

Discover Your Future



DISCOVER YOUR FUTURE COURSE INFORMATION

Discover Your Future is a course that will introduce students in grades 6-8 to the sixteen national career clusters and has been designed to be as flexible as possible for schools to implement any way they see fit. *Discover Your Future* is designed to be taught by any certified middle school teacher via hands-on, two-week modules for a total of thirty-two weeks. Schools would use course number 0972 and teachers would attend a two-day training in the summer to become familiar with modules and available resources. The resources will include potential guest speakers, field trip suggestions, activities, community projects, etc. Schools are encouraged to be creative in how they implement the course.

In this course students will explore each of the career clusters in the National Career Clusters Framework. As students navigate through the cluster areas, they will be exposed to career opportunities through real-world, hands-on projects that will influence their high school path and future career and college readiness goals. Additionally, the course will expose students to Career Technical Student Organization (CTSO) participation opportunities.

Portfolios: Students can create portfolios to include their collection of personal documents from each of the sixteen career clusters. By using the portfolio, students can focus on their interests gained during the course to help guide their future plans.

Profiles: After the career cluster lessons are completed, it is recommended that students create career profiles based on their area of interest to build a career community, and to guide future planning for district CTE opportunities. A fun way to achieve this would be to have students create social media profiles (Facebook, LinkedIn, Instagram, etc.) and display the profiles in a “gallery walk” in the classroom or school hallways.

Program notes:

- » Some lessons in this course may take longer or shorter than the suggested times.
- » Extension activities that were not completed during the original lessons in the career clusters can be re-visited if extra time is available.
- » Most lessons are project based, and all lesson plans should be reviewed prior to implementation.
- » When using a guest speaker in any of the sixteen clusters, there is a separate lesson plan available.

MATERIAL AND EQUIPMENT

Lesson	Materials
Agriculture, Food and Natural Resources	
Lesson 1: Growing a Nation	Blank white paper Colored pencils, crayons, markers Various art supplies
Lesson 2: Everything but the Moo	2 different colored highlighters per student
Lesson 3: What is FFA?	Crayons, colored pencils, markers
Lesson 4: What's the Difference? Organic & Conventional Foods	10 paper plates
	5 organic food samples, sliced (ex: apple)
	5 conventional food samples of the same variety as organic sample
	Toothpicks Napkins
Lesson 5: Incredible Eggs	1 dozen white eggs
	1 dozen brown eggs
	1 flashlight per station (or other light source)
Lesson 6: Making Butter	Heavy whipping cream
	1 small mini-square Ziplock container per student
	Toll house crackers or similar brand - 4 crackers per student
	Paper Towels
Lesson 7: Extemporaneous Public Speaking	Classroom items (chalk, markers, paper, eraser, books, Scissors, décor. Whatever you have available)
Architecture & Construction	
Lesson 1: Design and Layout	Marking Tools - Pencil, Pen, or Marker
	Measuring Tools - Ruler, Measuring Tape
	Drawing paper (larger than 8.5" x 11")
	Framing or Bench Square, Speed square
	Layout Tools - Compass
Lesson 2: Creating a Floorplan	Pencil or Pen
	Grid Paper
	Rule
	Computer or Handout as a Resource for determining wire voltage requirements
Lesson 3: Floor, Wall, Roof Systems	Pencil
	Marker
	Foam Board or Cardboard
	Scissors
	Hot Glue Gun with glue sticks (<i>optional</i>)
	Duct Tape
	Art supplies: pencils, markers, crayons, colored pencils, etc. (for decorating house)
Popsicle Sticks	
Lesson 4: SkillsUSA Overview	Handouts

**This equipment list was created without the consideration of overlap. Realize that much of the equipment can be used from lesson to lesson and cluster to cluster.*

Lesson	Materials
Arts/AV Technology & Communications	
Lesson 1: How do Colors Affect our Audience's Emotions	Computer/Tablet/device (if devices are not available, you may want to print some popular characters for students to use)
Lesson 2: How do I Read Comics?	Comic Books or Strips Comic Strips from newspapers or online Printed comics from online sources
Lesson 3: Writing a Comic Storyline	Comic Books (can use the same books/strips from previous lesson) Comic Strips from newspapers or online
Lesson 4: Creating the comic	Comic Templates Notecards Posterboard Coloring materials Scissors
Business Management Administration	
Lesson 1: Market Opportunities with Products & Services	Pencils Products and/or normal classroom items sitting out and easy for the students to use for the activity
Lesson 2: Good or Service	Whiteboard or T-Chart Markers Sticky Notes Pencils
Lesson 3: Entrepreneurship & Design for Delight	Whiteboard or Large Post-It note paper Markers Sticky Notes Pencils
Lesson 4: Prototyping & Pitch Development	Whiteboard or T-Chart Popsicle Sticks Straws Paper Construction Paper Rulers Tape (variety of types) Glue Paperclips/Binder Clips Index Cards Cotton Balls Toothpicks Aluminum Foil Other Prototyping/Crafting Supplies <i>(Optional):</i> Work with Career Tech Students to build a prototype using Machine Equipment, 3D Printer, Glow forge, or other means as available.

Lesson	Materials
Lesson 5: Shark Tank Production Fair	Location for Shark Tank Fair
	Tables or Desks
	Tablecloths (<i>Optional</i>)
	Tri-Fold Poster Board
	Fake Money Printed and Cut (included in the lesson)
	Access to Computer and Printer for students (<i>Optional</i>)
	Access to promoting Shark Tank Fair depending on how you will be handling it in your classroom
Education & Training	
Lesson 1: Create an Ideal Playground	Drawing Paper
	Colored construction sheets
	Scissors
	Art supplies: pencils, markers, crayons, colored pencils, etc.
	Glue
	Tape
	Ruler
Lesson 2: Create a Children's Storybook	Plain white letter size paper
	Art supplies: pencils, markers, crayons, colored pencils, etc.
	Ruler
	Colored paper
Lesson 3: Create a Bulletin Board	Bulletin board supplies: Pencils, markers, scissors, wrapping paper, wall borders, word strips, rulers, tape, pictures, staplers, etc.
	Plain white letter paper
	Posterboard/paper
Lesson 4: Teach for a Day	Materials list will vary per student. Students may bring their own materials from home
	Teach for a Day Lesson worksheet
Lesson 5: Exploring Careers	Exploring Careers Interview form
	Pen/Pencil
Finance	
Lesson 1: Introduction into the World of Finance	None
Lesson 2: Where did Money Come From?	Projector/TV
	Pencils
	Sticky Notes
	Bartering Video Guide Worksheet (Included in the Lesson)
	National Geographic Trading Game (internet search for resources)
Lesson 3: Needs vs Wants	Pencil
	Sticky Notes

Lesson	Materials
Lesson 4: Understanding Spending	Pencils Color Pencils/ Crayons/Markers Dried Beans The Bean Game Handouts (Virtual Option available in Lesson) Computers with Excel (optional) The Bean Game Teacher Guide (included in the lesson)
Lesson 5: Welcome to the Game of Finance Your Future	None
Lesson 6: Play the Game of Finance Your Future	4-6 Printed Finance Your Future Game Boards (Printable File included in the lesson) 4-6 Copies of Career & Experience Cards Printed and cut out 4-6 Copies of Fake Money Printed and cut out 4-6 Copies of Car and House Choice Handouts Printed 4 Copies of Teacher Experience Cards Register and Loan Tracker Worksheets for each student in your class
Government & Publication Administration	
Lesson 1: Teamwork & Failure	Master Locks (12) 6 Cones (can borrow from gym teacher) Soccer balls (can borrow from gym teacher)
Lesson 2: Teamwork and Time Management	Nerf Ball (borrow sponge or rubber balls from gym) Clipboard Large Band/Sling Shot Cone Marbles PVC Pipe (1 1/2- 2 inch) (1 ea.) - Split in half
Lesson 3: Teamwork & Leadership	Dice (2) Dominoes Cones Trolley w/ Ropes (1ea)
Lesson 4: Communication & Teamwork	Blind Folds (7) String Carry Litter (or alternative) Rubber bands 10 Styrofoam Cups
Lesson 5: Giving Directions & Speed	Corn Hole Board Bean Bags (4ea) Hula Hoop
Lesson 6: Teamwork & Communication	Blindfolds Hula Hoop Disk Cones

Lesson	Materials
Health Science	
Lesson 1: Health Careers Exploration	Large piece of paper or poster board Markers, colored pencils, & Crayons
Lesson 2: Cell vs Cell	Paper Markers, colored pencils, & Crayons Scissors Glue or tape
Lesson 3: Wash this Way	Baby oil, Vaseline, or cooking spray Access to a sink with running water, soap, and paper towels Glitter (enough for each student to sprinkle on hands) Newspaper or large paper to protect surfaces from glitter Pen, pencil, marker, or crayons Paper
Lesson 4: Body Systems	Markers/crayons (sidewalk chalk if outdoors) Butcher paper or other wide width paper
Lesson 5: Vital Signs	Dual head basic stethoscope Thermometer Manual blood pressure cuff Clock with second hand or watch (students can bring their own)
Lesson 6: What's Your Pulse rate	Dual head basic stethoscope(s): purchase a set for the class (one per team of two students), borrow from a CTE health science program, or local nursing program, or ask students to bring from home if available. Stopwatch (one per team of 2 students) Clock or watch with second hand
Lesson 7: Bone Fractures	Celery stalks with rounded bottom and leafy top removed (enough for each student to have at least one stalk) Small paper bags (<i>optional</i>) Knife and cutting board (<i>optional</i>)
Lesson 8: Chain of Infection	Popsicle Sticks or Index cards
Hospitality & Tourism	
Lesson 1: West Virginia Travel Regions	Map of travel regions Plain white letter size paper Colored paper Art supplies: pencils, markers, crayons, colored pencils, etc. Craft supplies (for making map – rocks, flowers, leaves, cotton balls, sticks, macaroni, etc.) Glue Rulers

Lesson	Materials
Lesson 2: Glo Germ & PPE	Glo Germ Gel for hand washing Glo Germ Powder for surface cleaning (can also spread the gel on surface) UV Light Soap Paper Towels Access to warm, running water Aprons Food Service Gloves Hats or hair nets
Lesson 3: Plating	Frosted cake, Twinkie, Brownie, or other premade dessert Various ingredients that can be used for garnishes such as berries, chocolate, flavored sweet sauces, whipped cream, frosting/icing Aprons Food Service Gloves Hats or hair nets <i>Suggested Equipment if available:</i> Garnishing tools Pastry brushes (various sizes) Petit cookie cutters or shapes Plates (round and square) Small mixing bowls Small rolling pins Squeeze bottles Vegetable peeler Whisks Wooden skewers or toothpicks
Lesson 4: Create your Ideal Food Truck	Art supplies: pencils, crayons, markers, colored pencils, Scissors, rulers, glue, tape, Stapler/staples Cardstock Food Truck Templates
Lesson 5: Napkin Design	Square, cloth napkins, (Starched preferred)
Tourism Lesson 1: Ethics Game	Materials can be found in resources
Tourism Lesson 2: Bigfoot and Friends	Materials can be found in resources
Tourism Lesson 3: Take a Virtual Park Visit	Colored pencils or crayons
Tourism Lesson 4: What Principle Am I	Materials can be found in resources
Tourism Lesson 5: Trash Timeline	Materials can be found in resources
Tourism Lesson 6: Lego & Leave No Trace	Assorted Legos
Human Services	
Lesson 1: American Sign Language Alphabet and simple phrases	Manual ASL alphabet and Simple Phrase resource sheets (see resources)
Lesson 2: Self-care BINGO	Scissors 2 copies of Self-care BINGO sheet for each student Glue or tape Small Ziplock baggies Teacher's choice of prizes

Lesson	Materials
Lesson 3: The Importance of Customer Service	Index Cards
Lesson 4: Cosmetology - A chemical reaction?	Mentos candy 2 liters of cola (diet and regular recommended) Safety glasses
Lesson 5: Cosmetology- Haircuts, nail design, and so much more	Nail Art Planner Nail Art Journal
Information Technology	
Lesson 1: Exploring IT	Adobe Light (if students have iPad access) Download GIMP (if students have PC access) Copies of handouts (see resources) Offline assignment
Lesson 2: Exploring IT	Adobe Light (if students have iPad access) Download GIMP (if students have PC access) Copies of handouts (see resources) Offline assignment
Lesson 3: Pay vs Play	Adobe Light (if students have iPad access) Download GIMP (if students have PC access) Copies of handouts (see resources) Offline assignment
Lesson 4: Presentation	Adobe Light (if students have iPad access) Download GIMP (if students have PC access) Copies of handouts (see resources) Offline assignment
Law, Public Safety, Corrections & Security	
Lesson 1: Firefighting as a Career	Blindfold(s) Doll(s) or stuffed animal(s) Optional materials to create a maze in the classroom: cardboard boxes, sheets, blankets
Lesson 2: Emergency Response	None
Lesson 3: International Radiotelephony Spelling	Paper Pencil *Whiteboard/markers can be used in place of paper & pencil
Lesson 4: First Aid Kit	If no computers or internet access, you will need: Markers Colored pencils Crayons Magazines with ads

Lesson	Materials
Lesson 5: Fingerprint Analysis	Crime Scene Tape Coffee Cup Ink Pads (Black or dark blue) Wet Naps or Baby Wipes Clear Packing Tape Cocoa (for light surfaces or Talcum Powder, Baby Powder, or Cornstarch for dark surfaces) Magnifying glasses Small paint brushes or make up brushes with very soft bristles Gloves Index Cards Paper Pens/pencils
Lesson 6: Three Little Pigs Jury Trial	Big Bad Wolf Mock Trial Script Judge Robe (could be black cloth or graduation gown) Gavel (or something similar) Paper Pens/pencils
Manufacturing	
Lesson 1: The History of Manufacturing	History of Manufacturing PPT Pencil/Pen Paper
Lesson 2: The Linking Person	Gram Unit Cubes
Lesson 3: Where is the bottleneck?	M&M's or similar candies 3 timers
Lesson 4: Joining	Easy Cheese Crackers (of choice) Nail file Wax paper
Lesson 5: Flying Monkey Manufacturing Co.	Tape measure Paper Paper clips Activity: airplane Company (Flying Monkey)
Lesson 6: Block Blueprint Measurement	Lego Blueprints Activity Various measuring tools Assortment of Legos
Marketing	
Lesson 1: Target Audience	Paper Pencil Sticky Notes Large Sticky Note Paper (<i>Optional</i>)
Lesson 2: Branding & Logo Design	Paper Pencil Logo BINGO Board Printed (1 per student)

Lesson	Materials
Lesson 3: Designing your own logo	Pencil
	Paper
	Sketch your Own Logo Worksheet (Included in the lesson)
	Color Pencils/Crayons/Markers
Lesson 4: Option 1 - FBLA Marketing Mix	Computer (if using computer-based option)
	Computer (Alternative Options Available)
	Posterboard
Lesson 4: Option 2 - Types of marketing & Advertisements	Color Pencils/Crayons/Markers
	Computer (Alternative Options Available)
	Posterboard
Science, Technology, Engineering, and Mathematics	
Lesson 1: ABET U	Careers Engineering and Engineering PPT
	Recruitment Videos (see resources)
Lesson 2: Bridge Design Challenge	Engineering notebook (options: composition notebook, digital engineering notebook, purchased professional notebook)
	Pencil
	3/4 inch linking cubes (2)
	1 sheet of 8.5" x 11" cardstock
	Assorted construction tools such as scissors
Lesson 3: Design Process	Design Process PPT
	SWP Digital Notebook or Composition Notebook
	Decision Matrix Template or Automated Template
	Activity 1 Paper Table Challenge
	Paper
	Pencil
	Scissors
	Book(s)
	20 pcs of Newspaper
Lesson 4: Getting to Better	7 feet of masking tape
	Activity 2 - Getting to better
	Reverse Engineering PPT
	Decision matrix Template or Automated Template
	SWP Digital Notebook or Composition Notebook
	Paper
	Water Bottle (1 per class)
Lesson 5: Zipline Adventures	Pencil
	1 sheet of 8.5" x 11" cardstock
	2 tongue depressors
	2 paperclips
	2 rubber bands
	1 bendy straw
	1 toilet paper roll
	12 inches of string
	6 inches of masking tape
Small figure (such as a Lego man or similar object)	
Scissors	

Lesson	Materials
Lesson 6: Engineers to the Rescue Blennerhassett Flood	3 tongue depressors
	24 inches of string
	5 rubber bands
	1 fork
	1 spoon
	12 inches of tape
	12 pipe cleaners
	1 hula hoop
	1 solo cup
	Scissors
Lesson 7: Mini Golf Course Design	Isometric paper
	Cardstock
	Balsa Wood
	Mini Solo cups
	Felt
Playdough	
Transportation, Distribution, and Logistics	
Lesson 1: Exploring Transportation	Grid Paper
	Drawing Paper
	Copies of Handouts
	World Map (<i>Optional</i>)
	US Map (<i>Optional</i>)
Lesson 2: Purchasing a Vehicle	Pencil or Pen
	Grid Paper
	Copies of Handouts
	Computer (<i>Optional</i>)
Lesson 3: Careers in the Automotive Industry	Drawing Paper
	Pencil or Pen
	Grid Paper
	Computer or Handouts for Research
Lesson 4: Designing a Rubber Band-Powered Car	Grid Paper
	Copies or Handouts
	Hot Glue Gun with glue sticks (<i>optional</i>)
	Straws
	Rubber Bands
	Wooden Dowels
	Plastic Bottle
Plastic Bottle Lids (4)	
Lesson 5: Overview of SkillsUSA	Copies of Handouts

LESSON PLANS



START-UP LESSON PLAN

Lesson Plan Title: Discover Your Future with the 16 National Career Clusters		Instructor:
Suggested Total Time for Lesson (minutes): 225 minutes (5 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.BM.1409.43 Complete a career and job analysis.		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Career Cluster Interest Inventory • Career Grid • Career Graphic Organizer • Occupational Outlook Handbook 		Resources: <p>PDF Files:</p> <ul style="list-style-type: none"> • Career Cluster Interest Inventory • Career Grid • Career Graphic Organizer <p><i>A-Z Index : Occupational Outlook Handbook: : U.S. Bureau of Labor Statistics (bls.gov)</i> <i>Browse by Career Cluster (onetonline.org)</i></p>
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
Introduction	Get Started/Explain: Ask students to brainstorm about careers to see what the students already know. Students will be introduced to the national 16 career clusters by completing the activities in this five-day unit.	
Day 1	Career Cluster Interest Inventory: The interest inventory is a series of questions that will allow students to examine their own interests, hobbies, likes, and dislikes to point students in the direction of what career paths to investigate in the future. This will also tell students how the careers relate to the 16 clusters and the working world.	
Day 2	Charades: Based on the student’s interest inventory results, students will act out careers that fall under the 16 career clusters while other students try to guess their word or phrase. Teams will earn points for each correct answer with a prize given for the most points.	
Day 3-4	Career Finder: Students will use the Bureau of Labor Statistics “Occupational Outlook Handbook” website (if internet is available) to research the top five careers based on their career cluster interest inventory. Students will use the Career Finder grid (example in resources) to document their research.	
Day 4-5	Chosen Career: Students will use a simple graphic organizer (example in resources) to guide additional research when choosing a career based on their Career Finder grid. Students will look up the basics of a career of choice including salary, education requirements, employment outlook, skills, tasks, etc.	
	Check for Understanding/Summarize/Close: As the class progresses through the Discover Your Future curriculum, a portfolio may be developed to save the materials that most interest them. Discover Your Future Wrap up will consist of students creating a chosen career presentation, a resume, a fictitious job advertisement, and mock interviews. (See examples in the resources folder)	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



AGRICULTURE, FOOD AND NATURAL RESOURCES CLUSTER

LESSON 1

Lesson Plan Title: Growing a Nation		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What will Students Learn? (Content Skill Sets)		
0972.AG.0101.28 Students will learn about historically significant innovations in agriculture and the innovations and technology that will shape the future of food and fiber production. 0972.AG.0101.31 Identify and describe significant innovations and inventions in the history of agriculture and their impacts on the industry. 0972.AG.0111.18 Demonstrate knowledge of American agriculture history.		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none">• Blank white paper• Colored pencils, crayons, markers, various art supplies• Laptop & Projector	Resources: The Seeds of Change 1600 - 1929 (growinganation.org)	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
	Get Started/Explain: Gather paper and art supplies and make the items available for student use. Share “The Seeds of Change” Website link with all students. Project “The Seeds of Change” website, choose a few key points in history to talk about. Reflect on what technology we use today compared to the equipment available years ago. What are some of the major differences? What has made life easier for all of us? What percentage of food and consumable items does your family buy at the grocery store? What percentage of food and consumables, if any, does your family produce at home? Pair students up to work together for this activity. Hand out 6 pieces of blank white paper per pair.	
	Discover/Engage/Practice: Students will access and review the Seeds of Change” timeline. Each pair will select 6 events from the timeline. Ensure that each group chooses a different set of events. You may change the number according to the number of students in the class. Students will make a mini poster of each event using blank paper and art supplies. Each mini poster will need to be titled at the top with the date of the occurrence. Students will draw and color the event or development and add 2-3 descriptors of what occurred on that date.	
	Check for Understanding/Summarize/Close: Starting with the earliest event, allow students to present their chosen event or development. Post these in order around the room for all to see. Summarize by allowing the students to pick three main events that have had the greatest influence on our lives today and explain.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



AGRICULTURE, FOOD AND NATURAL RESOURCES CLUSTER

LESSON 2

Lesson Plan Title: "Everything but the moo!"		Instructor:
Suggested Total Time for Lesson (minutes): 90 minutes (2 Days)		
Content Focus - What will Students Learn? (Content Skill Sets)		
0972.AG.0101.31 Identify and describe significant innovations and inventions in the history of agriculture and their impacts on the industry. 0972.AG. 0101.39 Identify food products that are derived from meat, egg, poultry, fish, and dairy products.		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: Part 1: <ul style="list-style-type: none"> Everything but the..." worksheets for each of the farm species, 1 copy per student Computer & Projector to show videos from the "Everything but the..." website Part 2: <ul style="list-style-type: none"> "Everything but the..." Infographic "Everything but the..." How many animal byproducts do you use?" By-products list, 1 copy per student. 2 different colored highlighters per student 		Resources: Everything But the...Animal By-Product Resources Farm Credit of the Virginias (farmcreditofvirginias.com) How many animal by-products do you use.pdf (farmcreditofvirginias.com) Optional Resources for Classroom Use & Further discussions: 10 Reasons Ag is Good for Youth (farmcreditofvirginias.com) Ag Works (farmcreditofvirginias.com)
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Discussion: Think about the products we use daily. What are they made of? Where do those ingredients come from? Think about yesterday's lesson and reflect on how easy it is to run out to the grocery store and buy these items instead of hand making them. Today we will explore animal by-products and how we use them. Definition: By-product – a secondary product that is derived from the harvesting of an animal; examples include carcass, hooves, blood, fat.	
15 minutes each	Discover/Engage/Practice: (Each of the videos are approximately 1.5 minutes per species) "Everything but the... Moo!" Access the sight, show the corresponding video, allow students to complete the worksheet and discuss. "Everything but the...Baa!" Access the sight, show the corresponding video, allow students to complete the worksheet and discuss. "Everything but the...Oink!" Access the sight, show the corresponding video, allow students to complete the worksheet and discuss. "Everything but the...Beat!" Access the sight, show the corresponding video, allow students to complete the worksheet and discuss. "Everything but the...Cluck!" Access the sight, show the corresponding video, allow students to complete the worksheet and discuss.	
10 minutes	Check for Understanding/Summarize/Close: Give each student a copy of the by-product list and two different color highlighters. Each student should use one highlighter to highlight every by-product they use within the first 24 hours of having the paper. After the first 24 hours students should switch to the other highlighter and highlight everything they use on the list in the upcoming week. If you do not have highlighter for students, have them use a writing utensil and mark the products with symbols or D for daily and W for weekly. Once the week is over, instruct the students use the "everything but the..." infographic to find out how many products they used from each animal. Some products overlap!	
Modifications, Support, and Extensions (for those students with IEP)		

Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?



AGRICULTURE, FOOD AND NATURAL RESOURCES CLUSTER

LESSON 3

Lesson Plan Title: What is FFA?		Instructor:
Suggested Total Time for Lesson (minutes): 90 minutes (2 Days)		
Content Focus - What will Students Learn? (Content Skill Sets)		
<p>0972.AG.0101.79 Students will learn the history and operations of the National FFA Organization and the Three Circle Model of Agricultural Education.</p> <p>0972.AG.0101.80 Explain the components and importance of the Three Circle Model of Agricultural Education.</p> <p>0972.AG.0101.83 Research the important dates and events in FFA History.</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
<ul style="list-style-type: none"> • FFA Facts Worksheet Pages – 1 per student • Crayons/markers/colored pencils (specifically blue and gold) • Digital copy of Official FFA Student Handbook uploaded to Learning Management System 		<p>What is FFA? PowerPoint FFA Facts Worksheet Pages Student Handbook - 2022.pdf Powered by Box</p>
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	<p>Get Started/Explain: Begin the lesson with the showing and discussing the “What is FFA?” PowerPoint Presentation. Allow students to view and discuss the short video from the link on slide 2 of the PowerPoint.</p> <p>Provide digital access to the Official FFA Student Handbook. Distribute worksheets, 1 per student. This activity is broken into 5 sections. Allow the students 10 minutes per section to work with a partner and complete the worksheets using the Official FFA Handbook. Instruct the students to change partners at each 10-minute interval. This is their time to use the manual to further explore all the activities that FFA offer. If desired, stop between each worksheet section and check for understanding and discuss responses and reactions.</p>	
10 minutes 10 minutes 10 minutes 10 minutes 10 minutes	<p>Discover/Engage/Practice: Section 1: What is FFA? Section 2: What’s in it for me? Section 3: History of the FFA Jacket Section 4: Official FFA Emblem Section 5: Chapter Officers</p>	
30 minutes	<p>Check for Understanding/Summarize/Close: Summarize key points by reviewing and discussing class responses on the worksheets. If time permits, use the student handbook to review the FFA Officers section and hold a mock class election or assign officer parts to students and instruct them to practice the FFA Official Opening Ceremony.</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



AGRICULTURE, FOOD AND NATURAL RESOURCES CLUSTER

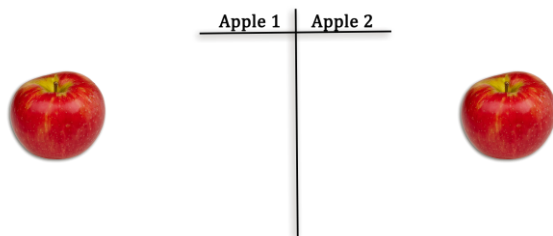
LESSON 4

Lesson Plan Title: What's the Difference? Organic & Conventional Foods		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What will Students Learn? (Content Skill Sets)		
Using the claim, evidence and reasoning model, students will compare and contrast organic vs conventionally produced foods to discover the differences and similarities of each farm production style. Students will identify farm practices for plant production and harvest of safe products for consumers. 0101.33 Identify and debate the issues associated with biotechnology use in the agriculture industry. 0101.37 Discuss the importance of food labeling to consumers. 0101.45 Compare and contrast various food labels. 0111.48 Conduct sensory analysis experiments for smell, taste and texture of food and food additives and enhancers 0111.51 Conduct food product sampling and consumer evaluation activities. 0111.58 Demonstrate knowledge of organic foods 0111.64 Identify characteristics of organic foods		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: 1 organic apple and 1 conventional apple of the same variety Knife or apple slicer Cutting board Taste Test Supplies: <ul style="list-style-type: none"> • 10 paper plates labeled 1-10 • 5 organic food samples, sliced and prepared for individual taste tests • 5 conventional food samples, sliced and prepared for individual taste tests Note: Choose food samples that you can purchase both an organic version and a conventional version. Choose foods of similar varieties or types to represent equivalent foods with different farming production methods. <ul style="list-style-type: none"> • Toothpicks and napkins for taste tests 	Resources: Handout: https://cdn.agclassroom.org/media/uploads/2019/03/22/infographics-conv-organic.pdf infographics-conv-organic.pdf (agclassroom.org) handout, 1 per student <i>Give it a Minute: Organic & Conventional Farming</i> https://www.youtube.com/watch?v=g6TMZZfbUE Microsoft Word - Claim Evidence Reasoning- Organic vs Conv.docx (agclassroom.org) handout, 1 per student <i>Agricultural Literacy Curriculum Matrix</i> Whats the Difference? A Look at Organic and Conventional Foods (agclassroom.org)	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Define Organic Farming and Conventional Farming and instruct students to record the definitions and the discussion facts below. Present and discuss the following facts: <ul style="list-style-type: none"> • While organic-label foods are offered in each section of the grocery store, fresh fruits and vegetables are the top selling category of organically grown food. • Consumer demand for organically produced goods has shown double digit growth during most years since the 1990s. • Organic foods do not have a nutritional advantage over their conventional counterparts. • Synthetic pesticides approved for use on conventional and organic crops undergo the same rigorous scientific evaluation by U.S. EPA. The agency evaluates scientific data on the pesticide to ensure that when used according to label directions, the product will not harm people, non-target species or the environment. • 100 percent organic - Products that are completely organic or made of all organic ingredients. • Organic - Products that are at least 95 percent organic. • Made with organic ingredients - These are products that contain at least 70 percent organic ingredients. The organic seal can't be used on these packages. 	

Discover/Engage/Practice:

Part 1:

1. Ask students questions to generate thought, "What is the definition of the word, organic?" "Where do you see the word *organic* most?" Allow students to offer several answers directing students to think about their food and the labels they see in the grocery store.
2. Ask for two student volunteers. Inform them that one will be doing a taste test and the other will serve as a scribe.
3. Reveal two apples to the students labeled 1 and 2. Inform students that one apple was produced using organic farming practices and the other was produced using conventional farming practices. (Be sure you keep note of which apple is organic and which is conventional.)
4. Draw a T-chart on the board. Label one side "Apple 1" and the other side "Apple 2." Instruct the scribe to list all of the adjectives that are used during the observation.
5. Ask the other student volunteer to carefully examine each apple and describe them to the class. The volunteer should visually observe, taste, and touch the apple. Cut the apples with a knife or an apple slicer once the exterior of the apple has been thoroughly examined. (Remind the scribe to be recording the description of each apple.)
6. Once the observation is complete, the student volunteer(s) should select which sample they think is the organic apple and which is the conventionally farmed apple. Give the student an opportunity to explain why they made their choice.
7. Reveal to the students which apple is which and have a short discussion that answers the questions:
 - Was there a difference in physical appearance? (Size, Shape, Color, Texture)
 - Is there an observable difference between the two samples that you can see, feel, or taste?
 - What are your perceptions about both methods of farming?



45 minutes

Part 2:

1. Give each student one copy of the [Claim, Evidence and Reasoning- Organic and Conventional Food Production handout](#).
2. Now that students have been briefly introduced to the terms *conventional* and *organic*, they will begin to develop a clear definition of the terms as they progress through the CER model.
3. Have students brainstorm the questions they have concerning the two farming practices. Examples could include:
 - Are organic foods safer or more nutritious than conventionally grown foods?
 - Is one method "better" for farmers?
 - Is one method "better" for the environment?
 - Is there a measurable difference between conventionally grown food and an organically grown food?
 - Does organic/conventional food taste better?
4. Introduce the *Claim, Evidence, and Reasoning* model. Explain that after a question is asked, this model can be used to find a credible answer to a question by using the following steps:
 - a. **Claim:** State a direct response to the question.
 - b. **Evidence:** Find reliable information that supports the claim.
 - c. **Reasoning:** Link the claim to evidence by explaining how the evidence supports the claim.
5. Instruct students to complete two of the four steps in the CER model on the first page of their worksheet. First, they should select and record one question they would like to answer about organic and conventional food production practices (step 1). Next, they will formulate a claim by answering their question using their best guess and background knowledge. This should also be recorded in the corresponding box on their handout (step 2).
6. Let students know we will come back to the evidence (step 3) and reasoning (step 4) portions momentarily. First, we will spend some time gathering evidence and learning about farming practices.
7. As students participate in the following activities, they should be filling out the Venn Diagram on page 2 of their handout listing the similarities and differences found in the farming production styles.

	<ol style="list-style-type: none"> 8. Show the video, Give it a Minute: Organic and Conventional Farming. (1:27 minutes) 9. Next students will participate in a taste test. Prior to class choose five different foods that you can purchase both an organic label product and a conventional product. Prepare the samples and label them 1-10 placing like foods next to each other (e.g., strawberries #1 and #2, carrots, #3 and #4, etc.) and select a random order for organic vs conventional. Be sure to keep a key. 10. Inform students that they will be examining and tasting five different foods. Each food will have both an organic and a conventional sample. Direct students to page three of their handout. Explain that for every food they will observe and taste each sample, record their observations (columns 1-3), determine if it is a conventional or organic food product (column 4), and then explain their choice (column 5). 11. After all samples have been evaluated and identified by the students, reveal the correct answers. Have students place a star next to the samples that they guessed correctly. 12. Hold a class discussion about the differences and similarities observed. <ul style="list-style-type: none"> • Note to Teacher: With a 50/50 chance, students will guess some of the samples correctly. As your students discuss differences they could taste, discuss reasons why. In many cases it will not be due to organic vs conventional farming practices. Possible reasons for differences include the use of different plant varieties or cultivars and different packaging or processing methods. Ripening may also impact taste. For example, a tomato that was vine ripened will likely taste better than one that was picked and ripened during transport to the grocery store. 13. Direct students back to their Venn Diagram. Have students record the differences and similarities they observed during the taste tests and review the following as a class, in small groups, or individually to complete the Venn Diagram: <ul style="list-style-type: none"> • Organic vs Conventional Farming infographic • Organic and Conventional Farming: What's the Same? What's Different? website.
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10 minutes	<p>Check for Understanding/Summarize/Close: Instruct students to complete their handout by answering the reflection questions on the last page and returning to the first page to complete the "Evidence" and "Reasoning" sections of their CER models.</p> <p>After conducting these activities, review and summarize the following key concepts:</p> <ul style="list-style-type: none"> • The nutrition and overall food safety of organic and conventionally produced food is the same. The difference lies in the production methods used on the farm. • The USDA Organic program is federally regulated with specific requirements for farmers to meet in order to label their food product as "organic." • A variety of farming methods can be used to produce a safe and nutritious food supply. <p>Compare the labeling of both types of products and discuss this impact on consumers.</p>
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Modifications, Support, and Extensions (for those students with IEP)

Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?



AGRICULTURE, FOOD AND NATURAL RESOURCES CLUSTER

LESSON 5

Lesson Plan Title: Incredible Eggs		Instructor:
Suggested Total Time for Lesson (minutes): 60 minutes (1 day)		
Content Focus - What will Students Learn? (Content Skill Sets)		
<p>0972.AG.0139.3 Quality control. 0972.AG.0139.2 Production processes. 0972.AG.0101.38 Define and differentiate the quality and yield grades of food products and what they mean to the consumer.</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • 1 dozen eggs • 1 dozen brown eggs <p><i>Can be store-bought eggs, but farm eggs will provide more variety of defects.</i></p> <ul style="list-style-type: none"> • Flashlight, one per station. <p>Note: Students' cell phones are a very effective light source for this activity but if desired acquire flashlights and shoe boxes. Cut a ¼ inch hole in the shoe box and place the flashlight into the box. Turn flashlight on. Egg will be candled at the hole in the box.</p>		Resources: Egg Candling PowerPoint
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	<p>Get Started/Explain: Set out the eggs at various stations, 6 eggs per station resulting in 4 stations. Number the eggs by writing on them lightly with a pencil. Provide one flashlight/light source and show box per station or one student per group may use a cell phone flashlight if permitted. At the conclusion of the PowerPoint, you will arrange students in groups of four.</p> <p>Discussion: Terms to know: <u>Albumen</u> – the white liquid substance inside of the egg that provides protein in our diet, protection for the yolk, and nutrition for the growing embryo (if the egg is fertilized and a chick is developing). <u>Yolk</u> – the yellow, thicker ball of liquid inside of the egg and contains mainly the energy/fat source of nutrition in our diet as well as the growing embryo (if the egg is fertilized and a chick is developing). <u>Air Cell</u> – an empty area inside the egg. This forms after the egg is laid and the egg temperature cools which causes the contents of the egg to condense. <u>Candling</u> – The process of inspecting eggs for quality, freshness, and soundness. <u>Soundness</u> – the quality of the eggshell. A sound egg contains no cracks.</p>	
25 minutes	<p>Discover/Engage/Practice: Project and present the PowerPoint “Egg Candling”</p> <p>Concluding quiz slides are included in the PowerPoint at the end.</p>	
20 minutes	<p>Check for Understanding/Summarize/Close: 4 Egg Candling Stations will be set up for the groups of 4 to candle them using the provided light source. Allow them 5 minutes per station. Groups will designate one recorder to document the findings of each egg. Ensure that they record the egg number on their papers as well. Instruct them to record the defect or no defect.</p>	
10 minutes	<p>Bring the class back together and discuss the findings of each egg station.</p>	

Modifications, Support, and Extensions (for those students with IEP)

Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?



AGRICULTURE, FOOD AND NATURAL RESOURCES CLUSTER

LESSON 6

Lesson Plan Title: Making Butter		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What will Students Learn? (Content Skill Sets)		
0972.AG.0101.35 Students will learn the history of food processing, food labeling requirements, raw food materials and their value-added products, and how to preserve and process food. 0972.AG.0101.44 Produce a food product (cheese, sausage, sauerkraut, etc.) 0972.AG.0101.39 Identify food products that are derived from meat, egg, poultry, fish, and dairy products.		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none">• Heavy whipping cream – 3 tablespoons per student• One small Mini-Square Ziplock Container or similar brand, 1 per student• Toll House Crackers or Similar Brand – 4 per student• Napkins or Paper Towels	Resources:	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	Get Started/Explain: Discussion: Think about how easy it is to drive to the store and buy items you need. Whether it is food or clothing, do you ever stop to think about where your consumables come from? Do you ever consider the processes that these items must go through to be ready for consumers to buy? It wasn't easy for our ancestors to attain ready to use items. Most everything came by hard work and endurance. Items had to be handmade from other materials available on the farm. As we put labor into a product, we produce a value-added product. Today, we will use our own efforts and labor to produce a value-added food product ready for consumption.	
25 minutes	Discover/Engage/Practice: Distribute Ziplock containers and pour 4 tablespoons of heavy whipping cream into each. Distribute 4 crackers per student. Instruct the students to close the containers tightly and begin shaking. Ask them to guess what they think will happen as the process of shaking the contents occurs. Whipped cream forms first (they can taste this if desired) then the buttermilk will separate from the butter. Instruct the students to pour off the buttermilk and they will be left with pure, homemade butter. They can use their crackers to sample their product.	
5 minutes	Check for Understanding/Summarize/Close: Did you like the butter? Was it better than store bought? Was it worth your effort to make? Consider the process that other items in our refrigerator must endure to travel from farm to table.	
5 minutes	Instruct students to wash the containers and clean up their stations.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



AGRICULTURE, FOOD AND NATURAL RESOURCES CLUSTER

LESSON 7

Lesson Plan Title: Extemporaneous Public Speaking		Instructor:
Suggested Total Time for Lesson (minutes): 90 minutes (2 days)		
Content Focus - What will Students Learn? (Content Skill Sets)		
0972.AG.0146.12 Demonstrate skills and techniques used by public speakers 0972.AG.0146.19 Deliver an extemporaneous speech.		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: Various Items from around the classroom, 1 item per student: <ul style="list-style-type: none"> Examples: chalk, markers, paper, eraser, books, scissors, décor, anything you have available. 	Resources: Components of a Speech Handout, 1 per student	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Gather the items to be used and randomly arrange them on a table at the front of the classroom. You will want to have one random item per student, at least. Instruct the students to come forward and choose one of the items.	
10 minutes	Discover/Engage/Practice: "An important part of agriculture education is leadership. An effective leader, must know how to communicate. Ask the question to the class: "When you have to pay attention and listen to a speaker, what makes them interesting to you?" -Topic, time span, voice, enthusiasm, organization. Discuss these factors based on responses. Discuss the components of a well-rounded speech. Introduction, body, and conclusion.	
5 minutes	You are wondering why I asked you to select a random item. We will use the speech outline worksheet to write an extemporaneous speech. You will have 5 minutes to compose a 1-minute speech about your item that you have selected. At the conclusion of this 5 minutes, everyone will present their speech, without the use of the worksheet. Be mindful of your time and allow yourself enough time to rehearse independently.	
50 minutes	Allow each student the choice of standing at their desk or coming forward to the front of the class to present. Provide feedback as needed. Allow peers to ask questions to each speaker after their speech concludes.	
20 minutes	Check for Understanding/Summarize/Close: Access ffa.org or YouTube to find examples of FFA Extemporaneous Speakers and view one of the examples. Students will discuss their reaction to the challenge of "thinking on your feet." What was your biggest challenge? If you had known you were writing a speech about the item, would you have chosen differently? Reflect on what improvements you would make to your next presentation.	

Modifications, Support, and Extensions (for those students with IEP)

Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?



ARCHITECTURE AND CONSTRUCTION CLUSTER

LESSON 1

Lesson Plan Title: Design and Layout		Instructor:
Suggested Total Time for Lesson (minutes): 135 minutes (3 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
This lesson will provide students with an understanding of tool identification, usage, safety, and maintenance by drawing a tiny house. 0972.AR.1843.3 Use and Maintain measuring, layout, and marking tools (Lesson plan supports fundamental understanding).		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> Marking Tools- Pencil or Marker Measuring Tools- Rule, Tape Measure, Framing, or Bench Square Layout Tools- Compass 		Resources: <ul style="list-style-type: none"> Reading a Tape Measure Easy as 123 https://www.youtube.com/watch?v=89NU3iefcAM How to read a ruler https://www.youtube.com/watch?v=KoD7CG6M9u4
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	Get Started/Explain: Gather Students to an area with each tool, discuss: <ul style="list-style-type: none"> Tool identification, (Each student will need to understand the proper name of each tool.) Tool safety, (Students will have to understand that sharp points of tools are to be held away from themselves and others when carrying them. No Horseplay during activity.) Tool use and, (Understand how to use each tool, including the reading of a ruler, tape measure and square.) Tool maintenance (These tools require little maintenance; students need to know where the tools are to be stored when not in use.) 	
30 minutes 45 minutes 30 minutes	Discover/Engage/Practice: <ul style="list-style-type: none"> Students will learn the fundamentals of measurements and fractions from reading a tape measure and rule. Have students measure different objects in the classroom. Students will understand the basics of a framing or bench square and using it to draw angles Students will learn how to calculate sq footage Students will draw a tiny home by using all the tools in the materials list by drawing a 8-inch x 10-inch floor dimension house within 1/16th of an inch that will include at least 4 walls, a roof, windows, and a door. 	
15 minutes	Check for Understanding/Summarize/Close: Students drawing an 8-inch x 10-inch floor dimension house within 1/16th of an inch that will include at least 4 walls, a roof, windows, and a door. (A house with proportionate dimensions drawn.)	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



ARCHITECTURE AND CONSTRUCTION CLUSTER

LESSON 2

Lesson Plan Title: Creating a Floorplan		Instructor:
Suggested Total Time for Lesson (minutes): 135 minutes (3 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>Students will be asked to design a Tiny Home (under 600 sq ft), not to exceed 8 ft wide and 12 ft high. (Lesson plan supports fundamental understanding in the support of home construction)</p> <p>0972.AR.1843.4 Layout foundation forms 0972.AR.1843.8 Demonstrate understanding of floor systems 0972.AR.1843.9 Demonstrate understanding of wall systems 0972.AR.1843.10 Demonstrate understanding roof systems</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Pencil • Grid Paper • Rule • Computer—Resource wire voltage requirements 		Resources: <ul style="list-style-type: none"> • How to Sketch a Floor Plan https://www.youtube.com/watch?v=O5A58npxsps
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	Get Started/Explain: Students will develop a blueprint or floorplan of a tiny home, using grid paper. The home will be under 600 sq ft, not to exceed 8 ft wide and 12 ft high. The house will include all standard amenities.	
30 minutes 45 minutes 30 minutes	Discover/Engage/Practice: <ul style="list-style-type: none"> • Students will design a floorplan to include the location of doors, windows, stairs, closets, as well as all necessary appliances such as a washer, dryer, stove, refrigerator, etc. • Identify the type of material the roof will be constructed...shingles, metal, ceramic tile? • Will the house have a porch or deck? • Calculate the square footage of the entire home. • Develop and include a scale of measurement on the plans (e.g., 1/8inch= 1inch) • Determine which building materials will be necessary for the construction of the home. • Decide how the home will be heated and/or cooled. • Plan the routing of the required plumbing system. • Properly label each part of the house. 	
15 minutes	Check for Understanding/Summarize/Close: <ul style="list-style-type: none"> • The student completed a house plan to scale, including all necessary requirements for a functional home, including appliances. The home meets the requirements of being under 600 sq ft, not to exceed 8ft wide and 12 ft high. • Students share their creations and discuss their blueprints, the various parts of the house, and different construction components, i.e., wiring, plumbing, etc. 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



ARCHITECTURE AND CONSTRUCTION CLUSTER

LESSON 3

Lesson Plan Title: Floor, Wall, and Roof Systems		Instructor:
Suggested Total Time for Lesson (minutes): 135 minutes (3 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>Students will be asked to construct a model Tiny Home, not to exceed 12 inches wide, 16 inches long, and 14 inches high. (Lesson plan supports fundamental understanding in the support of home construction)</p> <p>0972.AR.1843.4 Layout foundation forms 0972.AR.1843.8 Demonstrate understanding of floor systems 0972.AR.1843.9 Demonstrate understanding of wall systems 0972.AR.1843.10 Demonstrate understanding of roof systems</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Pencil • Marker • Foam Board or Cardboard • Scissors • Hot Glue Gun • Duct Tape • Popsicle Sticks 		Resources: <ul style="list-style-type: none"> • Cardboard House Very Simple How to Make a House Out of Cardboard DIY Cardboard House Model - Bing video • DIY Simple Miniature House - Miniature Model - Bing video
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	Get Started/Explain: Students will be asked to construct a home from foam board or cardboard, not to exceed 12 inches wide, 16 inches long, and 14 inches high, using a blueprint or floorplan previously designed by the student on grid paper. <ul style="list-style-type: none"> • Deconstruct cardboard boxes. • Have students use previously designed blueprint or floorplan. • Construct a model foam board or a cardboard tiny home. 	
30 minutes 45 minutes 30 minutes	Discover/Engage/Practice: <ul style="list-style-type: none"> • Explain to the students that they will be building their own model house. • Students will draw the outline of the house on cardboard pieces, making sure to use proper tools for measuring and marking. • Students will cut along the lines drawn • Fold the foam board or cardboard accordingly to make the house • Secure the edges with tape • Assemble all parts of the house with hot glue or tape • Decorate the house to your personal taste 	
15 minutes	Check for Understanding/Summarize/Close: A foam board or cardboard model house is constructed that does not to exceed 12 inches wide, 16 inches long, and 14 inches high.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



ARCHITECTURE AND CONSTRUCTION CLUSTER

LESSON 4

Lesson Plan Title: SkillsUSA Overview		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>This lesson will provide students with an understanding of SkillsUSA as an Organization with a national membership association serving high school, college, and middle school students who are preparing for careers in trade, technical, and skilled service occupations, including health occupations, and for further education.</p> <p>Content for this lesson plan was collected from SkillsUSA Official Site Middle School - SkillsUSA.org</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
<ul style="list-style-type: none"> • Handouts 		<ul style="list-style-type: none"> • https://www.skillsusa.org/wp-content/uploads/2021/07/Sk-Membership-Benefits-Guide-2021-HS-MS-mc-v8-web-FINAL.pdf • MS-Chapter-Integration-Guide.pdf (skillsusa.org)
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	<p>Get Started/Explain:</p> <ul style="list-style-type: none"> • SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. SkillsUSA helps each student excel. • SkillsUSA is only possible if there is at least one CTE classroom that exists to which the chapter can connect. Classrooms and laboratories are the first components of a whole CTE program. • A primary purpose is to develop the technical skills and knowledge of a student in their desired career path. Work-based learning programs and workplace experiences are the second components of a whole CTE program. • A primary purpose is to engage students in authentic experiences that aid in career preparation through the application of what's being learned in the classroom. CTSOs are the third component of a whole CTE program. • A primary purpose is to develop leadership and career readiness skills in students and to recognize technical skills and knowledge. 	
20 minutes	<ul style="list-style-type: none"> • Students will learn about interactive and memorable sessions. • Each session is written to introduce students to different STEM careers and career clusters, and to the value of SkillsUSA. • Students will be engaged in learning and share specific career clusters and occupational information. • The highlight of each session is a hands-on learning activity. 	
10 minutes	<p>Check for Understanding/Summarize/Close:</p> <p>Students expressing the benefits of joining SkillsUSA.</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?



ARTS, A/V TECHNOLOGY AND COMMUNICATION CLUSTER

LESSON 1

Lesson Plan Title: Arts. AV Day 1: How do Colors Affect our Audience's Emotions?		Instructor:
Suggested Total Time for Lesson (minutes): 40 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.AV.1857.4 Identify color theory terminology 0972.AV.1857.5 Demonstrate the use of color to create impact or effect 0972.AV.1857.6 Mix colors to obtain shades, tints, or neutrals 0972.AV.1857.7 Choose and apply an appropriate color scheme 0972.AV.1857.8 Identify the correct use of RGB and CMYK color		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> Computer/Tablet to search for characters (If you do not have access to devices you may want to print some popular characters for students to use) 		Resources: <ul style="list-style-type: none"> Arts. AV Cluster PowerPoint Presentation Inside Out: Guessing the Feelings (Search YouTube) Inside Out: Emotional Truths by Way of Pixar PDF Color Symbolism Video (Search for on YouTube) Color Psychology - How Colors Influence Your Choices and Feelings (Search for on YouTube) A Guide to Color Meaning _Adobe PDF
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	Get Started/Explain: Use Arts. AV PowerPoint Slides 1-5 to start this Unit. To get started and engage your students start by showing the video Inside Out: Guessing the Feelings or a similar video (find by searching YouTube). This video will help the students get introduced to the idea that feelings and colors are associated. If you do not have the video, use the Inside Out Emotional Truths by Way of Pixar Article by Travis Langley Ph.D. Discuss what students learned during the video or the article.	
20 minutes	Discover/Engage/Practice: Give students some time to search for their favorite character, movie, or brand. Have them look at the colors and consider what emotions are being communicated to the audience. Use the following videos and/or PDFs to help students understand the concepts if needed. Color Symbolism Video (Search for on YouTube) Color Psychology - How Colors Influence Your Choices and Feelings (Search for on YouTube) A Guide to Color Meaning _Adobe PDF	
5 minutes	Check for Understanding/Summarize/Close: Reflect on what the students have learned about colors today.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



ARTS, A/V TECHNOLOGY AND COMMUNICATION CLUSTER

LESSON 2

Lesson Plan Title: Arts. AV Day 2 & 3: How do I read Comics? / Comic Book Exploration		Instructor:
Suggested Total Time for Lesson (minutes): 80 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.AV.1514.24 Define and use the elements of design (e.g., line, space, shape, texture, form, value, and color) 0972.AV.1514.26 Evaluate/critique the effectiveness of visual communications and interactive media design		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Comic Books or Strips • Comic Strips from Newspapers • Printed Comics from Online Sources (Internet Search) 		Resources: <ul style="list-style-type: none"> • Arts. AV Cluster PowerPoint Presentation
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	Get Started/Explain: Explain to students how comic books and comic strips work.	
55 minutes	<p>Discover/Engage/Practice: Explain how it is read: boxes left to right in rows, the difference between speech, thought, and exclamation bubbles. (Examples are on Slide 6 in the PowerPoint)</p> <p>Explain how each of the “bubbles” helps the audience understand what is happening in the story.</p> <p>For the second activity in this section, you will be introducing the students to Comic Books and Comic Strips. Slide 7. Find some comic books, or comic strips from newspapers, or print them from online sources. An online source is clickable on the slide you can print these ahead of time or navigate through them as a class. You can take the class to the library to search for Comics.</p> <p>Distribute the comics to students in pairs or leave them on a table and allow the students to pick and choose what they want to see or read.</p> <p>The goal of this activity should be relaxed and unstructured to allow students to enjoy looking at the pictures and the words.</p>	
15 minutes	Check for Understanding/Summarize/Close: Put students into pairs and have them discuss what they liked about the comics they chose.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



ARTS, A/V TECHNOLOGY AND COMMUNICATION CLUSTER

LESSON 3

Lesson Plan Title: Arts. AV Day 4 & 5: Writing a Comic Storyline		Instructor:
Suggested Total Time for Lesson (minutes): 80 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.AV.1514.25 Apply elements of a successful layout, including communication, organization, and attractiveness		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Comic Books • Comic Strips from Newspapers 		Resources: <ul style="list-style-type: none"> • Arts. AV Cluster PowerPoint Presentation • Storyline Template Workshop
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	<p>Get Started/Explain: Use one of the Comic Strip Resources from the previous day to have a class discussion to get the students thinking about ideas for a story. Discuss the Storyboard Plan on slide 8– feel free to change the story for your class.</p> <p>Slide 9 – Discusses Character Development.</p>	
55 minutes	<p>Discover/Engage/Practice: Go over Slide 10 in the PowerPoint with students, demonstrating how a storyline will be created.</p> <p>Have students focus on the main parts of the story and verbal communication to help the audience understand what is happening in the comic.</p> <p>It is important to stress that the students will have to come up with their own original stories.</p> <p>This is the Production part of the Comic.</p> <p>This part of the lesson is open-ended. Put students into groups or allow them to work individually. Each group has to make a story, edit it, and submit it for review. Provide students with the Storyline Template Worksheet in the Resources folder and have them start creating their stories.</p>	
10 minutes	<p>Check for Understanding/Summarize/Close: Check the students’ Storylines. Once you approve their story students are ready to start working on the next part of this activity the Comic Strip.</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



ARTS, A/V TECHNOLOGY AND COMMUNICATION CLUSTER

LESSON 4

Lesson Plan Title: Arts. AV Day 6-10: Creating the Comic		Instructor:
Suggested Total Time for Lesson (minutes): 200 minutes (4 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>0972.AV.1859.11 Demonstrate techniques of 2-D design 0972.AV.1859.13 Produce project to client specifications 0972.AV.1859.14 Describe characteristics of design for different media (e.g., logos, magazines) 0972.AV.1859.15 Choose appropriate ideas through the visual stages of layout (e.g., thumbnail, rough, comprehensive) 0972.AV.1859.16 Demonstrate understanding of related math (e.g., proportion, percentages, basic measurements) 0972.AV.1859.17 Demonstrate ability to solve design problems 0972.AV.1859.19 Identify basic tools and materials (e.g., computer software, pencils, paper)</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
<ul style="list-style-type: none"> • Comic Templates • Notecards • Poster Board • Coloring/Cutting Materials 		<ul style="list-style-type: none"> • Arts. AV Cluster PowerPoint Presentation • Comic Strip Template 1 • Comic Strip Template 2 • Comic Strip Template 3 • Step-By-Step Disney Character How to Draw (Search YouTube) • Step-By-Step Disney Character How to Draw PDFs
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	<p>Get Started/Explain: Throughout this 3 day lesson students are going to start creating their own comic. You can choose to allow the students to create their comic individually or put them into small groups to create the comic. Allow the students to create the comic on the provided templates or use notecards and a poster board to make their comic.</p>	
115 minutes	<p>Discover/Engage/Practice: On Slide 9 in the PowerPoint, show the video the video “Creating your Character.” Use the video series to help your students draw a Character. Choose the “How to Draw a Character” video that meets the students needs. Demonstrate by drawing on the board along with the video.</p> <p>Next Activity, allow students to start creating their comics. Provide templates worksheets to students (Comic Strip Template 1, 2, or 3), or provide note cards and poster board for students to make large scale comics.</p> <p>Give students time to work on their comics and leave a couple of days in your time frame for the students/groups to share out their creations.</p>	
80 minutes	<p>Check for Understanding/Summarize/Close: On the last day or two of the lesson allow students to present their comics to the class and share their creations.</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?



BUSINESS MANAGEMENT AND ADMINISTRATION CLUSTER

LESSON 1

Lesson Plan Title: Day 1: Market Opportunities with Products & Services		Instructor:
Suggested Total Time for Lesson (minutes): 40 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.BM.1439.13 Understand the nature of business to show its contributions to society.		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Pencils • Product Ideas Sitting around the room 		Resources: <ul style="list-style-type: none"> • Business Cluster PowerPoint Presentation
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	<p>Get Started/Explain: Introduce students to the world of Business through Market Opportunities. Start on Slides 1-5 in the PowerPoint</p> <p>Start with this video as an introduction to Business: Your Entrepreneur Pasty Footwear. The video is embedded into this PowerPoint Presentation and does not require the internet to be able to play.</p>	
15 minutes	<p>Discover/Engage/Practice: Start with the discussion on Slide 6: Every product that is available in the market today was at one time someone's idea. That idea was generated in response to an opportunity that someone recognized – a market opportunity. Use the Market Opportunities PowerPoint Presentation as a guide for this activity.</p> <p>Examples</p> <ul style="list-style-type: none"> • The pencil or pen that you are writing with. • The clock on the wall • The smartboard or Promethean TV in your classroom. • Product ideas come from different places • An idea to solve a current problem that exists. • An idea to assist with the needs of the customer or improvement of an already existing idea. • An idea that directly relates to another problem. • Or sometimes a totally new idea for something that has never been produced • Now show the Think Outside the Box video on this slide. This video is embedded into this presentation and you do not need the internet to play this video. 	
15 minutes	<p>Check for Understanding/Summarize/Close: Hands-on Activity:</p> <ul style="list-style-type: none"> • Divide the students into pairs. Have the students explore the classroom and pick a product. Have them go back to their desks and determine the problem the product solves and consider the market opportunity. Provide time for a share out to the entire class. • Alternative Option: Use the PowerPoint Products that Solve Problems and let each pair or group pick a product from the presentation and share out the problem it solves. 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



BUSINESS MANAGEMENT AND ADMINISTRATION CLUSTER

LESSON 2

Lesson Plan Title: Day 2: Goods or Service		Instructor:
Suggested Total Time for Lesson (minutes): 40 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.BM.1439.13 Understand the nature of the business to show its contributions to society. 0972.BM.1439.14 Understand economic systems to be able to recognize the environments in which businesses function.		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: • Whiteboard or T-Chart or Interactive Display		Resources: • Business Cluster PowerPoint Presentation
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	<p>Get Started/Explain: Start on Slide 7 of the PowerPoint.</p> <p>Writing the terms “Goods and Services” on the board, ask students to brainstorm definitions for each. After student sharing, provide and write a definition for each on the board. Goods are things you can buy and hold. Services are things that people do for others. Make a T-Chart with some examples on the board.</p>	
15 minutes	<p>Discover/Engage/Practice: A product is physical, and it is also tangible. This implies that a product can be held, it can be seen, felt, or smelled. A product can be stored for future use. A product can be owned. A product can be returned to the seller or transferred to another consumer.</p> <p>A service is a work done by another person for another individual, it is intangible and can only be felt. For instance, a person will visit a restaurant to have the desired services performed by other people while they relax at their tables. Services vary according to who provides them- where, when, and how. A service is perishable and cannot be stored for later use or sale. A service cannot be owned by the consumer once payment has been made.</p> <p>Worksheet 1 is on this slide and should be completed as a class as part of the instruction.</p>	
20 minutes	<p>Check for Understanding/Summarize/Close: Worksheet #2 should be completed individually and then the answers should be reviewed in a class discussion.</p> <p>Slide 8 - This is an Extra but very fun resource for you and your students. Search GimKit for a Game about “Goods or Services” “Goods vs Services” to play a Goods and Services GimKit.</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



BUSINESS MANAGEMENT AND ADMINISTRATION CLUSTER

LESSON 3

Lesson Plan Title: Days 3-5: Entrepreneurship & Design for Delight		Instructor:
Suggested Total Time for Lesson (minutes): 120 minutes (3 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.BM.1474.3 Discuss entrepreneurial discovery processes 0972.BM.1474.11 Identify creative thinking and how entrepreneurs solve problems 0972.BM.1474.36 Apply the design thinking process.		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Large Post-It Note Paper or a Whiteboard • Sticky Notes 		Resources: <ul style="list-style-type: none"> • Business Cluster PowerPoint Presentation
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	Get Started/Explain: Start on Slide 9 The first step as a designer is to develop empathy. Read the Humpty Dumpty Nursery Rhyme to your students. Go to the next slide.	
105 minutes	Discover/Engage/Practice: <ul style="list-style-type: none"> • Work through Slide 10 • Display chart paper with 3 columns or 3 sheets of Post-It Note Paper. Label each column/ sheet with the questions. See the notes section on the PowerPoint Slide for more information. • Allow students to answer this question from the perspective of Humpty Dumpty. Record their answers on the enlarged chart paper or write onto this slide. Sticky Notes can be used for students to post their ideas so you can group and have a class discussion. • Tell students to be creative as they think of reasons for why Humpty Dumpty fell. Encourage them to get into the space of the character. • Continue through with the remaining questions. • Explain to students after coming up with an idea of how to help humpty the next step would be to develop a prototype. (In this lesson we do not actually create the prototype, however if time permits in your classroom you could have students work in groups to develop the prototype as a extra to this lesson) • Explain to your students that we are going to take this idea and apply it to products that we see created in the Business World to solve problems. • Now that you have your students thinking, have them consider a problem. When you are preparing to open a business, you need to discover the problem that you are going to solve, develop a product or product(s) that will solve that problem. It will be difficult for your students to think outside of the box and you will need to facilitate these ideas. Have students share problems with a common console, spots training, getting up early, etc. A great example to use is why were turf fields developed for sports. • Use the next few slides and Discuss new innovative products as well as how other products have been improved over time. Here take the time to discuss the problem that the product is solving and how that is different then what is currently out on the market. • Go through slides 11-26 (this is an exercise to get the students thinking) 	
5 minutes	Check for Understanding/Summarize/Close: Ask the Students what they will Design?	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



BUSINESS MANAGEMENT AND ADMINISTRATION CLUSTER

LESSON 4

Lesson Plan Title: Days 6-9: Prototyping and Pitch Development		Instructor:
Suggested Total Time for Lesson (minutes): 160 minutes (4 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.BM.1475.7 Assess the need to use external resources for concept development 0972.BM.1476.26 Identify methods of prototyping 0972.BM.1476.27 Explain why prototyping is important		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Whiteboard or T-Chart • Popsicle Sticks • Straws • Paper • Construction Paper • Rulers • Tape • Glue • Paperclips/Binder clips • Index Cards • Cotton Balls • Toothpicks • Aluminum Foil 		Resources: <ul style="list-style-type: none"> • Business Cluster PowerPoint Presentation
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Start on Slide 27 Ask the students the question "What will you create or redesign?" Reflect on the content covered in the previous lesson as necessary.	
140 minutes	Discover/Engage/Practice: Go to Slide 28 Have students complete the Product/Service Design Challenge Worksheet. Have students "pitch" their idea and reason to you. Explain the purpose of a Product Pitch to the students. Once you approve the design you can let the students start building their prototype.	
5 minutes	Check for Understanding/Summarize/Close: Prep the students for their Shark Tank Product Fair.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



BUSINESS MANAGEMENT AND ADMINISTRATION CLUSTER

LESSON 5

Lesson Plan Title: Days 10: Shark Tank Product Fair		Instructor:
Suggested Total Time for Lesson (minutes): 40 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>0972.BM.1439.3 Understand the nature of the business to show its contributions to society.</p> <p>0972.BM.1439.4 Understand economic systems to be able to recognize the environments in which businesses function</p> <p>0972.BM.1474.11 Identify creative thinking and how entrepreneurs solve problems</p> <p>0972.BM.1474.36 Apply the design thinking process</p> <p>0972.BM.1475.7 Assess the need to use external resources for concept development</p> <p>0972.BM.1476.26 Identify methods of prototyping</p> <p>0972.BM.1476.27 Explain why prototyping is important</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Location for Shark Tank Fair • Tables or Desks • Tablecloths (Optional) • Tri-Fold Poster Board • Access to Computer and Printer for Students (Optional) • Access to promoting the Shark Tank Fair depends on how you will be handling it in your classroom. • Fake Money Printed and Cut 		Resources: <ul style="list-style-type: none"> • Business Cluster PowerPoint Presentation • Fake Money PDF
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Hold your Shark Tank Product Fair – some ideas are listed below: <ul style="list-style-type: none"> • Have students Create a Tri-Fold Poster with their “Company Name”, “Product or Service Name”, a description of the product or service, and some illustrations (computer printed or hand-drawn) to show how the product works. • Hold a small fair in your classroom and let the students walk around and see other’s creations • Invite other teachers, administrators, and/or parents to your classroom Shark Tank Product Fair. • Have a grade-wide Shark Tank Product Fair inviting other classes to come. • Have a school-wide Shark Tank Product Fair inviting everyone in the school to come. • Hold a community-wide Shark Tank Product Fair inviting the school systems and community to come. 	
30 minutes	Discover/Engage/Practice: Go to Slide 29 – Allow students to set up their prototype at a desk or table. Each person that visits the fair should be provided with a set number of Investment Dollars (see the Fake Money PDF in the resources folder). Make sure that you give each visitor the same amount of Investment Dollars. Tell the visitors they will walk around the fair and listen to the students pitch their products and look at their prototypes. Visitors should invest their money wisely in the product they believe will be most successful. Explain to the students will want to make a pitch to others as they come around to encourage the audience their product is worth investing in.	
80 minutes	Check for Understanding/Summarize/Close: At the end of the fair, the student with the most investment money will be the Entrepreneur Winner!	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?



EDUCATION AND TRAINING CLUSTER

LESSON 1

Lesson Plan Title: Create the Ideal Playground		Instructor:
Suggested Total Time for Lesson (minutes): 85 minutes (2 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Students will create their ideal playground.		
Careers in Education 0972.ED.1321.19 Select age-appropriate indoor and outdoor play equipment and activities for physical development 0972.ED.1321.22 Construct purposeful play activities that support essential learning in an early childhood setting. 0972.ED.1321.54 Analyze needs for safety, health and comfort, and convenience in an early childhood setting 0972.ED.1003.37 Develop activity center plans that address different developmental domains and that accommodate varying numbers of children in early childhood		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Paper • Colored construction sheets • Scissors • Art supplies: pencils, markers, crayons, colored pencils, etc. • Glue • Tape • Ruler 	Resources: <ul style="list-style-type: none"> • Playground Picture Examples PPT • Let's Build a Playground book by Michael J. Rosen (suggested) • Search YouTube for Let's Build a Playground videos 	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
20 minutes	Get Started/Explain: Show pictures of various playgrounds. Ask the class what they enjoy most about playgrounds and what is their favorite piece of play equipment. Ask what could make it better? List student responses on a whiteboard.	
5 minutes	Explain that students are going to design their ideal playground.	
20 minutes	Discover/Engage/Practice: Divide the class into groups. Pass out art supplies and have students sketch out the design of their playground. Remind students playgrounds should be fun but also needs to be safe for everyone. They should include safety in their design.	
20 minutes	They can use supplies to build a mock playground.	
20 minutes	Check for Understanding/Summarize/Close: Have students present their designs to the class. Take pictures and keep sketches for their portfolio. Display student designs around the room. Additional Options: <ul style="list-style-type: none"> • Create a competition by having students vote on the top three best designs. • Explain that each county has different budgets. Give each group a different budget amount and have them create their ideal playground within the budget. Check with your school office for equipment catalogs or have them look online, if available. 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



EDUCATION AND TRAINING CLUSTER

LESSON 2

Lesson Plan Title: Create a Children’s Storybook		Instructor:
Suggested Total Time for Lesson (minutes): 75 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Students will write and illustrate a short storybook.		
Careers in Education 0972.ED.1323.4 Describe various methods of story presentation 0972.ED.1321.18 Demonstrate the handling and viewing of a book 0972.ED.1323.19 Apply knowledge of genres to book choice and presentation 0972.ED.1323.23 Identify literary elements in children’s literature		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
<ul style="list-style-type: none"> • Plain white letter size paper • Art supplies: pencils, markers, crayons, colored pencils, etc. • Rulers • Colored paper 		<ul style="list-style-type: none"> • Variety of Children’s Book • Recommended Children’s Book List • Children’s Book Review Guide • Writing Tips
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
20 minutes	Get Started/Explain: Discuss children’s books with the class. Ask students if they are familiar with some of the popular children’s books such as Cat in the Hat, Green Eggs & Ham, The Three Little Pigs, The Little Engine that Could, etc. Ask students if they have a favorite childhood book and why they like it. This lesson is relevant to an Educator’s Rising competitive event.	
40 minutes	Discover/Engage/Practice: Students will use their creativity and create a short children’s book. They will write and illustrate the book. You can have students work individually or in groups of two. The story can be about anything but should reinforce either academic or social/emotional values appropriate for public school. The book should be written for the Pre-K audience (ages 3-4) or Kindergarten through third grade (ages 5-9). The book should have a front and back cover and a title/credit page. A limit should be placed on the maximum number of pages such as 16, 20, 24, etc. The title page should include the title of the story, intended age audience, and author/illustrator.	
15 minutes	Check for Understanding/Summarize/Close: <ul style="list-style-type: none"> • Students can present their books to the class and/or put them on display. • You can use the grading rubric to assess students’ work. 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



EDUCATION AND TRAINING CLUSTER

LESSON 3

Lesson Plan Title: Create a Bulletin Board		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Students will create a mock bulletin board.		
Careers in Education 0972.ED.1323.2 Identify materials that encourage and support literacy skills 0972.ED.1323.15 Display or present creative products 0972.ED.1321.23 Discuss teaching techniques that encourage the development of a positive self-concept 0972.ED.1321.52 Describe visual cues that promote independence and decision making in early childhood		
Materials and Resources - What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> Bulletin board supplies: Pencils, markers, scissors, wrapping paper, wall borders, word strips, rulers, tape, pictures, staplers, etc. Plain white letter paper Posterboard 		Resources: <ul style="list-style-type: none"> Examples of bulletin boards: the school hallways, internet, magazines, etc. Bulletin Board Worksheet Bulletin Board Rubric (optional)
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	Get Started/Explain: Explain the purpose of a bulletin board is to be engaging and educational and they are important components of classrooms. They can enhance lessons to make them more engaging, reinforce a positive attitude or inspirational quote, remind of classroom rules, depict a holiday or time of year, etc.	
5 minutes	Share examples of effective bulletin boards. This lesson is relevant to an Educator's Rising competitive event.	
5 minutes	Discover/Engage/Practice: Divide students into groups. Allow students to use their creativity to decide what type of bulletin board they will create. Instruct students to sketch and design their board on a plain sheet of paper. Have students complete the Bulletin Board Worksheet.	
15 minutes	Provide each group a piece of poster board/paper and have them create their bulletin board.	
10 minutes	Check for Understanding/Summarize/Close: <ul style="list-style-type: none"> Display students' bulletin boards around the room. Allow students to present their designs to the class if they choose. Optional: Have students and/or teachers vote on the best designs. Bulletin Board rubric included in resources if needed 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



EDUCATION AND TRAINING CLUSTER

LESSON 4

Lesson Plan Title: Teach for a Day		Instructor:
Suggested Total Time for Lesson (minutes): 135 to 180 minutes (3-4 days - depending on class size)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Students will choose their favorite skill or hobby and teach it to the rest of the class.		
Careers in Education 0972.ED.1321.11 Identify learning opportunities and conditions that develop creative and critical thinking 0972.ED.1321.23 Discuss teaching techniques that encourage the development of a positive self-concept 0972.ED.1322.8 Recognize the need for self-assessment for continued professional growth 0972.ED.1322.11 Exhibit appropriate characteristics in an educational team setting		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
<ul style="list-style-type: none"> Teach for a Day Lesson worksheet Students' material list – will vary per student 		<ul style="list-style-type: none"> Teach for a Day Lesson Worksheet
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Start out by asking students if they want to be a teacher. Explain they are going to get the chance to be the teacher for a day. This lesson is relevant to an Educators Rising competitive event.	
Time depends on the number of students in class. Allow 10 minutes per student/group	Discover/Engage/Practice: Have students brainstorm about all the things they are good at doing and what they can teach others to do. Ask them to choose one thing they want to teach the rest of the class to do. Have them write out their objective, materials list, and procedures using the Teach for a Day Lesson worksheet. Review each lesson to make sure materials are available and the lesson is school appropriate. Students can work individually or in groups. Be mindful of students who may not want to teach a lesson in front of the class. An alternative could be they can turn in their lesson to you and you use it to teach the rest of the class. Students will take turns teaching their lesson/activity to the class.	
10 minutes	Check for Understanding/Summarize/Close: Have students reflect on their lesson and what went well/what they would change. Poll the students again to see if there was a change in students who want to be a teacher.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



EDUCATION AND TRAINING CLUSTER

LESSON 5

Lesson Plan Title: Exploring Careers		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Students will choose an education staff member to job shadow and interview.		
Careers in Education 0972.ED.1322.6 Identify career-related skills and employment opportunities 0972.ED.1322.7 Identify resources for professional development 0972.ED.1322.10 Identify the importance and legal mandates of confidentiality 0972.ED.1322.11 Exhibit appropriate characteristics in an educational team setting		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none">Exploring Careers Interview FormPen/Pencil		Resources: <ul style="list-style-type: none">Exploring Careers Interview Form
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Start by having students give an example of a career in education. Write all the jobs on a whiteboard, flip chart, etc. Explain they will pick a school staff member to job shadow and interview.	
10 minutes	Discover/Engage/Practice: After students have selected the staff member, they will contact the selected staff member to schedule a day to job shadow and conduct an interview. Have them review the Exploring Careers Interview Form and select three additional questions they plan to ask during their interview.	
15 minutes per interview	Students will job shadow a staff member and conduct an interview. Students will complete the Exploring Careers Interview Form.	
10 minutes	Check for Understanding/Summarize/Close: Discuss the interviews with the class. Ask students what they learned from this experience and what was the most surprising information.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?

LESSON 1

Lesson Plan Title: Finance Day 1: Introduction into the World of Finance		Instructor:
Suggested Total Time for Lesson (minutes): 40 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.FI.1470.1 Calculate the time value of Money 0972.FI.1451.3 Discuss how people react to incentives 0972.FI.1451.12 Identify types of currency (e.g., coins, paper money, banknotes, etc.)		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources: • Finance Cluster PowerPoint Presentation
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
12 minutes	Get Started/Explain: Introduce Students to the Vocabulary Words. Use the PowerPoint Slides 1-4 as a Guide. Definitions for the Vocabulary words are in the Slide 4 Notes on the PowerPoint Presentation. Vocabulary Words are Income, Debt, Utilities, Expenditures, Spending, Cost, Savings, Budget, Salary, Retirement.	
15 minutes	Discover/Engage/Practice: Engage the students in a discussion about "what would you rather." See slide 5 in the PowerPoint Presentation. Discussion comments are in the Notes section of the PowerPoint Slide. Would you rather: <ul style="list-style-type: none"> • Spend as you earn • Save for big purchases • Save for college education • Save for emergencies 	
12 minutes	Check for Understanding/Summarize/Close: End with a discussion on why money is important.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

LESSON 2

Lesson Plan Title: Finance Day 2: Where did Money come from?		Instructor:
Suggested Total Time for Lesson (minutes): 40 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.FI.1470.1 Calculate the time value of Money 0972.FI.1451.3 Discuss how people react to incentives 0972.FI.1451.12 Identify types of currency (e.g., coins, paper money, banknotes, etc.)		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Pencils • Stick Notes • Bartering Video Guide Worksheet (Optional) 		Resources: <ul style="list-style-type: none"> • Finance Cluster PowerPoint Presentation • Extra Activity – National Geographic Trading Game (optional) Do an internet search for the entire lessons resources – video, pdf, and article
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	<p>Get Started/Explain: Start the lesson off with a recap of what students learned yesterday thinking about money in their lives. Now ask the question “Where did Money Come From?”</p> <p>Start the Finance Cluster PowerPoint Presentation on Slide 6 – Guiding questions and discussion topics to lead into the video you will show next are in the notes section of the PowerPoint.</p>	
20 minutes	<p>Discover/Engage/Practice: Show the video about Bartering – this video is embedded into the PowerPoint Presentation and you do not need the internet to show the video. The video is about 4 minutes long.</p> <p>If you would like there is a PDF named Bartering Video Guide Worksheet that you can have ready for your students to follow.</p> <p>If you have enough time you can work through some of the additional activities on this worksheet with your students or play the National Geographic Trading Game (do a google search) (video, PDF, and article are available through the national geographic website)</p>	
15 minutes	<p>Check for Understanding/Summarize/Close: Place students in pairs and have them discuss items they have traded in the past. Have each group come up with at least 2 items they have traded for in the past and bring the whole class back together to share out those ideas and end on a class discussion.</p> <p>An alternative way to share is to use sticky notes and make categories/topics around the classroom. Have the students group into pairs and create their sticky notes and then stick them on the walls under the categories/topics</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

LESSON 3

Lesson Plan Title: Finance Day 3: Needs vs Wants		Instructor:
Suggested Total Time for Lesson (minutes): 40 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.FI.1451.20 Set financial goals 0972.FI.1451.21 Develop a personal budget 0972.FI.1451.51 Maintain appropriate personal appearance 0972.FI.1451.53 Set personal goals 0972.FI.1451.54 Make responsible financial decisions		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
<ul style="list-style-type: none"> • Pencils • Sticky Notes 		<ul style="list-style-type: none"> • Finance Cluster PowerPoint Presentation
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	<p>Get Started/Explain: Engage students with a scenario to get them thinking about their spending habits and how that relates to wants and needs. See Slide 7 on the Finance Cluster PowerPoint in the Notes section for more details.</p> <p>Give students time to talk about what they see when they go to the store and lead into an in-depth discussion whether they believe those are wants or needs.</p>	
5 minutes	<p>Discover/Engage/Practice: Show the video about Needs vs Wants on Slide 7 -this video is embedded into the PowerPoint Presentation and you do not need the internet to show the video. The video is about 2 minutes long.</p>	
20 minutes	<p>Check for Understanding/Summarize/Close: Discussion</p> <ul style="list-style-type: none"> • What are 3 questions you can ask yourself to determine if an item is a need vs. a want? • What is one NEED in your life? What is one WANT? • Why do you think it is helpful to know if something is a need or a want? • Brainstorm 3 items that could be considered a need for some people, but a want for others. • While categorizing needs and wants may sound simple, it can be hard to recognize the difference when you're considering a purchase. • Making a Wants and a Needs part on the Wall, have students write down each of their ideas on a sticky note and then take those sticky notes to the appropriate area. As a class discusses what they came up with. 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

LESSON 4

Lesson Plan Title: Finance Day 4: Understanding Spending		Instructor:
Suggested Total Time for Lesson (minutes): 40 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.FI.1451.20 Set financial goals 0972.FI.1451.21 Develop a personal budget 0972.FI.1451.51 Maintain appropriate personal appearance 0972.FI.1451.53 Set personal goals 0972.FI.1451.54 Make responsible financial decisions		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
<ul style="list-style-type: none"> Dried Beans or Color Pencils or Computers with Excel The Bean Game Handouts or Virtual File 		<ul style="list-style-type: none"> Finance Cluster PowerPoint Presentation The Bean Game Teacher Guide The Bean Game Handouts or Virtual File
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Reflect on yesterday's lesson: While categorizing needs and wants may sound simple, it can be hard to recognize the difference when you're considering a purchase	
30 minutes	Discover/Engage/Practice: Play The Bean Game <ul style="list-style-type: none"> There are a few ways you can do this with your students. You can purchase dried beans and distribute them as the game indicates, you can have students use the virtual worksheet (excel document) which will allow them to type in the numbers to calculate their beans, or you can use the printed handout and color pencils to allow the students to color in the beans. Follow the directions on the Teacher Guide and play the game. 	
5 minutes	Check for Understanding/Summarize/Close: Discussion <ul style="list-style-type: none"> What did you learn from this game? 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

LESSON 5

Lesson Plan Title: Finance Day 5: Welcome to the Game of Findance Your Future (Intro Game Rules)		Instructor:
Suggested Total Time for Lesson (minutes): 40 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>0972.FI.1451.18 Explain the need to save and invest</p> <p>0972.FI.1451.20 Set financial goals</p> <p>0972.FI.1451.21 Develop a personal budget</p> <p>0972.FI.1451.22 Describe sources of income (wages/salaries, interest, rent, dividends, transfer payments, gift funds, inheritances, etc.)</p> <p>0972.FI.1451.23 Discuss types of loans (e.g., mortgages, auto loans, etc.)</p> <p>0972.FI.1451.28 Maintain financial records</p> <p>0972.FI.1451.43 Discuss the nature of retirement planning</p> <p>0972.FI.1451.54 Make responsible financial decisions</p> <p>0972.FI.1470.12 Understand the fundamental principles of money needed to make financial exchanges</p> <p>0972.FI.1470.13 Analyze financial needs and goals to determine financial requirements</p> <p>0972.FI.1470.14 Manage personal finances to achieve a financial goal</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
		<ul style="list-style-type: none"> Finance Cluster PowerPoint Presentation
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	<p>Get Started/Explain:</p> <p>Recap what students have learned so far.</p> <ul style="list-style-type: none"> Tell students that we are going to apply all of their learning into playing a game called Findance Your Future. This is a game similar to the board game called Life but made especially for this class. Start on Slide 8 of the Finance Cluster PowerPoint Presentation. 	
30 minutes	<p>Discover/Engage/Practice:</p> <ul style="list-style-type: none"> Go to Slide 9 and watch the Wealth Video. This video is embedded into the PowerPoint Presentation and does not require internet access. Discuss what wealth means with the students after watching the video. Go to Slides 10 & 11 in the PowerPoint Presentation, and go over the game rules. Go to Slide 12 and go over how to Keep Track of a Register and the Loans students will take in the game. 	
5 minutes	<p>Check for Understanding/Summarize/Close:</p> <p>Tell the students to be ready because tomorrow we are going to have some fun playing the game of Findance Your Future.</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

LESSON 6

Lesson Plan Title: Finance Days 6-10: Play the Game of Findance Your Future		Instructor:
Suggested Total Time for Lesson (minutes): 160 minutes (4 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.FI.1451.18 Explain the need to save and invest 0972.FI.1451.20 Set financial goals 0972.FI.1451.21 Develop a personal budget 0972.FI.1451.22 Describe sources of income (wages/salaries, interest, rent, dividends, transfer payments, gift funds, inheritances, etc.) 0972.FI.1451.23 Discuss types of loans (e.g., mortgages, auto loans, etc.) 0972.FI.1451.28 Maintain financial records 0972.FI.1451.43 Discuss the nature of retirement planning 0972.FI.1451.54 Make responsible financial decisions 0972.FI.1470.12 Understand the fundamental principles of money needed to make financial exchanges 0972.FI.1470.13 Analyze financial needs and goals to determine financial requirements 0972.FI.1470.14 Manage personal finances to achieve a financial goal		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: You will need 4-6 sets of each of these <ul style="list-style-type: none"> • Printed Findance your Future Game Boards • Printed Career & Experience Cards • Printed Fake Money • Printed Car & House Choice Handout • Printed and Created Teacher Experience Cards (Enough for each student) • Printed Register and Loan Tracker Worksheet 		Resources: <ul style="list-style-type: none"> • Finance Cluster PowerPoint Presentation
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: <ul style="list-style-type: none"> • Before class starts you will want to make your own experience cards or have an extra set of already created experience cards you can walk around the class and hand out at random. • Review the Game Rules as needed. • Place students in groups of 3-4 students 	
30 minutes	Discover/Engage/Practice: <ul style="list-style-type: none"> • Show Sides 13-15 as needed. • Walk around and hand out your experience cards. • Engage with the student groups as they are playing 	
5 minutes	Check for Understanding/Summarize/Close: <ul style="list-style-type: none"> • Tell the students to be ready because tomorrow we are going to have some fun playing the game of Findance Your Future. • Play the game for the next few days allowing your students to get the hang of making financial decisions and how that impacts their financial wealth. You can make it fun by setting new competitive goals each day for a winner of the game. 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?



GOVERNMENT AND PUBLIC ADMINISTRATION CLUSTER

LESSON 1

Lesson Plan Title: Teamwork and Failure		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.GO.1070.1 Describe the key components of group dynamics and their effect on team success 0972.GO.1070.2 Analyze how effective work teams function and methods available for group leaders to develop an effective team		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • 12 Master locks • Soccer ball • 6 cones 		Resources:
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	Get Started/Explain: 2 Stations will be set up in area. Class will be divided into teams of 6. Each station will have a cadet to record the reflections. You must hand the clipboard to the cadet then they will explain the station. You are given 5 minutes at each station. You do not have to attempt stations in any specific order. When the whistle blows you will go to another station with your team.	
15 minutes (5 each station)	Discover/Engage/Practice: <ul style="list-style-type: none"> • Station 1 – Master locks are given to each team member to unlock. They have 5 minutes to complete combos. If not completed in 5 minutes, the cadet stops the group. • Station 2 – Soccer relay – each member must dribble the ball down and back between cones and then pass it to the next person. If they skip a cone they must go back to the missed cone and then finish. 	
20 minutes	Check for Understanding/Summarize/Close: After completing each station, the group must fill out the reflection for each station. This should take no more than 5 minutes. Each station has a theme. Have groups report back to the whole class what they learned about themselves. Time management and Teamwork Difference in Failure and Quitting.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



GOVERNMENT AND PUBLIC ADMINISTRATION CLUSTER

LESSON 2

Lesson Plan Title: Teamwork and Time Management		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Teamwork, Time Management, Communication 0972.GO.1070.1 Describe the key components of group dynamics and their effect on team success 0972.GO.1070.2 Analyze how effective work teams function and methods available for group leaders to develop an effective team 0972.GO.1070.6 Understand effective relationships with others in order to motivate and lead 0972.GO.1070.7 Apply good critical thinking skills and examine different approaches to making decisions		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • PVC pipe split in half • Cone • Marble • Nerf balls • Large band or slingshot 		Resources:
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	Get Started/Explain: 2 Stations will be set up in the area. The class will be divided into teams of 6. Each station will have a cadet to record the reflections. You must hand the clipboard to the cadet then they will explain the station. You are given 7 minutes at each station. You do not have to attempt stations in any specific order. When the whistle blows, you will go to another station with your team.	
25 minutes	Discover/Engage/Practice: <ul style="list-style-type: none"> • Station 1: Marble Bridge – Each person will be given a piece of PVC pipe that is split. You must build a bridge that the marble can travel. The only movement of the pipe is the angle when the marble is moving. Pipe cannot move forward. Time stops when the marble is in the cone, if it falls off the pipe you must restart from the beginning. • Station 2 – Slingshot catch -The launch crew is 3 members all the others are catchers placed at random distances. • 5 points for a short catch and 10 for a long catch. 	
10 minutes	Check for Understanding/Summarize/Close: Reflections are to be answered at end of each station. Example: What was the most difficult part? How did you overcome conflict?	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



GOVERNMENT AND PUBLIC ADMINISTRATION CLUSTER

LESSON 3

Lesson Plan Title: Teamwork and Leadership.		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>Teamwork and communication</p> <p>0972.GO.1070.1 Describe the key components of group dynamics and their effect on team success</p> <p>0972.GO.1070.2 Analyze how effective work teams function and methods available for group leaders to develop an effective team</p> <p>0972.GO.1070.6 Understand effective relationships with others in order to motivate and lead</p> <p>0972.GO.1070.7 Apply good critical thinking skills and examine different approaches to making decisions</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
<ul style="list-style-type: none"> • Dominoes • 2 dice • Trolley with ropes • Cones 		
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	<p>Get Started/Explain:</p> <p>2 Stations will be set up in the area. The class will be divided into teams of 6. Each station will have a cadet to record the reflections. You must hand the clipboard to the cadet then they will explain the station. You are given 10 minutes at each station. You do not have to attempt stations in any specific order. When the whistle blows you will go to another station with your team.</p>	
25 minutes	<p>Discover/Engage/Practice:</p> <ul style="list-style-type: none"> • Station 1 -Shut the box. Each team will get one chance to shut the box by rolling the dice and totaling the numbers of both dice to drop the tiles, If your team gets all the tiles down you have completed the task, and close the box. Repeat this 2 times. • Station 2 Australian Trolley- 2 teams compete against each other. Select a group leader for each team. Each participant must stand on the trolleys and hold on to the ropes All team members must always keep both feet on the trolleys. If one falls off, then you must reset and then continue until you move the trolley past the cone. 	
10 minutes	<p>Check for Understanding/Summarize/Close:</p> <ul style="list-style-type: none"> • Did the Team Leader do a good job giving directions and answers to all questions to prevent miscommunication? • What could have been done better as a team? • What would life be like without a little fun? • Not everything is meant to be Laborsome...it is good to just do things to blow off steam and to JUST HAVE FUN! • Being able to let someone else be in control and letting them lead. It's always nice to be the leader, but sometimes being a good follower is more important. 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



GOVERNMENT AND PUBLIC ADMINISTRATION CLUSTER

LESSON 4

Lesson Plan Title: Communication and Teamwork		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>Take your time to get things done right. Time management and teamwork</p> <p>0972.GO.1070.1 Describe the key components of group dynamics and their effect on team success</p> <p>0972.GO.1070.2 Analyze how effective work teams function and methods available for group leaders to develop an effective team</p> <p>0972.GO.1070.3 Examine communication problems and solutions for work teams and evaluate barriers to effective collaboration, including conflict resolution techniques.</p> <p>0972.GO.1070.4 Understand the basics of communication, including the importance of two-way communication (sending and receiving) and how to share information with team members and superiors</p> <p>0972.GO.1070.5 Explain the need for leaders to issue clear, concise, and unambiguous directives</p> <p>0972.GO.1070.6 Understand effective relationships with others in order to motivate and lead</p> <p>0972.GO.1070.7 Apply good critical thinking skills and examine different approaches to making decisions</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
<ul style="list-style-type: none"> • 10 Styrofoam cups • String • Rubber bands • Litter (to carry a person) • Blindfolds 		
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	<p>Get Started/Explain:</p> <p>12 Stations will be set up in the area. The class will be divided into teams of 6. Each station will have a cadet to record the reflections. You must hand the clipboard to the cadet then they will explain the station. You are given 7 minutes at each station. You do not have to attempt stations in any specific order. When the whistle blows, you will go to another station with your team.</p>	
25 minutes	<p>Discover/Engage/Practice:</p> <ul style="list-style-type: none"> • Station 1 – Cup stacking using a rubber band with the 6 strings, stack the cups in a pyramid. Only the rubber band can touch the cups and team members can only hold the string. This drill will show how working together will be crucial in doing this skill. • Station 2 – Blind Litter Carry- Select a leader. Designate one member as the injured person. Litter carriers are blindfolded. They have to find the injured person, place them on litter and carry them to the finish line. An injured person is the only one that can give verbal directions. If someone touches an obstacle, the team resets with a different injured person. 	
10 minutes	<p>Check for Understanding/Summarize/Close:</p> <ul style="list-style-type: none"> • Enter their Reflections at the end of each station. Communication, Teamwork, and Trust are the objectives of these stations. • Did the team leader do a good job giving directions? • Was the person that was a casualty able to communicate effectively with everyone? • Report to the whole class what was learned 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



GOVERNMENT AND PUBLIC ADMINISTRATION CLUSTER

LESSON 5

Lesson Plan Title: Giving Directions and Speed		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>Giving Directions, Communications</p> <p>0972.GO.1070.1 Describe the key components of group dynamics and their effect on team success</p> <p>0972.GO.1070.2 Analyze how effective work teams' function and methods available for group leaders to develop an effective team</p> <p>0972.GO.1070.3 Examine communication problems and solutions for work teams and evaluate barriers to effective collaboration, including conflict resolution techniques.</p> <p>0972.GO.1070.4 Understand the basics of communication, including the importance of two-way communication (sending and receiving) and how to share information with team members and superiors</p> <p>0972.GO.1070.5 Explain the need for leaders to issue clear, concise, and unambiguous directives</p> <p>0972.GO.1070.6 Understand effective relationships with others in order to motivate and lead</p> <p>0972.GO.1070.7 Apply good critical thinking skills and examine different approaches to making decisions</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
<ul style="list-style-type: none"> • Corn Hole Board • Hula Hoop 		
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	<p>Get Started/Explain:</p> <p>2 Stations will be set up in the area. The class will be divided into teams of 6. Each station will have a cadet to record the reflections. You must hand the clipboard to the cadet then they will explain the station. You are given 7 minutes at each station. You do not have to attempt stations in any specific order. When the whistle blows, you will go to another station with your team.</p>	
25 minutes	<p>Discover/Engage/Practice:</p> <ul style="list-style-type: none"> • Station 1 – Corn Hole Team will play a game of cornhole. Each team member gets 1 chance to put the bag in the hole. 15 seconds will be deducted from your time for each successful toss. The event is timed given 7 minutes on the scoreboard deduct 15 seconds for each successful toss. 2 teams compete • Station 2 - Hula Hoops – The team holds hands and the hoop is but between 2 participants. The hula hoop must travel around the circle without hands breaking apart. Time stops after the hoop makes it all the way around the circle. 	
10 minutes	<p>Check for Understanding/Summarize/Close:</p> <ul style="list-style-type: none"> • Reflections are answered at each station. • Example: Was the team leader doing a good job? What was the most difficult part? • Report at end of class what you found. 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



GOVERNMENT AND PUBLIC ADMINISTRATION CLUSTER

LESSON 6

Lesson Plan Title: Teamwork and Communication		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>Time management and Teamwork Communication and trust</p> <p>0972.GO.1070.1 Describe the key components of group dynamics and their effect on team success</p> <p>0972.GO.1070.2 Analyze how effective work teams' function and methods available for group leaders to develop an effective team</p> <p>0972.GO.1070.3 Examine communication problems and solutions for work teams and evaluate barriers to effective collaboration, including conflict resolution techniques.</p> <p>0972.GO.1070.4 Understand the basics of communication, including the importance of two-way communication (sending and receiving) and how to share information with team members and superiors</p> <p>0972.GO.1070.5 Explain the need for leaders to issue clear, concise, and unambiguous directives</p> <p>0972.GO.1070.6 Understand effective relationships with others in order to motivate and lead</p> <p>0972.GO.1070.7 Apply good critical thinking skills and examine different approaches to making decisions</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
<ul style="list-style-type: none"> • Blindfolds and cones • Hula Hoops 		
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	<p>Get Started/Explain:</p> <p>2 Stations will be set up in the area. The class will be divided into teams of 6. Each station will have a cadet to record the reflections. You must hand the clipboard to the cadet then they will explain the station. You are given 7 minutes at each station. You do not have to attempt stations in any specific order. When the whistle blows you will go to another station with your team.</p>	
20 minutes (10 each station)	<p>Discover/Engage/Practice:</p> <ul style="list-style-type: none"> • Station 1 – Helium Hoop 2 teams – Team members must lower the hoop from head height to the ground. Team members must always keep both index fingers on hoop. Fingers must always stay straight and parallel with arms tucked at side. If team member finger comes off, they must restart. Only group leader may talk. • Station 2 – Minefield – 1 member is to be blindfolded; the other members will give person direction from perimeter of minefield. Disk cones are the mines and are placed randomly in the area marked 	
20 minutes	<p>Check for Understanding/Summarize/Close:</p> <ul style="list-style-type: none"> • After completing each station, the group must fill out the reflection for each station. This should take no more than 7 minutes • Each station has a theme, Teamwork, Time management, and Communication. Did the team leader do a good job giving directions? • Have groups report back to the whole class what they learned about themselves. 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?



HEALTH SCIENCE CLUSTER

LESSON 1

Lesson Plan Title: Health Career Explorations		Instructor:
Suggested Total Time for Lesson (minutes): 90 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>Health Science</p> <p>0972.HE.0711.5 Discuss healthcare fields and the types of workers needed</p> <p>0972.HE.0711.8 Describe selected types of healthcare facilities and healthcare delivery systems (e.g., organizational and financial structure, departments and services, type and levels of healthcare personnel, policies and requirements)</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
<p>Materials:</p> <ul style="list-style-type: none"> • Large piece of paper or poster board • Markers, colored pencils, crayons 	<p>Resources:</p> <ul style="list-style-type: none"> • Fakebook profile template • LinkedIn profile template • Patient scenarios • Explore Health Careers • Health Science Discover your Future Chart • Employability Skills Web Links and Resources • Health Career Explorer explorehealthcareers.org • Featured Health Professions - Health Professions Network (hponline.org) • Home : Occupational Outlook Handbook: : U.S. Bureau of Labor Statistics (bls.gov) • Careers.org Healthcare Practitioners and Technical - Occupations - Careers.org • Careers.org Healthcare Support - Occupations - Careers.org • Reality Check - EducationQuest • Video Library Videos CareerOneStop • Healthcare virtual tours for hospitals and healthcare facilities (virtually-anywhere.com) • Imagine U - Home Page (camcinstitute.org) 	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	<p>Get Started/Explain:</p> <p>Ask students to brainstorm about healthcare facilities and health careers to see what the students already know about the different health care delivery systems and careers.</p>	

<p>15 minutes</p> <p>30 minutes</p> <p>10 minutes</p> <p>10 minutes</p> <p>20 minutes</p> <p>20 minutes</p>	<p>Discover/Engage/Practice:</p> <ul style="list-style-type: none"> • Present different Health Care Facilities to students using the HC Facilities PowerPoint. Do Turn and Talk activity about the homeless veteran (see PowerPoint slide 4) • Four Corners of Practice activity: seat students in groups of 4 • Have students research different healthcare careers using resources provided and/or the health career chart provided (if no internet access) • On a large sheet of paper, students write personal information on each corner: name, health career choice, education necessary, expected job description; or create a social media profile for the career of choice • Students discuss the four individuals represented on the corners of their paper or in the social media profile, and then select one of the following patient scenarios in which each would be professionally involved: <ul style="list-style-type: none"> › Motor Vehicle Crash with Burn Description: Patient arrives in the Emergency Department (ED) via ambulance post-motor vehicle crash (MVC). He was wearing a seat belt and was T-boned by another car on the driver's side, the vehicle's airbags were not deployed. During extraction from the vehicle by the firefighters, there was spontaneous combustion of the vehicle and the patient sustained burns on his legs. The patient arrives in the ED with difficulty breathing and severe pain in his upper chest. › Broken Hip Description: A. Jones is a 76-year-old widow who slipped and fell outside her home and broke her left hip. A. Jones was admitted to the hospital three days ago and had hip surgery to repair the break. The surgery was uneventful, but recovery has been slow. A. Jones has a history of high blood pressure, osteoarthritis, and "stomach problems". A. Jones has a history of heavy drinking of alcohol, but states has recently "cut back to 1-2 drinks per day" and currently smokes ½ to 1 pack per day • The group will compose a story about the patient they selected. The story should tell how each professional in their group would care for the patient and what type of facility(s) they would be in (note- it is up to the teacher to determine the requirements for the writing exercise) • (Optional extension activity) Groups can prepare posters to illustrate their teamwork and present it to classmates. Can work in groups: some do writing of the story and others create poster illustration.
	<p>Check for Understanding/Summarize/Close:</p> <ul style="list-style-type: none"> • Were students able to discuss the different healthcare fields, facilities, and types of workers needed? • Did students display an understanding that the different roles of health care providers and health care facilities play in supporting the needs of the health care consumer?
<p>Modifications, Support, and Extensions (for those students with IEP)</p>	
<p>Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?</p>	



LESSON 2

Lesson Plan Title: Cell vs. Cell		Instructor:
Suggested Total Time for Lesson (minutes): 30-45 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Health Science 0972.HE.0716.13 Examine the structure of a typical cell 0972.HE.0716.14 Distinguish the function of each cell structure		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: If not using digital option: <ul style="list-style-type: none"> Paper, markers, colored pencils, scissors, glue 		Resources: <ul style="list-style-type: none"> Cell vs Cell PowerPoint Cell Template Human Cell vocabulary and KEY
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10-15 minutes	Get Started/Explain: Student instructions: Have you ever thought about how similar cell phones and apps could be compared to a human cell? Look up the definitions of each cell component. Then use the different apps/ cell phone components to make a comparison to each part of the human cell and its function Human cell vocabulary and key is in the resource file	
20-30 minutes	Discover/Engage/Practice: Variations: <ul style="list-style-type: none"> Digital - Students make a copy of slides. "Add slide" or provide a list for your vocabulary terms and definitions. Copy/paste icons into cell phone (you will have to adjust the image sizes). You can find your own by clicking "insert," "image," "search the web," and enter specifics for what you are looking for, click on the image, and at the bottom, choose "insert." Drag the corners of the box to the size you need. Use the toolbox bar to insert lines and text boxes to explain which cell part you are referring to, and why it can be compared to the cell component. Variation 2: Print and cut image and icons. Follow instructions on slide 3 for cell phone icon/component comparison. Variation 3: MAKE YOUR OWN! Use paper, markers, etc., to create your own cell phone and draw the components and apps. Draw a line from each one to your explanation of how it relates to part of a cell 	
5 minutes	Check for Understanding/Summarize/Close: Were students able to identify the components of the human cell and compare them to the parts of a cell phone? Were students able to distinguish the function of the human cell parts?	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



HEALTH SCIENCE CLUSTER

LESSON 3

Lesson Plan Title: Wash This Way		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Health Science 0972.HE.0711.24 Explain the current requirements of standard precautions and the procedures used at a variety of healthcare facilities to support those standards (e.g., infection control, proper hand washing, and gloving procedures)		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none">• Baby oil, Vaseline, lotion or cooking spray• glitter (enough for each student to sprinkle on hands)• newspaper or large poster paper to protect surfaces from excess glitter• Access to a sink with soap, paper towels, and running water for handwashing• Paper for tracing outline of hands• Pen, pencil, marker or crayons	Resources: <ul style="list-style-type: none">• Videos Handwashing CDC• Wash Your Hands Fact Sheet• Handwashing flier (for extension activity)	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
2 minutes	Get Started/Explain: *Teacher tip: this lesson requires a sink with running water, soap and paper towels. Proper handwashing is essential for infection control and the best way to prevent the spread of disease, especially in health care. This handwashing activity will demonstrate how improper handwashing techniques can leave harmful germs on hands. (Can be done in groups of 4).	

This lesson is relevant to a HOSA Health Professionals competitive event.

<p>15 minutes</p> <p>3 minutes</p> <p>15 minutes</p> <p>10 minutes</p>	<p>Discover/Engage/Practice:</p> <ul style="list-style-type: none"> • Have students watch a video on the proper way to wash their hands. There are lots of online videos and resources to demonstrate proper handwashing (ex.YouTube or CDC website) • Teacher should demonstrate proper handwashing and explain why soap, water, drying hands, etc. and proper technique is important. • Students will trace outlines of their hands on a piece of paper • 4 Students will “dirty’ their hands with nonstick cooking spray, lotion, baby oil, or Vaseline and glitter. Explain that the glitter represents microorganisms or germs that we normally cannot see. <ul style="list-style-type: none"> › Student 1 wash with warm water, rinsing only (no scrubbing or soap) for 5 seconds. › Student 2 wash with warm water, scrubbing for 20 seconds under the faucet with no soap. › Student 3 wash with warm water and soap, scrubbing hands under the faucet for 20 seconds, and rinsing just until no soap is left on hands › Student 4 wash with warm water and soap, scrubbing hands (while not under faucet) for 20 seconds, and rinsing thoroughly. • Observe the cleanliness of each student’s hands record observations by shading in the outline of the hand to indicate where you still see glitter. • Each volunteer will dry their hands thoroughly with a paper towel, and observe and record the cleanliness of hands again. • After all observations are recorded, all students will wash with soap and water again to remove all glitter and cooking spray. • Have students create a handwashing flier as an extension activity. • 1. Discuss with students what they have learned from the hand washing experiment. (It is not easy to remove germs. It is necessary to use both soap and water, to wash hands for at least 20 seconds, and to rub vigorously.) • 2. Discuss with students how germs can be picked up or spread through inadequate hand washing. Cold viruses can be spread by touching people or objects. The flu virus may spread by contact with infected people. In a preschool, a child can put a toy in his mouth and then give it to another child, who picks up germs from the toy. Think about other examples. Hand washing protects you from illness, but also protects those people you may encounter. • 3. Explain to students that because microbes are living organisms, they require certain conditions to live. The environment is the favorable surroundings and conditions external to the host that cause or allow the disease to be transmitted. Some diseases live best in dirty water. Others survive in human blood. Still others, such as E. coli, thrive in warm temperatures but are killed by high heat.
	<p>Check for Understanding/Summarize/Close:</p> <ul style="list-style-type: none"> • Did students recognize the differences in removing the “germs” with the different handwashing techniques? • Do students understand the proper steps in handwashing to remove dirt and germs? • Why is this important in health care?
<p>Modifications, Support, and Extensions (for those students with IEP)</p>	
<p>Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?</p>	



HEALTH SCIENCE CLUSTER

LESSON 4

Lesson Plan Title: Body Systems		Instructor:
Suggested Total Time for Lesson (minutes): 35 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Health Science 0972.HE.0715.27 Recognize body planes, directional terms, quadrants, and cavities 0972.HE.0715.28 Analyze the basic structure and function of the human body		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none">• Markers: Multiple colors• Butcher paper: *see below		Resources: <ul style="list-style-type: none">• Abdominal organs diagram• Four abdominal quadrants diagram• Nine abdominal regions diagram
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: <p>Understanding human anatomy is important in health care because it helps us understand how our body systems work to keep us alive, and how healthcare providers can treat bodies that are not functioning properly. The abdomen lies between the chest and the thighs of the legs and contains many organs. There are numerous diseases that affect the organs in the abdomen. This lesson will allow students to recognize where the abdominal organs are located in the body.</p> <p>Provide students with the diagrams in the resource file or you may choose to allow students to use a textbook or on-line resource.</p> <p>*This activity can be done using several methods. You can use sidewalk chalk if outdoors, butcher paper, or other wide width paper, or students can draw/ trace the outline of a body on regular paper or poster board. These instructions will be for students working in teams of two, with butcher paper large enough to draw the outline of a person to mid-thigh; or using sidewalk chalk outside.</p>	

30 minutes	<p>Discover/Engage/Practice:</p> <ol style="list-style-type: none"> 1. Separate students into teams of two. 2. Have them get one piece of butcher paper per team or do the activity outside with sidewalk chalk. 3. Using whatever method you choose, one person will lie on the paper or sidewalk. Note-The paper size should be enough to fit the student's head, shoulders, torso, hips, to about mid-thigh. 4. Have the other team member draw a rough outline of the student laying on the paper or sidewalk, then the student laying down may get up. 5. Have the students complete the following commands, using different colors for identifying certain organs. 6. As each command is stated, observe students' responses and give feedback. <p><i>Optional:</i> have an outline on your whiteboard/ paper, etc., so all students can observe. After each command and feedback, draw the correct command so all students can see.</p> <p>Ask students to:</p> <ul style="list-style-type: none"> • Identify the umbilicus on the "patient" • Draw the diaphragm • Draw the liver • Draw the gall bladder • Draw the stomach • Draw the pancreas • Draw the spleen • Draw the kidneys • Draw the small intestine • Draw the large intestine • Draw the four quadrants and label them • Draw the nine regions and label them
	<p>Check for Understanding/Summarize/Close:</p> <p>Were students able to correctly recognize the basic structure and organs of the human torso? Were students able to identify the four quadrants and nine regions of the abdomen?</p>
<p>Modifications, Support, and Extensions (for those students with IEP)</p>	
<p>Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?</p>	



LESSON 5

Lesson Plan Title: Vital Signs		Instructor:
Suggested Total Time for Lesson (minutes): 35 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Health Science 0972.HE.0715 Advanced Principals of Health Science 0972.HE.0715.36 Apply procedures for measuring and recording vital signs including normal ranges		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Blood pressure cuff • Stethoscope • Clock or watch with second hand • May be provided by guest speakers, or borrow from local CTE health science program 		Resources: <ul style="list-style-type: none"> • <i>How to Take Vital Signs – Step-by-Step Manual Instructions - USA Medical and Surgical Supplies (usamedicalsurgical.com)</i> • <i>Vital Signs (clevelandclinic.org)</i> • Vital signs worksheet • Vital signs notes • Vital signs PowerPoint • What Temperature is it? Worksheet and (optional) prizes • Types of Thermometers
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: <p>*Before class, invite nursing students from a local college, technical education center or high school CTE program to come to the classroom for this lesson. You can also ask a parent, friend, or family member who is a medical professional (MA, LPN, RN, EMT, or Physician) trained to take vital signs. Ask them to bring a stethoscope, blood pressure cuff, thermometer, and a watch with a second hand to demonstrate taking vital signs.</p> <p>Explain: Vital signs are identified as a person's body temperature, pulse rate, breathing rate, and blood pressure. The goal of the lesson is to recognize how to identify a person's vital signs and what is the normal range.</p> <p>This activity is relevant to HOSA Future Health Professionals competitive event.</p>	
10 minutes 20 minutes	Discover/Engage/Practice: <ul style="list-style-type: none"> • Show Vital Signs PowerPoint. • Do Vital Signs worksheet, individual or as a group (can complete worksheet if guest is not able to come or while waiting to have vital signs checked) *can be a quiz. Hand out the vital signs note document for students to take notes as they view the PowerPoint. • During class, have the nursing students or medical professionals talk about and demonstrate how to take vital signs. If no guests are available, show a YouTube video on "How to Take Vital Signs" or "Basic Vital Signs." • After the nursing students or medical professional have completed the presentation, allow guests to demonstrate how to check vital signs on students (optional-will need 3-4 nursing students to do vital signs if class is large). • If taking students vital signs: set up stations for each nursing student or medical professional to perform taking the vital signs. • Provide privacy for each station if possible and remind students that medical information must be kept private, and they cannot ask another student or share the vital signs readings with others. • Leave enough time at the end of the class for students to ask questions. • Extension activity: "What Temperature is it?" 	
	Check for Understanding/Summarize/Close: Did students display understanding of the vital signs ranges and the procedures for measuring vital signs?	

Modifications, Support, and Extensions (for those students with IEP)

Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?



LESSON 6

Lesson Plan Title: What's Your Pulse Rate?		Instructor:
Suggested Total Time for Lesson (minutes): 40 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Health Science 0972.HE.0715.36 Apply procedures for measuring and recording vital signs including normal ranges		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> Stethoscope (s): purchase a set for the class, borrow from a CTE health science program, or local nursing program, or ask students to bring from home if available. Stopwatch, clock or watch with a second hand 		Resources: <ul style="list-style-type: none"> Parts of a Stethoscope Top 10 - Stethoscope Facts Education Zone DS Medical Worksheet: What is Your Pulse Rate? How to Use a Stethoscope
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	<p>Get Started/Explain: Vital Signs Lesson should be done prior to this lesson This activity will allow students to listen to a heartbeat (if stethoscopes are available), take a pulse and calculate a pulse rate at rest and after exercise.</p> <p>Explain how to find a pulse</p> <ul style="list-style-type: none"> Locate pulse by lightly pressing two fingertips on the underside of the wrist just below the base of the thumb. Pulse can also be found on the neck; place two fingers on the Adam's Apple and slowly slide fingers upward to the side. Ask students: What is causing the pulse that you are feeling? <p>Explain how to take a pulse rate</p> <ul style="list-style-type: none"> The rate is the speed at which something happens. Pulse rates are usually measured in how many beats per minute. The pulses that you're feeling correspond directly to the number of heartbeats. Since it can be difficult to count the number of pulses that occur in one minute, you are going to count the number of pulses that occur in 15 seconds and convert it to 60 seconds (1 minute) Because pulse rates are usually measured in minutes, it is very difficult to compare our results with anything else. Therefore, you must convert our results to the number of heart beats per minute. This can be done by multiplying the number of pulses in 15 seconds by 4. This lesson is relevant to a HOSA Future Health Professionals competitive event 	
30 minutes	<p>Discover/Engage/Practice: Show students a video on "stethoscope basics."</p> <ul style="list-style-type: none"> In groups of two, use the worksheet "What is Your Pulse Rate" <p>Students will:</p> <ul style="list-style-type: none"> Listen to heartbeat Take a pulse Calculate a pulse rate at rest, during exercise and after exercise Complete a lab report (optional) 	
	<p>Check for Understanding/Summarize/Close:</p> <ul style="list-style-type: none"> Were students able to find their own pulse and calculate their heart rate? Ask how did the heartbeat sound (if using a stethoscope)? Did students understand the difference in measuring heart rate before, during, and after exercise? 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



LESSON 7

Lesson Plan Title: Bone Fractures		Instructor:
Suggested Total Time for Lesson (minutes): 35 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Health Sciences 0972.HE.0732.415 Identify types of fractures 0972.HE.0732.419 Define open and closed extremity injuries		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none">• Head of celery• Knife• Cutting board (optional)• Small paper bags (optional)		Resources: <ul style="list-style-type: none">• Bone Fractures Images and Descriptions
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Prior to the lesson: <ul style="list-style-type: none">• Gather enough celery for each student to have a minimum of one stalk.• Separate the celery into stalks and cut off the ends.• Cut off the rounded bottom and leafy top of a head of celery and separate the stalks• Provide students with the bone fracture images and descriptions located in resources Ask students if they have ever broken a bone or know someone who has. If so, ask if they know the type of break it was. Most people break at least two bones in their lifetime. What are the different ways bones break? Using celery stalks we will model many different ways that bones can fracture. Not all fractures are alike. There are many ways that bones break and many ways to describe the characteristics of a break.	

20 minutes

Discover/Engage/Practice:

Break celery stalks in different ways, like snapping with two hands, striking against a firm surface, twisting, or crushing, so that each break pattern that results is unique in some way. Use the images to see the variety of ways to describe a bone break and see if the celery stalks you broke match any of the images. If not, break a stalk to match one of the examples.

- **Orientation:** Not all fractures are alike. There are many ways that bones break and many ways to describe the characteristics of a break. In transverse fracture, the break is at a right angle to the length of a bone. In an oblique fracture, the break is diagonal to the length of the bone. In a spiral fracture, one part of the bone has been twisted.
- **Number of pieces:** when a bone breaks completely into two separate pieces, this is called a simple fracture. When a bone breaks into three or more pieces, this is called a comminuted fracture.
- **Displacement:** sometimes when a bone breaks, it moves from its original location in the body. Bones that have moved after a fracture are called displaced and bones that do not move are called non-displaced.
- **Closed/Open:** If the force that breaks a bone is large enough, part of the bone can pierce the skin. This is called an open or compound fracture. To model this, poke a celery stalk through a hole in a paper bag. Bones that do not pierce the skin are called closed fractures.
- **Completeness:** sometimes a bone breaks, but not completely into two pieces. This is called an incomplete fracture. If the bone breaks all the way into separate pieces, this is called a complete fracture.
- **Location:** A bone can break at various places. Most long bones have three regions. The rounded end, where one bone meets another at a joint is called the epiphysis. The long middle region is called the diaphysis. The area between the end and the middle, where the bone comes wider, is called metaphysis.
- **Special cases:** There are many kinds of bone fractures, both the common types and categories you saw, and others. Sometimes, multiple kinds of bone fractures happen together. Bone is living tissue and can heal itself, but often it needs help. Doctors take an X-ray picture of the fracture, then may need to set the bone by moving broken pieces back where they belong. Casts and splints keep bones in the right position, making it easier for bones to heal correctly.
- **What's going on?** There are many kinds of bone fractures. Sometimes, multiple kinds of bone fractures happen together. Bone is living tissue and can heal itself, but often it needs help. Doctors take an X-ray picture of the fracture, then may need to set the bone by moving broken pieces back where they belong. Casts and splints keep bones in the right position, making it easier for bones to heal correctly.
- **Healing bones:** Bones heal in several stages. First a blood clot forms around the break. Your immune system cleans the area. Next a soft collagen cover forms over the break in a few days. This cover eventually hardens, as cells that create new bone add minerals like calcium to the bone. Finally, special cells trim the hard cover down to the size of the original bone.
- Have students compare their celery stalk "fractures" with other students and discuss.

Check for Understanding/Summarize/Close:

- Were students able to correctly identify the different types of bone fractures based on the celery stick breaks?
- Can students differentiate between open and closed extremity fractures?

Modifications, Support, and Extensions (for those students with IEP)

Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?



LESSON 8

Lesson Plan Title: Chain of Infection		Instructor:
Suggested Total Time for Lesson (minutes): 60-90 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Health Science 0972.HE.0715.29 Describe common diseases and disorders of each body system (prevention, pathology, diagnosis, and treatment)		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Popsicle stick or index card with causative agent written on it: bacteria, virus, parasite, fungi 		Resources: <ul style="list-style-type: none"> • Chain of Infection terms and definitions • Parts of the Brain Diagram • Chain of infection rubric • Chain of infection extension activity
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	<p>Get Started/Explain: This is a two-part lesson that can be either a whole class project or a group project. Part 1 will illustrate how different parts of the brain affect the body, and Part 2 will explain the chain of infection. Both parts will come together to create a neurological virus outbreak in the classroom. Students will determine how the outbreak occurred and how to stop it! Decide if they want to break into groups or complete the lesson as a whole class.</p>	
30 minutes	<p>Discover/Engage/Practice: Part 1: Provide students with Parts of the Brain diagram and discuss each as a whole group. The group(s) will need to document the following: Using the Parts of the Brain diagram: Choose two sections of the brain and write down the actions of the body it affects. Now pretend that those areas of the brain are affected by a stroke. Consider how your life would be different without those functions. Give two ways that your life would change.</p> <ul style="list-style-type: none"> • Choose two parts of the brain and write down the actions of the body that it affects. Now a highly contagious neurological virus outbreak has occurred, and those are the two areas of the brain that are affected. What would a person act like if a virus affected only those two parts of the brain? Be ready to tell which parts you picked and name your virus (be creative!). 	
45 minutes	<p>Part 2: Provide the students with the Chain of Infection terms and definitions. Follow the Chain of Infection rubric. The group will select the causative agent for the outbreak and give it a name (something silly or fun.... let them be creative). Next, they will choose the reservoir and decide how the causative agent gets from the reservoir to the host. Then they must decide how to stop the spread of the disease. They will write a story about the outbreak and illustrate how the infected person looks and acts. They must also show the chain of infection and tell what can be done to prevent the outbreak.</p>	
	<p>Check for Understanding/Summarize/Close:</p> <ul style="list-style-type: none"> • Did students show understanding of how the parts of the brain affect different parts of the body? • Did students show understanding the chain of infection? 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?



HOSPITALITY AND TOURISM CLUSTER

LESSON 1

Lesson Plan Title: WV Travel Regions		Instructor:
Suggested Total Time for Lesson (minutes): 75 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>Students will learn about the nine travel regions of West Virginia.</p> <p>Hospitality & Tourism</p> <p>0972.HO.7663.19 Work effectively in a team environment to improve the quality of work and the work environment</p> <p>0972.HO.7663.29 Locate the nine tourist regions of West Virginia on a map</p> <p>0972.HO.7663.33 Categorize historical/geographic places of interest in each of the tourism regions</p> <p>0972.HO.7663.36 Categorize the industries and products that are most important to West Virginia's economy</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Map of travel regions • Plain white letter size paper • Colored paper • Art supplies: pencils, markers, crayons, colored pencils, etc. • Craft supplies (for making map – rocks, flowers, leaves, cotton balls, sticks, macaroni, etc.) • Glue • Rulers 		Resources: <ul style="list-style-type: none"> • Map of Nine Travel Regions • Websites, textbooks, magazines about West Virginia for research
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	Get Started/Explain: Explain the nine travel regions that make up the state of West Virginia. Refer to the resources – Map of Nine Travel Regions. Show this map to students.	
5 minutes	Divide the class into nine groups and assign each group one travel region. Give each group a map of their travel region (Map of Nine Travel Regions resource).	
20 minutes	Discover/Engage/Practice: Instruct the groups to research their travel region and create a map identifying which counties are included in their region. Encourage students to be creative when creating their map using different items, possibly something representing that region. Each regional map will be combined at the end to create a state map of West Virginia.	
20 minutes	Have students pick a historical or unique feature about their region and create an advertisement such as a brochure, flyer, or commercial.	
15 minutes	Check for Understanding/Summarize/Close: Students will present their map and advertisement to the class.	
5 minutes	Place each regional map together to create a state map.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



HOSPITALITY AND TOURISM CLUSTER

LESSON 2

Lesson Plan Title: GloGerm and PPE		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Students will learn how to properly wash hands, clean surfaces and how to properly wear personal protective equipment.		
Baking & Pastry <ul style="list-style-type: none"> • 0972.HO.1980.4 Identify safe food handling processes 		
ProStart <ul style="list-style-type: none"> 0972.HO.1013.4 Display knowledge of cleaning and sanitizing methods 0972.HO.1013.6 Exhibit understanding of prevention, causes, and response to workplace injuries 0972.HO.1013.8 Demonstrate personal hygiene 		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Glo Germ Gel for hand washing • Glo Germ Powder for surface cleaning • UV Light • Soap • Paper Towels • Warm, running water • Aprons • Food Service Gloves • Hats or hair nets 		Resources: <ul style="list-style-type: none"> • Glo Germ Handwashing Instructions • Glo Germ Surface Cleaning Instructions • Proper PPE for Food Service PPT • The Professional Image video
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Read through the Glo Germ Handwashing and Surface Cleaning Instructions prior to starting lesson.	
5 minutes	<ul style="list-style-type: none"> • Ask students if they know how to properly wash their hands. Explain how to use the Glo Germ Gel for handwashing. • Ask students if they know how to properly clean a surface. Explain how to use the Glo Germ Powder for surface cleaning. 	
10 minutes	Discover/Engage/Practice: Follow the steps in the Glo Germ Handwashing Instructions and allow students to practice applying the Glo Germ gel and washing their hands. Discuss results – Did students properly wash their hands? Were there any “germs” seen from the UV light?	
10 minutes	After learning proper handwashing, follow the steps in the Glo Germ Surface Cleaning Instructions. Have students clean a non-porous surface such as a table, desk, doorknob, etc. Allow students to practice applying the Glo Germ Powder and evaluate their cleaning techniques. Did students properly clean the surfaces? Were there any “germs” left on surfaces?	
10 minutes	Show the Professional Image video. After the video, explain the proper use of PPE for Food Service using the PPT.	
10 minutes	Have students practice applying proper PPE: <ul style="list-style-type: none"> • Hair covering • Gloves • Aprons 	

5 minutes

Check for Understanding/Summarize/Close:

- Clean up the work areas and put away all supplies. Discuss the results from the Glo Germ activities.
- If time allows, you can have students complete the Grade 5 or Grade 6 Additional Activity

Modifications, Support, and Extensions (for those students with IEP)

Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?

LESSON 3

Lesson Plan Title: Plating Lesson		Instructor:
Suggested Total Time for Lesson (minutes): 135 minutes (3 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Students will practice plating and naming a dessert using brownies or twinkies as the main ingredient. Students will use a variety of garnishments to create their perfect plate that is both appealing and tasteful.		
Baking & Pastry 0972.HO.1026.2 Create menu item descriptions for bakery goods		
ProStart 0972.HO.1020.1 Prepare soups, appetizers, and desserts <ul style="list-style-type: none"> › 21.7 Describe various types of dessert sauces. (NRAEF Standard) 0972.HO.1020.2 Prepare cold garnishes <ul style="list-style-type: none"> › 22.1 Explain why and how garnish is used. (NRAEF Standard) › 22.3 Explain how desserts should be plated and presented. (NRAEF Standard) 		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Aprons • Food Service Gloves • Hats or hair nets • Frosted cake, Twinkie, Brownie, or other premade dessert • Various ingredients that can be used for garnishes such as berries, chocolate, flavored sweet sauces, whipped cream, frosting/icing • Suggested Equipment: <ul style="list-style-type: none"> › Garnishing tools › Pastry brushes (various sizes) › Petit cookie cutters or shapes › Plates (round and square) › Small mixing bowls › Small rolling pins › Squeeze bottles › Vegetable peeler › Whisks › Wooden skewers or toothpicks 	Resources: <ul style="list-style-type: none"> • Dessert Worksheet • Plating Plan for Visual Appeal (Round Plate) • YouTube Videos, magazines, or pictures of plated desserts: • Refer to Resource List for recommended searches. • PPT – Dessert-Analysis-Photos • PPT – The Visual Appeal of Plating Food • Terms: <ul style="list-style-type: none"> › Balance: Providing enough variety and contrast to hold interest › Classical Garnish: In classical cuisine, combination of foods placed on a plate to accompany the main item › Focal Point: Emphasizes and strengthens the design by giving height and direction › Garnish: To decorate or enhance the food with the addition of other items › Plating: The way food is arranged on the plate 	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
20 minutes	Get Started/Explain: Prepare a plate using the frosted cake or Twinkie and any garnishes desired so students may view as they enter the classroom. Ask the following questions: <ul style="list-style-type: none"> • Do you think this looks good? Why or Why not? • Would you eat this? Why or Why not? • Do you think it was hard to “plate” this dish? • Explain “Plating” and other terms 	

5 minutes	<p>Discover/Engage/Practice: Divide students into lab groups.</p> <p>Show students examples of plated desserts through the Dessert Analysis Plating Examples PPT, YouTube videos, or cookbooks.</p> <p>Distribute the Plating Plan document. Allow lab groups time to sketch their plate using color pencils so they may visualize their presentation.</p> <p>Using the materials list, students will choose a twinkie or brownie and garnishes then create a dessert. Students will plate their dessert following their Plating Plan. Remind students of lab and food safety rules from the GloGerm and PPE lesson before they begin preparing their recipes. Students will name their dessert.</p> <p>Students will complete the Dessert Recipe Worksheet.</p>
10 minutes	
10 minutes	
25 minutes	
10 minutes	
15 minutes	<p>Check for Understanding/Summarize/Close: Use a department camera, cell phone, or tablet camera to photograph the plate presentations. These photographs can be included in a student cumulative portfolio.</p> <p>Remind students of the proper cleaning of equipment before the class period ends.</p> <p>(If students finish early, they can complete the Plating and Garnishing Terms worksheet.)</p>
20 minutes	
<p>Modifications, Support, and Extensions (for those students with IEP)</p>	
<p>Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?</p>	



HOSPITALITY AND TOURISM CLUSTER

LESSON 4

Lesson Plan Title: Create your Ideal Food Truck		Instructor:
Suggested Total Time for Lesson (minutes): 115-135 minutes (3 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Students will create a mock food truck to include design, name of truck business, and menu.		
ProStart 0972.HO.1013.2 Identify large and small kitchen equipment 0972.HO.1013.14 Display knowledge of various job profiles and chain of command 0972.HO.1014.2 Demonstrate how to read and follow standard recipes. 0972.HO.1019.26 Organize the information on a menu. 0972.HO.1019.30 Classify menu items according to their popularity.		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Art supplies: Colored pencils, crayons, markers, pencils, scissors, rulers, tape, staplers, glue • Food Truck Templates • Food Truck Cutout Template (on cardstock) 		Resources: <ul style="list-style-type: none"> • Food Trucks PPT • Food Truck Templates • Food Truck Cutout Template
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
20 minutes	<p>Get Started/Explain: Prior to starting the lesson, make copies of the Food Truck Templates for each student/group. Print one copy of the Food Truck Cutout Template on cardstock for each student/group.</p> <p>Start by asking students if they have ever seen a food truck such as an ice cream truck. Ask students if they know other types of food trucks. Show the Food Trucks PPT with examples. The PPT also includes examples of menus, insides of food trucks, and how to find area and perimeter. Explain students are going to create their ideal food truck.</p>	
5 minutes	Divide students into groups or allow them to work independently. Give each student/group a copy of the Food Truck Templates and a Food Truck Cutout Template.	
60 minutes	<p>Discover/Engage/Practice: Students should brainstorm food truck ideas and what type of food their food truck will serve. Students will complete the Food Truck Templates which include the following:</p> <ul style="list-style-type: none"> • Creating a food truck company name • Creating a logo • Creating a menu • Designing the outside of the food truck • Deciding on equipment needed and creating the layout • Making sure the equipment will fit using Area and Perimeter 	
10 minutes	Students will copy their food truck design onto the Food Truck Cutout Template. Then, cut the outline of the food truck. Fold accordingly and use glue and/or tape to hold the truck together.	
20 minutes	<p>Check for Understanding/Summarize/Close: Students will present their food trucks to the rest of the class and put their model food trucks on display.</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



HOSPITALITY AND TOURISM CLUSTER

LESSON 5

Lesson Plan Title: Napkin Design		Instructor:
Suggested Total Time for Lesson (minutes): 40 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Students will learn how to fold napkins for elegant table settings.		
Hospitality & Tourism 0972.HO.1241.73 Identify the main styles of table service and how they are executed.		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: • Square, starched cloth napkins		Resources: • Videos of napkin fold designs • Instruction sheets: Clown Hat, Cardinal's Hat, Birds of Paradise
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	<p>Get Started/Explain: Prior to starting lesson, search the internet for videos on how to do napkin folds. Review the napkin fold instruction sheets in the resource folder and practice the napkin folds so you can do a demo for the students.</p> <p>The day of the lesson, show a couple videos on how to fold napkins and do some demos. Pass out the instruction sheets on how to fold napkins. Pass out square cloth napkins that have been starched. If cloth napkins are not available, you can use paper napkins, but they are harder to work with when making folds.</p>	
20 minutes	<p>Discover/Engage/Practice: Using the instruction sheets, allow students time to practice different folds with the napkins.</p>	
5 minutes	<p>Check for Understanding/Summarize/Close: Walk around the room and check for progress. At the end of the lesson, have students tell the class which napkin fold is their favorite.</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



HOSPITALITY AND TOURISM CLUSTER

LESSON 1

Lesson Plan Title: What Principle Am I		Instructor:
Suggested Total Time for Lesson (minutes): 45 min		
Content Focus - What will Students Learn? (Content Skill Sets)		
Participants will be introduced to the Leave No Trace 7 Principles		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: A pre-made flip chart of Leave No Trace 7 Principles Prop cards		Resources: The 7 Principles - Leave No Trace Center for Outdoor Ethics (lnt.org)
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
3-5 min	<p>Get Started/Explain:</p> <p>Introduce self and welcome participants to the PEAK program. Ask how many have been hiking, camping, fishing, boating or on a picnic? Ask participants if they have a favorite place they visit and why. Ask who knows how to Leave No Trace while outdoors? Explain that Leave No Trace is information and skills that help people protect themselves and also the areas that they visit (e.g., state parks, campgrounds, etc.) Leave No Trace is about making good decisions to protect the world around you- the world we all enjoy. Read and Explain each Principle.</p>	
35-45 min	<p>Discover/Engage/Practice:</p> <ul style="list-style-type: none"> • Read some clues for participants to guess which principle you are- when they think they know the principle, tell them not to yell the answer-yet! • Have them put their finger to their nose when they know. • At each clue, more fingers should be moving to noses. • When all participants "know," ask for the answer, as they guess each Principle, show them items from the prop cards to further illustrate what they can bring or do to Leave No Trace. • Ask if they have any other ideas for each Principle. 	
3-5 min	<p>Check for Understanding/Summarize/Close:</p> <ul style="list-style-type: none"> • Explain how the Leave No Trace 7 Principles teach people to care for the environment while enjoying outdoor activities. Recreation can sometimes cause impacts (damage) to the land, but by following these Principles, we can enjoy our favorite places every time we visit. • Point to flip chart and read the principles again. • Hand out a small reference card to each participant. • Tell them to keep these cards and use them as a reminder of how they can enjoy outdoor activities more wisely. • Ask for any last questions. Thank them for their time and attention and tell them you will see them again! 	

Modifications, Support, and Extensions (for those students with IEP

Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?



HOSPITALITY AND TOURISM CLUSTER

LESSON 2

Lesson Plan Title: Take A Virtual Park Visit		Instructor:
Suggested Total Time for Lesson (minutes): 45-60 minutes		
Content Focus - What will Students Learn? (Content Skill Sets)		
Establishes a connection between fun and promoting the Seven Principles of Leave No Trace		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: A list of the Leave No Trace Seven Principles One double-sided park brochure template for each learner Colored pencils or crayons		Resources: The 7 Principles - Leave No Trace Center for Outdoor Ethics (lnt.org) The Hidden Worlds of the National Parks (artsandculture.withgoogle.com)
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
3-5 min	<p>Get Started/Explain: Virtual Tour of National Park. After the tour: Teacher will ASK learner to list some things that they remember about the park tour (facts, park activities, etc). Teacher will ASK learner how The 7 Principles of Leave No Trace might apply at this park. Teacher will REMIND learner that Leave No Trace is information and skills that help people protect themselves and the areas that they visit.</p> <p>READ and EXPLAIN each principle.</p> <p>Note: Leave No Trace is about making good decisions to protect the world around you- the world we all enjoy.</p>	
35-45 min	<p>Discover/Engage/Practice:</p> <ul style="list-style-type: none"> Imagine that you have been asked to make a brochure for the park that you just toured. In the first section, write the name of the park and describe it. In the second section, write about things you can do at this park. Draw a picture of what you would like to do if you ever visit in person. In the third section, write down the names of each of the Seven Principles. In the fourth section, write about why Leave No Trace is important in this park. Fold the brochure along the dashed lines. On the outside cover, write your name and the name of the park. Decorate the cover with pictures that represent this park. 	
3-5 min	<p>Check for Understanding/Summarize/Close: Ask your learner to share their brochure with you. If you are engaging with other people over a video call, ask learners to hold their brochure up to the camera and talk about their park visit- think a “show and tell” manner. Ask learner(s) about other ways that they can encourage friends and family to visit the park. Remind the group that having fun at the park and practicing Leave No Trace are one in the same! Consider hanging the brochure up to display in your home.</p>	
Modifications, Support, and Extensions (for those students with IEP)		

Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?



HOSPITALITY AND TOURISM CLUSTER

LESSON 3

Lesson Plan Title: Lego & Leave No Trace		Instructor:
Suggested Total Time for Lesson (minutes): 15-20 minutes		
Content Focus - What will Students Learn? (Content Skill Sets)		
Connect learner with outdoor stewardship while playing indoors.		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: Assorted Legos Build Prompts	Resources: The 7 Principles - Leave No Trace Center for Outdoor Ethics (Int.org)	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
3-5 min	Get Started/Explain: Teacher will distribute present challenges (NOVICE, INTERMEDIATE, ADVANCED) Students will select one challenge from each level.	
35-45 min	Discover/Engage/Practice: <ul style="list-style-type: none">Students will design, plan, and build their Lego masterpieces.	
3-5 min	Check for Understanding/Summarize/Close: Students will show or what they created. If you would like to connect through social media utilize #leavenotrace and tag @leavenotracecenter	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



HOSPITALITY AND TOURISM CLUSTER

LESSON 4

Lesson Plan Title: Trash Timeline		Instructor:
Suggested Total Time for Lesson (minutes): 15-20 minutes		
Content Focus - What will Students Learn? (Content Skill Sets)		
To provide a visual and hands-on method exhibiting how long it takes for trash to decompose. Also ideal for combining a STEM curriculum with Leave No Trace		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: Trash Timeline Cards from the Activity Materials Packet		Resources: The 7 Principles - Leave No Trace Center for Outdoor Ethics (lnt.org)
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
3-5 min	Get Started/Explain: Teacher will distribute each of the pictures, as many to each participant as necessary to distribute all pictures, as evenly as possible. Distribute the time pages in a similar manner. Try to ensure that no person holds both a picture and its associated time page.	
35-45 min	Discover/Engage/Practice: <ul style="list-style-type: none"> Students will roam around, trying to figure out which pictures match up with which time periods. As they make their matches, you can comment on their accuracy and have them try to correct any errors. Students will talk to each other and figure out how long each item takes to decompose. When they finish, it would be nice to have them line up in order from shortest to longest time. Variation: <ul style="list-style-type: none"> Split your group into teams for a mini competition to see who can most accurately pair the images to their timeline date in the shortest amount of time. Instead of partners, the teams will simply be creating a timeline on the ground using the trash images and date range cards. This will require you to print out and use multiple sets of the Trash Timeline Cards from the Activity Materials packet. 	
5 min	Check for Understanding/Summarize/Close: <ul style="list-style-type: none"> Consider the following questions: What object's decomposition rate surprised you the most? What are some factors that relate to decomposition? Can we list them? (examples: microbes, soil type, time, moisture, heat, the item itself, size of the item, elevation, slope, aspect, temperature, and season) 	

Modifications, Support, and Extensions (for those students with IEP)

Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?

Note: See below for a list of the decomposition rates for common items. The cards do not indicate which item matches up to which time frame. Write this list down or use this page as a reference.

- Orange or Banana Peel-----Up to 2 years
- Cigarette Butts-----1 to 5 years
- Leather-----1 to 5 years
- Wool Socks-----1 to 5 years
- Gum-----5 years
- Plastic-Coated Paper-----5 years

- Plastic Bags-----10 to 20 years
- Nylon Fabric-----30 to 40 years
- Tin Cans-----50 years
- Aluminum Can-----80 to 100 years
- Plastic 6-Pack Holder-----100 years
- Glass Bottles-----1,000,000 years



HOSPITALITY AND TOURISM CLUSTER

LESSON 5

Lesson Plan Title: Ethics Game		Instructor:
Suggested Total Time for Lesson (minutes):		
Content Focus - What will Students Learn? (Content Skill Sets)		
To have participants develop a greater appreciation and understanding of their own personal ethics, as related to Leave No Trace.		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: Ethics Situation Cards from the Activity Materials packet		Resources: The 7 Principles - Leave No Trace Center for Outdoor Ethics (Int.org)
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
3-5 min	<p>Get Started/Explain:</p> <p>Teacher will make one set of “Ethics Cards” (add a local spin to this activity by creating new area-specific situations using the blank cards)</p> <p>Teacher will gather participants and introduce The 7 Principles.</p> <p>Teacher will establish three locations in the activity area as “ethics stations.”</p> <p>Teacher will explain to the group that this activity will help them explore their own existing personal Leave No Trace ethics. This activity is also a great introduction to what impacts are and how different people view them in varying ways.</p>	
35-45 min	<p>Discover/Engage/Practice:</p> <ul style="list-style-type: none"> Place 3 cards in 3 separate locations on the ground and read them aloud as you set them down. Each participant should stand by the card whose situation disturbs or offends them most. Starting with the smallest group, move group to group and ask the participants to explain why they feel the way they do about their selected “Ethical Situation.” After Each group presents their arguments, open the floor for a brief debate over the chosen situation before moving onto the next station. Tell participants that they may switch groups if their opinions have changed after hearing what their fellow participants have said. <p>** Repeat this activity for as many rounds as you want (three times usually illustrates the point well**</p> <p>Variation:</p> <ul style="list-style-type: none"> After each round, collect the “Ethics Situation Card” that has the most people standing by it. Set these cards aside for a special round at the end of the activity. When the main game rounds are finished, pull out these worst-of-the-worst “Ethics Cards.” Do one last round to see which situation is voted to be the WORST. 	
3-5 min	<p>Check for Understanding/Summarize/Close:</p> <p>Circle the group back up and begin by asking if anyone felt that someone had “ethics” similar to theirs. Participants can raise their hands and explain. You can also ask the opposite question, i.e., whether anyone felt that others had “ethics” different from theirs.</p> <p>Ask participants to explain.</p> <ul style="list-style-type: none"> Why is it OK to have ethics that are both similar and different to others? How do you interact with someone who has a viewpoint different from yours? What can this group do to respect someone else’s personal beliefs or ethics? How does respect go both ways? 	

Modifications, Support, and Extensions (for those students with IEP)

Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?



HOSPITALITY AND TOURISM CLUSTER

LESSON 6

Lesson Plan Title: Bigfoot and Friends		Instructor:
Suggested Total Time for Lesson (minutes): 45 min		
Content Focus - What will Students Learn? (Content Skill Sets)		
Participants will demonstrate understanding of the Leave No Trace 7 Principles		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: Bigfoot & Friends Activity Booklet	Resources: The 7 Principles - Leave No Trace Center for Outdoor Ethics (lnt.org)	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
3-5 min	Get Started/Explain: Print Bigfoot & Friends **Make sure that Actual Size is selected underneath the Page Sizing & Handling menu. Also make sure that the page orientation is landscape. If these settings are not selected, the activity booklet will not be proportional when folded in half. **	
35-45 min	Discover/Engage/Practice: Students will record ways that they have practiced Leave No Trace today. Students will record ways that they have practiced Leave No Trace at School or Home Students will Draw 3 animals, insects, or plants that they saw today. Students will Help Bigfoot Navigate the LNT Map	
3-5 min	Check for Understanding/Summarize/Close: <ul style="list-style-type: none">• Explain how the Leave No Trace 7 Principles teach people to care for the environment while enjoying outdoor activities.• Recreation can sometimes cause impacts (damage) to the land, but by following these Principles, we can enjoy our favorite places every time we visit.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?



HUMAN SERVICES CLUSTER

LESSON 1

Lesson Plan Title: American Sign Language (ASL) Alphabet and Simple Phrases		Instructor:
Suggested Total Time for Lesson (minutes): 135 minutes (3 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.HU.0300.3 Recognize the manual ASL alphabet 0972.HU.0300.4 Receptively comprehend the manual alphabet 0972.HU.0300.15 Fingerspell clearly and fluently		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> Manual ASL alphabet resource sheet ALS Simple phrase resource sheet 		Resources: <ul style="list-style-type: none"> (806) The ASL Alphabet ASL - American Sign Language - ABCs - YouTube American Sign Language (nih.gov)
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
	Get Started/Explain: Discuss American Sign Language and explain the alphabet hand gestures. Teachers can search for a random YouTube video to assist in the ASL alphabet learning process and common ASL phrases.	
Day 1	Discover/Engage/Practice: Students will work with a partner and learn the ASL alphabet using the resource sheet	
Day 2	Students will continue to work with their partner and finger spell their individual names. Students will continue to spell all classmates names to their partner and identify each one individually.	
Day 3	Students will begin to work on simple phrases to generate ASL conversations between their classmates. The goal is to create two sentences per student for the class to interpret.	
	Check for Understanding/Summarize/Close: Were students able to manually learn the ASL alphabet and finger spell their name? Were students able to create two sentences for interpretation?	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



HUMAN SERVICES CLUSTER

LESSON 2

Lesson Plan Title: Self-care BINGO		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day – 15 minutes for each additional day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.HU.1731.16 List characteristics of a healthy positive attitude		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • 2 copies of Self-care BINGO Sheet for each student • Scissors and glue/tape • Small zip lock bag • Teacher’s choice of prize 		Resources: <ul style="list-style-type: none"> • <i>Teaching About Self-Care - Educators 4 Social Change</i> (educators4sc.org) • Self-care BINGO sheet
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
	<p>Get Started/Explain: Self-care is the practice of taking action to preserve or improve one’s own health. One of the main goals of self-care is to prevent or control and preserve overall well-being through the consistent act of taking care of various verticals of one’s own health. Students will practice self-care by participating in an elongated BINGO assignment.</p>	
Day 1 +	<p>Discover/Engage/Practice: Students will receive two copies of the self-care BINGO sheet. One sheet will be used to mark off their tasks. With the second sheet, students will cut out the squares and place each piece in a zip lock bag and leave it in their desk.</p> <p>At the end of each school day, students will pull one task from the zip lock bag. Students will choose to complete the task during the evening hours and bring proof back the next day – pictures, videos, signed cut square or statement from parents, etc. If the task was complete, the student will glue or tape the cut square piece to their BINGO sheet. If the student decides not to complete the task, he/she will wait till the next day to draw another square.</p> <p>The first student to get “BINGO” wins a prize. Teacher can decide if BINGO can be diagonal, four squares, etc. (Teacher’s choice of prize)</p>	
	<p>Check for Understanding/Summarize/Close: Were the students excited to complete the tasks? Have students describe how the task was completed and how it made them feel.</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



HUMAN SERVICES CLUSTER

LESSON 3

Lesson Plan Title: The Importance of Customer Service		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.HU.0928.29 Exhibit the use of empathy in interpersonal relationships 0972.HU.0928.32 Develop and implement prevention and intervention plans in various situations		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: • Index Cards		Resources: • 25 Skills for Excellent Customer Service Visual.ly
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
	<p>Get Started/Explain: Customer service is all around us. Most of us engage in customer service activities of some type during our normal daily routines at work. All of us encounter customer service when we go to the store, call a company on the phone, or visit a business's website.</p> <p>However, simply being exposed to customer service doesn't mean you understand how to do it well or how to evaluate whether you are receiving an acceptable level of customer service. The point of this lesson is to help you understand what customer service is and how to make it better whether you do it for a living or deal with it at a consumer level.</p> <p>This is a role-play lesson plan that requires students to get involved. You may need a short ice-breaker activity if role play is not a technique commonly used in your classroom. Feel free to skip the icebreaker if you don't think it's necessary.</p> <p>Note: The teacher can find a customer service-related YouTube video to show the class during the introduction.</p>	
Day 1	<p>Discover/Engage/Practice: Part 1: Ice Breaker This is a whole-class activity. Select a student and ask them to pretend to be a customer service agent at Zappos. You (the teacher) will take on the role of a person calling about shoes.</p> <p>Teacher/Student Interaction Teacher: We are going to do a short role-play demonstration before breaking into groups. Student, you are going to play the part of a customer service representative at Zappos. Zappos is famous for giving customers ANYTHING they want when there is a problem. I will pretend to call you on the phone and then we will see what happens. Ready?</p> <p>Teacher: "Hello. I am calling because I ordered a pair of shoes for a wedding, and they haven't arrived. I placed the order last week and paid extra for 3-day shipping. The wedding is in two days and I really need those shoes." Go back and forth with the student for two minutes and see where the conversation goes. There is no right or wrong answer.</p> <p>Three questions to ask when the activity is finished:</p> <ol style="list-style-type: none"> 1. What emotions did the caller show at the start of the call? 2. Did the answerer demonstrate Empathy, Patience, Attentiveness, Tenacity, and an Open Mind? 3. What emotions did the caller show at the end of the call? 	

<p>Day 2</p>	<p>Part 2: Role Play Cards</p> <p>Students will be divided into groups of three. Each group will have one observer, one customer, and one representative.</p> <p>Get a stack of index cards for the callers and write a scenario on each card. Hand the cards out randomly to the groups.</p> <p>Scenarios might be:</p> <ul style="list-style-type: none"> • Your product didn't arrive • The color is wrong • The product was broken • You changed your mind <p>Get a second stack of index cards for the representatives and write a scenario on each card. Hand out the cards randomly to the groups.</p> <p>Scenarios might be:</p> <ul style="list-style-type: none"> • Not paying attention to the caller – Maybe checking your phone during the conversation • Trying to finish the conversation as soon as possible • Says they are going to help, but not really • Honestly wants to help the customer • Wants to chat instead of helping <p>The students will role-play for 3 minutes.</p> <p>The observer needs to answer the same three questions as above (feelings before; demonstrate traits; feelings after) and document them on a piece of paper. You should rotate so that each student gets to play each role. Make sure you mix up the index cards, so each group sees various scenarios.</p>
	<p>Check for Understanding/Summarize/Close:</p> <p>You can close by reinforcing the concept that purchasing decisions are often driven by emotions and that companies that move customers from negative emotions to positive emotions can be very successful.</p>
<p>Modifications, Support, and Extensions (for those students with IEP)</p>	
<p>Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?</p>	



HUMAN SERVICES CLUSTER

LESSON 4

Lesson Plan Title: Cosmetology – A Chemical Reaction?		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.HU.1737.01 Apply techniques to ensure client safety and protection. 0972.HU.1734.05 Select and utilize appropriate Personal Protective Equipment (PPE) for specific tasks		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Mentos candies • Liters of cola (diet and regular recommended) • Old clothing/Smock or Big T-shirts • Safety Glasses 		Resources: <ul style="list-style-type: none"> • Mentos Geyser Experiment - Mentos & Coke Experiment (stevespanglerscience.com) • Tracking sheet • Observation sheet • The Pre-Cosmetology and Barbering programs of study are aligned to meet the requirements set forth by the West Virginia State Board of Barbers and Cosmetologists - https://wvbbc.com/About-Us/Laws-Regulations
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
	<p>Get Started/Explain:</p> <p>HAIRCOLOR. If you have highlights or change the color of your hair in any way, chemistry is being used. From color application through processing, your stylist is monitoring the chemical reactions that are taking place. Depending upon the condition of your hair, your new hair color will process more quickly or slowly – your stylist will consider that when formulating.</p> <p>CHEMICAL RELAXERS. Chemistry is so important, it's even in the name. Relaxers break the millions (yes, millions) of chemical bonds in curly hair to produce the straight result you desire. After the bonds are broken, the neutralizer creates a reaction that rebonds hair into a straight form. This process is so powerful, that once transformed, hair will remain straight until you cut it.</p> <p>ARTIFICIAL NAILS. If you have artificial nails, thank your stylist – and chemistry. The reaction of the nail products create, bind and hold your nails. Initiators, catalysts, monomers, polymerization – all are terms from chemistry. There is a practical application to what you can learn from chemistry! All of this happens to make your nails beautiful and lasting. That's why we love cosmetology. Whatever your interest – it's part of cosmetology. Cosmetologists are scientists. Part of cosmetology school is experimenting, being a scientist. And when you enter a salon, you will conduct experiments daily – and the good news, you'll predict the results because you will create them.</p> <p>If you thought chemistry was exciting – if you loved experimenting until you created a specific result, if you want to learn how you can create through chemistry, then think about cosmetology. You can combine your creativity and your love of science to make your Guests beautiful.</p> <p>Now, It's time to have fun with Chemistry!</p>	

Discover/Engage/Practice:

Our experiment will take place tomorrow. We will use the following materials to conduct the chemical reaction: Mentos candies, liters of cola/pop, safety glasses, old clothing or a big t-shirt. (you may add additional requirements)

Discuss the tracking sheet and observation sheet with the class and all other details of the chemistry experiment for Day 2 of the lesson.

Read over the following directions to the students.

1. Before you get started, you'll need to find a location suitable for the experiment. This activity is probably best done outside in the middle of a field or on a huge lawn where a little bit of mess won't be a big deal.
2. Once you've got your location squared away and your supplies gathered, carefully open the bottle of diet soda. The choice of diet over regular soda is just a preference. Regular soda becomes a sticky mess because it contains sugar, while diet soda uses artificial sweeteners instead of sugar, so it's not as sticky. Later on in the experiment, you'll be invited to compare the geyser power of diet versus regular soda, but for now we'll start with a 2-liter bottle of diet soda.
3. Position the bottle on the ground so that it will not tip over. You might need to put down something flat, like a small piece of wood, to hold it up. You want the bottle to be stable before conducting the experiment.
4. Let's start with seven Mentos for our first attempt. The goal is to drop all seven Mentos into the bottle of soda at the same time, which is trickier than you might think. One method for doing this is to roll a piece of paper into a tube just big enough to hold the loose Mentos, like a roll of coins. You can also use a Baby Soda Bottle to hold the Mentos or a Geyser Tube, which was invented to solve this very problem. Assuming that you're using the paper tube method, you'll want to load the seven Mentos into the tube, cover the bottom of the tube with your finger and position the tube directly over the mouth of the bottle. When you pull your finger out of the way, all seven Mentos should fall into the bottle at the same time.
5. Once your Mentos are lined up and ready to drop, it's time for the fun to begin. Drop the Mentos into the diet soda.
6. Now, it's time to run away. Don't forget to look back at the amazing eruption of soda. You might want to have someone film the reaction for you so you can watch it again.
7. Optional: After you have experimented with one diet soda, try the experiment with different types of soda to see which ones has the most intense reaction.

Check for Understanding/Summarize/Close:

Now, we are going to finish up by filling out the Outcome column on the Tracking Sheet. If you experimented with more than one type of diet soda, rank them in order of which produced the most explosive eruption.

Complete the Observation sheet by drawing what happened. Label the parts of your drawing. Next, write a short (2-3 sentence) summary of what is being shown in your drawing.

Optional Discussion Questions:

1. Describe what happened in the experiment.
2. What could you have done differently?
3. What do you think would have happened if you used a different type of diet soda?
4. What do you think would have happened if you only used half of the pack of Mentos?
5. What do you think would have happened if the soda was flat?

Modifications, Support, and Extensions (for those students with IEP)

Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?



HUMAN SERVICES CLUSTER

LESSON 5

Lesson Plan Title: Cosmetology - Haircuts, nail designs and so much more		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.HU.1717.07 Identify basic nail shapes 0972.HU.1717.23 Demonstrate the use of creative nail art designs 0972.HU.0928.20 Work Effectively in a team environment		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> Nail Art Planner Nail Art Journal 		Resources: <ul style="list-style-type: none"> The Pre-Cosmetology and Barbering programs of study are aligned to meet the requirements set forth by the West Virginia State Board of Barbers and Cosmetologists - https://wvbbc.com/About-Us/Laws-Regulations
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
Introduction	Get Started/Explain: Plan, Create and Inspire - Let your creativity lead you to your self-expression by creating a nail or hair design.	
	Discover/Engage/Practice: Students will have the following choices: 1. Nail Art Design 2. Barber Haircut Design By using the provided templates, students will design a unique nail or barber cut. Students should not put their name on templates and try to be discreet as possible while designing. Once designs are complete, teacher will gather masterpieces. Students will guess which classmate created which design. Teacher will tally the correct answers and provide a choice of prize for the best and or most guesses. Once the design is identified, the students will explain their design and the what inspired them.	
	Check for Understanding/Summarize/Close:	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?



INFORMATION TECHNOLOGY CLUSTER

LESSON 1

Lesson Plan Title: Exploring IT Cluster		Instructor:
Suggested Total Time for Lesson (minutes): 100 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>Students will explore the different programs of studies in the IT Cluster:</p> <p>0972.IT.1456.31 Apply general design and programming concepts</p> <p>0972.IT.1456.32 Identify various hardware platforms and run-time environments</p> <p>0972.IT.1456.33 Identify human aspects in information systems</p> <p>0972.IT.1456.34 Identify general information technology (IT) definitions and terms</p> <p>0972.IT.1456.36 Exhibit understanding of data hierarchy, access methods, and manipulation</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> Download Adobe Light Room (if students have access to iPad) Download GIMP (if students have access to PC) Make copies of handouts (offline assignment) 		Resources: <ul style="list-style-type: none"> Project Guide – Make your Own Game Code.org
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Students (or teachers) will divide the classroom into teams of 3-5	
90 minutes	Discover/Engage/Practice: Students will be handed: <ul style="list-style-type: none"> Resource – Project Guide (located in resources file) <ul style="list-style-type: none"> This will guide the students through the first part of the simulated workplace experience. Students will come up with a Game Description Do their first drawing Storyboard Look at Variables <ul style="list-style-type: none"> Charities Items End in mind Play Video 1 (located in resources file) 	
	Check for Understanding/Summarize/Close: Students will be guided through the process with a check list.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



INFORMATION TECHNOLOGY CLUSTER

LESSON 2

Lesson Plan Title: Exploring Computer AI and Game Design		Instructor:
Suggested Total Time for Lesson (minutes): 150 minutes (3 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>Students will explore the different programs of studies in the IT Cluster:</p> <p>0972.IT.1456.31 Apply general design and programming concepts</p> <p>0972.IT.1456.32 Identify various hardware platforms and run-time environments</p> <p>0972.IT.1456.33 Identify human aspects in information systems</p> <p>0972.IT.1456.34 Identify general information technology (IT) definitions and terms</p> <p>0972.IT.1456.36 Exhibit understanding of data hierarchy, access methods, and manipulation</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> Download Adobe Light Room (if students have access to iPad) Download GIMP (if students have access to PC) Make copies of handouts (offline assignment) 		Resources: <ul style="list-style-type: none"> PC Gaming Vs Console (article from Dmarket) Video Game Design Write your name
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Students (or teachers) will divide and watch video clip one	
5 minutes	Discover/Engage/Practice: Rollout of a new video game <ul style="list-style-type: none"> Show Video One (located in the resource folder) 	
90 minutes	Students will use work on the platform they selected <ul style="list-style-type: none"> PC Gaming Vs Console (located in the resource folder) Video Game Design Worksheets (located in the resource folder) 	
45 minutes	Students will explore Binary (the language of their Game) <ul style="list-style-type: none"> Write your Name (located in the resource folder) 	
5 minutes	Check for Understanding/Summarize/Close: Students will present (5mins) out to the customer (teacher) their ideas on why they should choose their firm.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



INFORMATION TECHNOLOGY CLUSTER

LESSON 3

Lesson Plan Title: Pay vs Play		Instructor:
Suggested Total Time for Lesson (minutes): 70 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>Students will explore the different programs of studies in the IT Cluster:</p> <p>0972.IT.1456.31 Apply general design and programming concepts</p> <p>0972.IT.1456.32 Identify various hardware platforms and run-time environments</p> <p>0972.IT.1456.33 Identify human aspects in information systems</p> <p>0972.IT.1456.34 Identify general information technology (IT) definitions and terms</p> <p>0972.IT.1456.36 Exhibit understanding of data hierarchy, access methods, and manipulation</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> Download Adobe Light Room (if students have access to iPad) Download GIMP (if students have access to PC) Make copies of handouts (offline assignment) 		Resources: <ul style="list-style-type: none"> Pay vs Free Video Free vs Paid (article Dmarket) Money Free vs Paid (article Dmarket)
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Students (or teachers) will divide and watch video clip (Pay Vs Play)	
10 minutes	Discover/Engage/Practice: Students will work in their groups to determine if they want their game Free or Pay:	
50 minutes	<ul style="list-style-type: none"> Students will read article from Dmarket / Free Vs Paid Students will review Money from Dmarket Students will revisit their Project Guide	
	<ul style="list-style-type: none"> Decide as a simulated workplace as to which pathway you are going <ul style="list-style-type: none"> Pay Vs Free Why you choose the payment method How you will fund your game 	
5 minutes	Check for Understanding/Summarize/Close: Students will present (5mins) out to the customer (teacher) their ideas on Pay Vs Play.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



INFORMATION TECHNOLOGY CLUSTER

LESSON 4

Lesson Plan Title: Presentation		Instructor:
Suggested Total Time for Lesson (minutes): 50 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Students will explore the different programs of studies in the IT Cluster: 0972.IT.1456.31 Apply general design and programming concepts 0972.IT.1456.32 Identify various hardware platforms and run-time environments 0972.IT.1456.33 Identify human aspects in information systems 0972.IT.1456.34 Identify general information technology (IT) definitions and terms 0972.IT.1456.36 Exhibit understanding of data hierarchy, access methods, and manipulation		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none">• Download Adobe Light Room (if students have access to iPad)• Download GIMP (if students have access to PC)• Make copies of handouts (offline assignment)		Resources: <ul style="list-style-type: none">• Presentation Score sheet
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Students (or teachers) will divide and present out to each other simulated workplace	
50 minutes	Discover/Engage/Practice: Students will work in their groups to present their findings: <ul style="list-style-type: none">• Which Platform• Pay Vs. Play	
5 minutes	Check for Understanding/Summarize/Close: The students will discuss the positive points from each other presentation	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



INFORMATION TECHNOLOGY CLUSTER

LESSON 5

Lesson Plan Title: Coding with Minecraft: Coordinates		Instructor:
Suggested Total Time for Lesson (minutes): 60 mins		
Content Focus - What will Students Learn? (Content Skill Sets)		
<ul style="list-style-type: none"> - Introduction to Coordinates - Coding with Coordinates - Automating Actions with Coordinates - Get Creative with Coordinates 		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: N/A		Resources: Coding with Minecraft Unit_3_Coordinates Coding_with_Minecraft_3_Coordinates_Presentation
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
	<p>Get Started/Explain: Note:</p> <ul style="list-style-type: none"> • You will need to gather the additional materials for the unplugged activities: Lesson A: Access to Map app or physical maps/globes, index cards, pencils, or pens. Lesson B: Index cards or blank pieces of paper, Masking tape or painter's tape (optional). • Remind students that there may be more than one solution for each of the activities. • Students should keep a coding mindset. As with any other sport or activity, you must practice getting better. Coding is no different. 	
	<p>Discover/Engage/Practice: <u>Lesson A:</u> Introduction to Coordinates (Slides 1-32) Teacher will review the lesson objectives with students. Teacher will describe/demonstrate how Coordinates in Minecraft work. Provide visuals and or model for students. Students will demonstrate an understanding of the Handy Tips X, Y, and Z axis orientation. Teacher will introduce students to Absolute World Position and Relative Player Position. Students will complete Absolute World Position and Relative Player Position Calculations. **Be sure to provide examples to students provided within the guide. ** <u>Unplugged: World Landmarks:</u> Teacher will have students utilize some real-world coordinates via Mapp App, Globes or Physical Map utilizing Latitude and Longitude. Example State Capitols, Stadiums, Swing Locations. Have students calculate the locations based on latitude and longitude and then relative to their position currently. <u>Plugged: Minecraft:</u> Students will log into Minecraft: Education Edition and Navigate to the Coding with Minecraft Subject Kit. Students will select Unit 3: Coordinates. Students will follow steps for the Coding Activity: Compass Rose. **if time permits try extension activities**</p>	
	<p>Check for Understanding/Summarize/Close: What other ideas do you have about how you can use positions when coding? What's the difference between absolute world position and relative player position?</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?



LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY CLUSTER

LESSON 1

Lesson Plan Title: Firefighting as a Career		Instructor:
Suggested Total Time for Lesson (minutes): 30 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Emergency and Firefighting Management Services 0972.LA.2205.20 Work effectively in a team environment to improve the quality of work and the work environment 0972.LA.2203.59 Apply search and rescue operations and techniques, and search safety		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Blindfold(s) • Doll(s) or stuffed animal(s) • Optional materials to create a maze in the classroom: cardboard boxes, sheets, blankets 		Resources: <ul style="list-style-type: none"> • Videos Sparky.org • Firefighters : Occupational Outlook Handbook: : U.S. Bureau of Labor Statistics (bls.gov) • Home Structure Fires report NFPA • How to Make a Home Fire Escape Plan
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
2 minutes	<p>Get Started/Explain: Firefighting is a great career that is open to students who care about their community, like physical challenges, and can work as part of a team. The salary, benefits, and work schedule of firefighters are competitive, and a college degree is not required (although salaries are often higher for those that do have a degree, and free tuition is college often available for firefighters in good standing). Many fire departments are looking to hire women and people of color in particular.</p> <p>*Call your local fire department or visit your local fire station. Firefighters love their jobs and are often happy to come and talk to a class or host a visit!</p>	
13 minutes 15 minutes	<p>Discover/Engage/Practice:</p> <ul style="list-style-type: none"> • View a Firefighter survival Maze video (YouTube has some) to show how firefighters train to go into buildings for search and rescue • Create a maze in the classroom to simulate the training exercise in the video. The maze can be small with a couple of chairs or tables, or larger scaled. • Hide dolls or stuffed animals throughout the maze for the students to find. • Put students into groups of 2 or more. One student will be blindfolded, and their partner or teammates will coach them through the maze. Students will go through the maze on their hands and knees to simulate search and rescue. Partners or teammates can switch roles so each student as a chance to be the rescuer. Other students must be quiet, no one else can help them! • **IMPORTANT SAFETY NOTE** Make sure the area of the maze is safe and clear from objects that could injure the blindfolded students. <p>Extension activity: Lessons from the Great Chicago Fire video (sparky.org); Weird History video (sparky.org)</p> <p>Optional activity if no access to YouTube: Have students plan a home fire escape</p>	
	<p>Check for Understanding/Summarize/Close: Did students work effectively as a team to “rescue” the victim?</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY CLUSTER

LESSON 2

Lesson Plan Title: Emergency Response		Instructor:
Suggested Total Time for Lesson (minutes): 35 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Emergency and Firefighting Management Services 0972.LA.2207.9 Articulate the role of an emergency dispatcher as a member of an agency's public safety team and relating to the National Incident Command/Management System 0972.LA.2207.10 Assess the role of the Public Safety Telecommunicator and responsibility for first responder safety		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
		<ul style="list-style-type: none"> • Car Accident Scene Scenario • <i>You Are the Help Until Help Arrives</i> (fema.gov)
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	<p>Get Started/Explain: *Please read the Until Help Arrives summary in the resource file before you start this lesson</p> <p>9-1-1 Operators are highly trained and will help callers:</p> <ul style="list-style-type: none"> • Assess what's going on • Take appropriate action • Be as safe as possible <p>The questions the operator ask help to send the right emergency responders to the right place. Depending on the situation, they will give specific instructions. It is important for the caller to follow their lead and then let them coach through the situation</p> <p>(Optional: play a 9-1-1 call video. You can find one on your own or use the one in slide 29 or 30 of the UHA (Until Help Arrives) slide deck in resources)</p> <p>Ask students:</p> <ul style="list-style-type: none"> • How many have you have ever called 9-1-1? • If you have called 9-1-1, rate how calm or not calm you were using your fingers, on a scale of 1-5 (1=not calm and 5=really calm) 	

<p>25 minutes</p>	<p>Discover/Engage/Practice: Students should be in pairs of two for this activity.</p> <p>Use the Car Accident Scene Scenario found in the resource file and have students' role play with one student as a witness and one student as a 9-1-1 operator. (Then switch roles)</p> <p>911 Operator question examples</p> <ol style="list-style-type: none"> 1. 911. What is the exact location of your emergency? 2. What is your name? 3. How do you spell your last name? 4. What is the problem? Tell me exactly what happened. 5. Does anyone need help? 6. Is the person conscious? 7. Is the person breathing? <p>The call should include:</p> <ul style="list-style-type: none"> • Specific locations like mile markers, closest exit, road signs, buildings/businesses, direction of travel • Incident Details like car position, number of cars involved, weather conditions • Injuries: Awake? Talking? In Pain? Breathing? Bleeding? • Potential Hazards: Flammable liquids, unstable ground, oncoming traffic, downed power lines, severe weather <p>Key Points:</p> <ul style="list-style-type: none"> • Always call 9-1-1 as soon as possible, but never delay bleeding control or moving someone away from imminent danger • Provide as much specific information as possible including where you are, what happened, how many are injured, the severity of the injuries, and any potential hazards. • Follow the operator's instructions and guidance
	<p>Check for Understanding/Summarize/Close:</p> <ul style="list-style-type: none"> • Are students able to articulate the role of an emergency dispatcher as a member of an agency's public safety team? • Do students understand the role of the Public Safety Telecommunicator and responsibility for first responder safety?
<p>Modifications, Support, and Extensions (for those students with IEP)</p>	
<p>Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?</p>	



LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY CLUSTER

LESSON 3

Lesson Plan Title: International Radiotelephony Spelling Alphabet		Instructor:
Suggested Total Time for Lesson (minutes): 35 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Emergency and Firefighting Management Services 0972.LA.2250.3 Communicate using appropriate language and level, including using appropriate techniques for communicating with special needs individuals (e.g., hard of hearing)		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> Paper/pencil Or Whiteboard 		Resources: <ul style="list-style-type: none"> NATO Phonetic Alphabet NATO Phonetic Alphabet Worksheet Emergency terms list NATO - Declassified: The NATO phonetic alphabet – Alfa, Bravo, Charlie..., 20-Oct-2016
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: NATO phonetic alphabet is a common name for the International Radiotelephony Spelling Alphabet which assigns code words to the letters of the English alphabet. This is important for military and emergency communications so that the key words can be pronounced and understood by those who transmit and receive voice messages. Proper communication is crucial in emergency situations. Fire fighters, EMT's, Police and Military may use this alphabet for communicating over the radio to pronounce, hear and understand the letters and numbers being said from the other side. Its use is also helpful to spell out words and names that are difficult to pronounce. Over the radio, the speaker saying the letter "E" could be misheard due to low radio signal, leaving them to wonder whether the letter was B, C, D, G, P, T, or Z.	
10 minutes 20 minutes	Discover/Engage/Practice: <ul style="list-style-type: none"> Split class in half or in teams. One person is designated as the "coder". The team members are the "De-coders" Give students the NATO Phonetic Alphabet Worksheet to see what they already know. After they complete the worksheet, provide students with the NATO Phonetic alphabet and/or go over the answers. Game: Split class in half or in teams. One person is designated as the "coder". The team members are the "De-coders" Coder: Spell a word from a selected category using the NATO Alphabet. For example, if the word is "stretcher", the coder would say "Sierra, Tango, Romeo, Echo, Tango, Charlie, Hotel, Echo, Romeo". De-Coders must figure out the word, preferably by listening and/or writing down the letters. The first group to figure out it is "stretcher" gets a point. (Teacher will select the number of rounds to fit the class schedule.) The team with the most points at the end of the rounds is the winner. 	
	Check for Understanding/Summarize/Close: Did students learn the importance of effective communication using the IRSA/NATO alphabet in emergency situations?	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY CLUSTER

LESSON 4

Lesson Plan Title: First Aid Kit		Instructor:
Suggested Total Time for Lesson (minutes): 65 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Emergency and Firefighting Management Services 0972.LA.2203.20 Demonstrate appropriate emergency and first aid knowledge and procedures for law and public safety occupations		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> If no computers or internet access: Markers, colored pencils, crayons Magazines, ads, journals 		Resources: <ul style="list-style-type: none"> First Aid kit PowerPoint <i>Make a First Aid Kit Supplies & Contents American Red Cross</i> <i>First-aid kits: Stock supplies that can save lives - Mayo Clinic</i> <i>First Aid Kits Treatment: First Aid Information for First Aid Kits (webmd.com)</i> <i>A First Aid Kit for Every Activity - Emergency First Response</i>
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	<p>Get Started/Explain: First responders are often the first on the scene and see some of the most serious illnesses and injuries. It is important for first responders to keep well-stocked first aid supplies to help them provide immediate and sometimes lifesaving care.</p> <p>Students will create their own first aid kit based on what they believe needs to be included. Ask students to think about different medical emergencies that can happen. If they were a first responder to an accident scene, what items would be most important to have available for immediate use?</p>	
60 minutes	<p>Discover/Engage/Practice: This lesson can be completed in groups or individually.</p> <p>Use the PowerPoint slides to create the first aid kits. Students should think of 10 items to put in their First Aid Kits. They need to describe what the item is used for and write a short story or scenario about the item being used. Students will need to add at least two pictures of their item. This can be done using digital media or clip art, or students can draw a picture of the items, or cut pictures out of magazines, ads, or journals if there is no access to computers or internet.</p> <p>Have students share their first aid kits with the rest of the class.</p> <p>Extension activity: have students locate first aid kits in the school and create a list or a map of where the first aid kits are located.</p>	
	<p>Check for Understanding/Summarize/Close: Do students understand the importance of providing first aid for law and public safety occupations?</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY CLUSTER

LESSON 5

Lesson Plan Title: Fingerprint Analysis		Instructor:
Suggested Total Time for Lesson (minutes): 85 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Students will learn how to collect and analyze the three different types of fingerprints,		
<p>Law & Public Safety</p> <p>0972.LA.1225.1 Exhibit understanding of proper evidence collection practices.</p> <p>0972.LA.1225.4 Identify and perform crime scene processing, including crime scene search patterns, measurement, photography, latent print techniques</p> <p>0972.LA.6044.4 Demonstrate steps of crime scene processing: note-taking; photography; sketching to scale; evidence collection; chain of custody</p> <p>0972.LA.6044.5 Validate, classify, and analyze fingerprints as individual evidence: type; pattern; minutiae</p> <p>0972.LA.6044.6 Model techniques of collecting and developing prints on various objects and textures: physical (dusting powders); chemical (ninhydrin; iodine; cyanoacrylate)</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
<p>Materials:</p> <ul style="list-style-type: none"> • Fingerprint Cards (database) • Crime Scene Tape • Coffee Cup • Ink Pads (Black or dark blue) • Wet Naps or Baby Wipes • Clear Packing Tape • Cocoa (for light surfaces or Talcum Powder, Baby Powder or Cornstarch for dark surfaces) • Magnifying glasses • Small paint brushes or make up brushes with very soft bristles • Gloves • Index Cards • Paper • Pens/pencils 	<p>Resources:</p> <ul style="list-style-type: none"> • Fingerprint Cards (Index cards used for teachers' fingerprints) • A video showing how to dust for fingerprints. (Recommend searching for "How to Lift Fingerprints: Dusting for Prints.") • Fingerprint Basics • Fingerprints at a Crime Scene • Fingerprint Analysis Worksheet 	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	<p>Get Started/Explain:</p> <p>Prior to starting lesson – you will need to do the following:</p> <ul style="list-style-type: none"> • Ask several teachers in your school to volunteer in this lesson – maybe 8 to 10. • Have instructors put their fingerprints on index cards and file them as "Fingerprint Cards" to be used as a "database." • Ask one volunteer to touch a coffee cup that will be used in a "crime scene". You can have a couple other teachers touch a few other items that wouldn't be out of the ordinary and place them in the crime scene such as a janitor touching the desk, a secretary touching papers, etc. • Search the internet or YouTube for a video showing how to dust for fingerprints. Recommend searching for "How to Lift Fingerprints: Dusting For Prints." <p>The day of the lesson but prior to the students entering class:</p> <ul style="list-style-type: none"> • Create a small "crime scene" in a corner of the room that students will automatically notice. Ideas include: <ul style="list-style-type: none"> › Place crime scene tape around the area. › Place a chair and/or desk on its side. › Scatter papers throughout › Place the coffee cup where students will see it 	

5 minutes	<p>As students are entering the room, they are sure to see the “crime scene.” Tell students they are welcome to look but do NOT TOUCH ANYTHING because they might end up tampering with evidence.</p> <p>As they are examining the crime scene, tell students a creative crime story about what happened that would be interesting and fun. A suggestion would be</p> <p>‘The classroom was broken into overnight. The perpetrator ransacked the room. I’m not sure what they were looking for but there are some things left in the room that shouldn’t be there. I need your help to review the evidence and see if we can figure out who broke into the classroom.’</p>
<p>5 minutes</p> <p>10 minutes</p> <p>15 minutes</p> <p>10 minutes</p> <p>15 minutes</p> <p>10 minutes</p> <p>5 minutes</p>	<p>Discover/Engage/Practice:</p> <p>Start a discussion with students about what clues they might be able to find to help solve the crime. As students call out ideas, write them down until someone mentions fingerprints. If no one mentions fingerprints after a few minutes, ask students if they think fingerprints might be a clue.</p> <p>Divide students into groups. Pass out paper or index cards, ink pads, and wet naps or baby wipes. Have students place their thumb on the ink pad and then on the paper. Then have students do the same thing with their index finger. Allow students a couple minutes to look over their fingerprints.</p> <p>Pull up the Fingerprint Basics resource document on projection or pass out copies to students. Discuss the document paying special attention to the three different types of fingerprints: Arches, Loops, and Whorls. Have students compare their fingerprints to the document and determine which fingerprint pattern most closely matches their own.</p> <p>Show a video on how to dust for fingerprints. Then, pass out the document “Fingerprints at a Crime Scene.” Have students read through the document and check for understanding by asking questions such as</p> <ul style="list-style-type: none"> • What is the tape used for? • When do you use cocoa powder versus baby or talcum powder? <p>Give each group the supplies needed to collect fingerprints: gloves, paper, tape, cocoa powder, talcum powder, and brushes. Have students go to the crime scene and pick an object to check for prints. Allow students a few minutes to practice lifting prints.</p> <p>After students have lifted a few prints, I have them compare the prints to the Fingerprint Cards collected before the lesson. Have them use their knowledge of the three types of fingerprints and the minutiae points learned from the Fingerprint Basics document.</p> <p>Once students have decided on who the perpetrator, have them complete the Fingerprint Analysis Worksheet.</p>
5 minutes	<p>Check for Understanding/Summarize/Close:</p> <p>Have each group go over their Fingerprint Analysis Worksheet with the class to see if everyone picked the same person or if they have differences.</p>
<p>Modifications, Support, and Extensions (for those students with IEP)</p>	
<p>Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?</p>	



LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY CLUSTER

LESSON 6

Lesson Plan Title: Three Little Pigs Jury Trial		Instructor:
Suggested Total Time for Lesson (minutes): 115 minutes (3 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Students will learn about jury trials by creating a mock trial of the big bad wolf in the story The Three Little Pigs.		
<p>Law & Public Safety</p> <p>0972.LA.1225.15 Display knowledge of branches of government</p> <p>0972.LA.1031.4 Identify occupations, roles, and responsibilities within the court system</p> <p>0972.LA.1031.5 Describe appropriate professional courtroom testimony and demeanor</p> <p>0972.LA.1031.8 Exhibit knowledge of trial and court procedures</p> <p>0972.LA.1031.9 Define courtroom terminology</p> <p>0972.LA.1031.18 Describe the functions of various participants in the courtroom including the judge, prosecutor, court clerk, court reporter, bailiff, defense attorneys, witnesses, and victims</p> <p>0972.LA.1031.19 Explain jurisdictional determination of cases</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Big Bad Wolf Mock Trial Script • Judge Robe (could be black cloth or graduation gown) • Gavel (or something similar) • Paper • Pens or pencils 		Resources: <ul style="list-style-type: none"> • Guide to Conducting Mock Trials • Three Little Pigs Story • Three Branches of Government • Big Bad Wolf Mock Trial Script • Terms • First Impressions Video (if available)
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	Get Started/Explain: <ul style="list-style-type: none"> • Prior to starting lesson, read through the Guide to Conducting Mock Trials • Read the Three Little Pigs story to the class, have them read independently, or in groups. Have students write down everything they are thinking after hearing the story. Once they have their questions, concerns and comments written down, discuss the Big Bad Wolfe Trial. 	
10 minutes	<ul style="list-style-type: none"> • Discuss the three branches of government. 	
10 minutes	<ul style="list-style-type: none"> • Decide on roles and teams for the Mock Trial and begin working on the defense or prosecution. 	
30 minutes	Discover/Engage/Practice: <ul style="list-style-type: none"> • Give students a copy of the Big Bad Wolfe Mock Trial Script. Students will read through the script and practice their lines until they feel as if they are ready for trial. 	
15 minutes	<ul style="list-style-type: none"> • A day or two before trial, show the video from First Impressions or discuss trial procedures and what a courtroom looks like. 	
5 minutes	<ul style="list-style-type: none"> • Discuss finding someone guilty, innocent or the inability to decide. 	
20 minutes	<ul style="list-style-type: none"> • Present the court/trial, then the jury must decide on a verdict based on what they heard and saw in court. 	
10 minutes	Check for Understanding/Summarize/Close: <p>Discuss the verdict with the class and answer any additional questions.</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?



MANUFACTURING CLUSTER

LESSON 1

Lesson Plan Title: The History of Manufacturing		Instructor:
Suggested Total Time for Lesson (minutes): 45-90 minutes (1-2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.MA.1863.1 Demonstrate a knowledge of Manufacturing Technologies		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> History of Manufacturing PPT Paper/Pencil/Pen 		Resources: <ul style="list-style-type: none"> A&E Television Networks. (2009, November 13). Kiichiro Toyoda, founder of the Toyota Motor Corporation, dies. History.com. Retrieved March 1, 2022, from https://www.history.com/this-day-in-history/toyota-founder-dies Our history. Ford Corporate. (n.d.). Retrieved March 1, 2022, from https://corporate.ford.com/about/history.html SME. (n.d.). Retrieved March 1, 2022, from https://www.sme.org/
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10-15 minutes	Get Started/Explain: Students will be introduced to a brief history of manufacturing	
30-35 minutes	Discover/Engage/Practice: Students will form groups or teacher may assign groups of 3-4 Students will work within these design teams to research topics in manufacturing as they relate to one of the following: <ul style="list-style-type: none"> FMS CAD CAM ASRS AGV PLC CNC Robotics Automation 	
10-15 minutes	Check for Understanding/Summarize/Close: <ul style="list-style-type: none"> Students will understand why artisan made products are likely not parts within your engines Students will understand Kiazen Students will be able to describe the economic and societal impacts as a result of advancements in Manufacturing. 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



MANUFACTURING CLUSTER

LESSON 2

Lesson Plan Title: The Linking Person		Instructor:
Suggested Total Time for Lesson (minutes): 45-65 minutes (1-2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.MA.1864.2 Read and Interpret Blueprints and Sketches		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: • Gram Unit Cubes		Resources:
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10-15 minutes	<p>Get Started/Explain: Students will establish team norms and roles within their team.</p> <p>Students will be reminded of Process Flow and be asked to create a process flow for the creation of a Linking Cube Person</p>	
30-35 minutes	<p>Discover/Engage/Practice: Students will form groups or teacher may assign groups of 3-4</p> <p>Students will work within these design teams to replicate the Linking Cube Person seen in the video.</p>	
10-15 minutes	<p>Check for Understanding/Summarize/Close: Students will explain the challenges of working within Teams</p> <p>Students will discuss various part fits and assembly procedures</p> <p>Students will work within their assigned roles to complete the task.</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



MANUFACTURING CLUSTER

LESSON 3

Lesson Plan Title: Where is the Bottleneck?		Instructor:
Suggested Total Time for Lesson (minutes): 45-90 minutes		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.MA.1863.1 Demonstrate a knowledge of Manufacturing Technologies		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • 3 timers • 5 small boxes with candies per grouping 		Resources: <ul style="list-style-type: none"> • <i>Activity Theory of Constraints Simulation (Where is the Bottleneck)</i>
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10-15 minutes	Get Started/Explain: Teacher will explain that in this activity students are working to identify methods for improving processes so that they maximize throughput in a system.	
20 minutes	Discover/Engage/Practice: <i>In teams of 3 students will self-assign duties:</i> A. Get Box & Empty It B. Count & Fill C. Return Box to Facilitator	
5 minutes	Check for Understanding/Summarize/Close: Students will evaluate the varies paces of process and how that effected efficiency. Students will reflect on what they feel was the optimal output through their trials. Students will connect activity to their personal lives.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



MANUFACTURING CLUSTER

LESSON 4

Lesson Plan Title: Joining		Instructor:
Suggested Total Time for Lesson (minutes): 45-65 minutes (1-2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.MA.1864.10 Perform welds on plate in all positions		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none">• Easy Cheese• Crackers (of choice)• Nail File• Wax Paper	Resources: <ul style="list-style-type: none">• https://www.youtube.com/watch?v=lp5uoHDCajQ	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10-15 minutes	Get Started/Explain: Students will Take notes on Joining	
30-35 minutes	Discover/Engage/Practice: Students will form groups or teacher may assign groups of 3-4 Students will view Easy Cheese Demo Students will prepare surface and demonstrate basic welding techniques.	
10-15 minutes	Check for Understanding/Summarize/Close: Students will explain the challenges of working through activity	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



MANUFACTURING CLUSTER

LESSON 5

Lesson Plan Title: Flying Monkey Manufacturing Company		Instructor:
Suggested Total Time for Lesson (minutes): 45-90 minutes (1-2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>0972.MA.1866.2 Exhibit Flexibility and Adaptability 0972.MA.1866.3 Demonstrate Leadership Skills 0972.MA.1866.4 Recognize others or their contributions 0972.MA.1866.5 Demonstrate Group Process Techniques 0972.MA.1866.6 Organize Work 0972.MA.1903.12 Develop an order of Operations (Process Plan) based on blueprint specifications</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Activity: Airplane Company (Flying Monkey) • Tape Measure • Paper • Paper Clips 		Resources:
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10-15 minutes	Get Started/Explain: Students will be introduced to today's challenge. To Accurately produce the most dart airplanes within a time limit.	
30-35 minutes	Discover/Engage/Practice: <ul style="list-style-type: none"> • Students will assign roles within their teams (7 Roles) • Students work through the exercise and identify points of improvement within their process to increase their efficiency. 	
10-15 minutes	Check for Understanding/Summarize/Close: <ol style="list-style-type: none"> 1. What happens when the process runs at a slow pace? 2. What happens when the process speeds up? 3. What is the maximum output per minute? 4. List where bottlenecks might occur in your everyday lives. 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



MANUFACTURING CLUSTER

LESSON 6

Lesson Plan Title: Block Blue Print Measurement		Instructor:
Suggested Total Time for Lesson (minutes): 45-65 minutes (1-2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.MA.1864.2 Read and Interpret Blueprints and Sketches 0972.MA.1873.12 Interpret Various Lines 0972.MA.1903.6 Identify, Select, and Calibrate Precision and Semi-Precision Measuring Tools 0972.MA.1903.11 Interpret Blueprints including geometric dimensioning and tolerancing (GD&T) symbols		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Lego Blue Prints Activity • Various Measuring Tools • Assortment of Legos 		Resources: <ul style="list-style-type: none"> • https://www.stefanelli.eng.br/en/simulator-virtual-dial-caliper-thousandth-inch/
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10-15 minutes	Get Started/Explain: Introduced to Measurements	
30-35 minutes	Discover/Engage/Practice: <ul style="list-style-type: none"> • Students will form groups or teacher may assign groups of 3-4 • Students will Complete Activity Lego Blue Prints 	
10-15 minutes	Check for Understanding/Summarize/Close: Students will explain their procedure for measuring and the instrument that they chose to measure with.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?



MARKETING CLUSTER

LESSON 1

Lesson Plan Title: Days 1: Target Audience		Instructor:
Suggested Total Time for Lesson (minutes): 40 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.MK.0422.13 Understand marketing's role and function in business to facilitate 0972.MK.0425.17 Acquire foundational knowledge of customer/client/business behavior to understand what motivates decision-making		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none">• Pencil• Paper• Sticky Notes• Large Stick Post-It Notes		Resources: <ul style="list-style-type: none">• Marketing Cluster PowerPoint Presentation
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10 minutes	Get Started/Explain: Start with the Marketing Cluster PowerPoint Presentation and go through Slides 1-4	
20 minutes	Discover/Engage/Practice: Go to Slide 5 Start the Lesson by showing the Video: You are the Target on this slide. This video is embedded on the slide and you do not need an internet connection to show the video. The target audience is the group or type of people that advertisers want to attract. People may be defined by their age, gender, family status, lifestyle, or interests. After watching the Video with students take a minute to have a discussion on how companies target them with advertisements. Think of commercials, YouTube, website banners, billboards, etc. Put students into pairs and have them choose 2 of their favorite products. Encourage students to think outside of the box with marketing techniques: such as shelf placement, location in the store, what types of commercials are on certain channels, and what other products are near. <ul style="list-style-type: none">• Option 1: Have the students make a list of how these companies market the product to them.• Option 2: Provide students with sticky notes and have them make a list of each marketing technique and product on a sticky note.	
10 minutes	Check for Understanding/Summarize/Close: As a closing to the lesson have each group share <ul style="list-style-type: none">• Option 1: Students can stand up and discuss their lists• Option 2: Make areas around the classroom (shelf placement, location, commercial, newspaper, etc.) and have students take their stick notes to those locations and have a class discussion.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



MARKETING CLUSTER

LESSON 2

Lesson Plan Title: Day 2: Branding & Logo Design		Instructor:
Suggested Total Time for Lesson (minutes): 40 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.MK.0425.16 Understand marketing's role and function in business to facilitate 0972.MK.0425.17 Acquire foundational knowledge of customer/client/business behavior to understand what motivates decision-making 0972.MK.0425.21 Position company to acquire desired business image 0972.MK.0425.24 Understand the use of trade shows/expositions to communicate with targeted audiences		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none">• Pencil• Paper• Logo Bingo Board Pre-Printed 1/student		Resources: <ul style="list-style-type: none">• Marketing Cluster PowerPoint Presentation
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	Get Started/Explain: Start with the Marketing Cluster PowerPoint Presentation on slide 6. Discuss what a logo is – See the notes on the PowerPoint Slide Show the Video 12 Famous Logos with a Secret Meaning (Search on YouTube or Similar Video)	
20 minutes	Discover/Engage/Practice: Go to Slide 7 <ul style="list-style-type: none">• Discuss Brand Identity See the notes on the PowerPoint Slide. Go to Slide 8 <ul style="list-style-type: none">• Play LOGO BINGO – There are 2 examples of Boards on this slide. Find the Logo Boards in the Resources Folder. Have enough boards ready before the start of class that each student can have 1 board.	
10 minutes	Check for Understanding/Summarize/Close: Reflect on what students learned about Logos and Brand Identity today? How does that make a product and a company more successful?	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



MARKETING CLUSTER

LESSON 3

Lesson Plan Title: Days 3 & 4: Designing your own Logo		Instructor:
Suggested Total Time for Lesson (minutes): 80 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.MK.0425.21 Position company to acquire desired business image		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none">• Pencil• Paper• Sketch your Own Logo Worksheet 1/student• Color Pencils/Crayons/Markers• Computer (if using computer-based option)	Resources: <ul style="list-style-type: none">• Marketing Cluster PowerPoint Presentation	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
5 minutes	Get Started/Explain: Start with the Marketing Cluster PowerPoint Presentation on slide 9. Tell students today they are going to be designing their own logo.	
65 minutes	Discover/Engage/Practice: If you are doing the Marketing Lesson following the Business Lesson you can have the students create a logo for the product/prototype they created throughout those lessons. If you did not do the lessons in that order, have the students create a logo that represents them. If the students start to get stuck, encourage the student to find a way to incorporate their favorite shape or a letter in their name into the design. Use the provided Sketch Out Your Logo Ideas Worksheet. Computer-Based Option: In Adobe Illustrator for use in other publications, such as business cards, menus, or advertisements. Students learn about file formats, resolution, and image size and select appropriate settings for a variety of final product scenarios. Non-Computer Based Option: Have students use paper, pencil, colored pencils, and markers to design a sketch of their logo.	
10 minutes	Check for Understanding/Summarize/Close: Have students group in pairs and share their logos with each other, reflecting on why they made the choices they did.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



MARKETING CLUSTER

LESSON 4

Lesson Plan Title: Days 3 & 4: Option 1 FBLA Marketing Mix		Instructor:
Suggested Total Time for Lesson (minutes): 240 minutes (5 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.MK.0425.20 Employ product-mix strategies to meet customer expectations. 0972.MK.0425.25 Manage promotional activities to maximize return on promotional efforts. 0972.MK.0425.28 Understand sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Computer (if able to) • Poster board • Coloring Pencils/Crayons/Markers 		Resources: <ul style="list-style-type: none"> • Marketing Cluster PowerPoint Presentation • The 4 P's of Marketing Guide • The 4 P's Marketing Video (Search YouTube)
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	Get Started/Explain: Start with the Marketing Cluster PowerPoint Presentation on slide 10. Introduce the students to the topic. Take some time to go to FBLA.org and explore what FBLA is. Visit WVFBLA.ORG for more information about WV FBLA or start a Middle Level FBLA Chapter. See the Notes on the slide for more information.	
195 minutes	Discover/Engage/Practice: What is Marketing Go to Slide 12 – Show the Marketing Video Discuss what the students learned through the video The 4 P's of Marketing Go to Slide 13 and cover the content in the Notes Section and search for a video on YouTube: The 4 P's of Marketing. Use the provided handout to help students work through this activity. Review Slide 10 and what the students. Remember this is a chance for your students to get creative. They can create a new product or service that they are going to develop a Marketing Mix Strategy for. Students can use a Poster board, Canva, PowerPoint, Word, Publisher, Adobe Express, etc to create their Marketing Mix Presentation.	
30 minutes	Check for Understanding/Summarize/Close: Have students present their Marketing Mix to the Class. Follow up with students that are interested in competing in WV FBLA at the State Leadership Competition for the Marketing Mix Competitive Event.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



MARKETING CLUSTER

LESSON 4

Lesson Plan Title: Days 3 & 4: Option 2 Types of Marketing & Advertisements		Instructor:
Suggested Total Time for Lesson (minutes): 240 minutes (5 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.MK.0425.20 Employ product-mix strategies to meet customer expectations. 0972.MK.0425.25 Manage promotional activities to maximize return on promotional efforts. 0972.MK.0425.28 Understand sales processes and techniques to enhance customer relationships and to increase the likelihood of making sales		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Computer (if able to) • Poster board • Coloring Pencils/Crayons/Markers 		Resources: <ul style="list-style-type: none"> • Marketing Cluster PowerPoint Presentation • Advertising Templates Blank • Search additional YouTube Videos about Advertisements see slide 16
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	Get Started/Explain: Start with the Marketing Cluster PowerPoint Presentation on slide 15. Hold a class discussion about advertising.	
195 minutes	Discover/Engage/Practice: What is Marketing <ul style="list-style-type: none"> • Go to Slide 16 – You can search for videos listed on this slide that are optional and provide a deeper look into advertisements. Go through Slides 17 - 22 <ul style="list-style-type: none"> • Discuss the different types of advertisements, the different types of audiences they can reach, and the different types of impact each can have. Go to Slide 23 <ul style="list-style-type: none"> • Pass out the Advertising Templates Blank Worksheet. • Computer-Based Alternative – Use Canva, Adobe Express, Photoshop, Illustrator to let students design their advertisements. • Allow students time to create their advertisements for a new product or for an existing product. The 4 P's of Marketing <ul style="list-style-type: none"> • Go to Slide 13 and cover the content in the Notes Section and play the video: The 4 P's of Marketing • Use the provided handout to help students work through this activity. Review Slide 10 and what the students. <ul style="list-style-type: none"> • Remember this is a chance for your students to get creative. They can create a new product or service that they are going to develop a Marketing Mix Strategy for. • Students can use a Posterboard, Canva, PowerPoint, Word, Publisher, Adobe Express, etc to create their Marketing Mix Presentation. 	
30 minutes	Check for Understanding/Summarize/Close: Have students present their Marketing Mix to the Class. Follow up with students that are interested in competing in WV FBLA at the State Leadership Competition for the Marketing Mix Competitive Event.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?



SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS CLUSTER

LESSON 1

Lesson Plan Title: ABET U		Instructor:
Suggested Total Time for Lesson (minutes): 45-90 minutes (1-2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.ST.2461.1 Describe Major Engineering Fields 0972.ST.2461.2 Identify Functions an Engineer Performs 0972.ST.2461.3 Describe Education Required to be an Engineer 0972.ST.2461.5 Describe relationships between the engineer and other technical personnel		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> Careers Engineering and Engineering ppt Recruitment Video(s) 		Resources: <ul style="list-style-type: none"> ABET. (2022) ABET, Inc. Retrieved January 20, 2022, from https://www.abet.org/ Science reference guides. Engineering Disciplines. Science Reference Guide, Library of Congress. (n.d.). Retrieved January 20, 2022, from https://www.loc.gov/rr/scitech/SciRefGuides/eng-disciplines.html What do engineers do? (Michigan State University) URL: http://www.egr.msu.edu/future-engineer/what WVU Statler Majors and First Year. YouTube. (2020, April 2). Retrieved April 1, 2022, from https://youtu.be/MGSBdKLGVLw
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10-15 minutes	Get Started/Explain: Teacher will present Careers in Engineering and Engineering Technology ppt	
20-25 minutes	Discover/Engage/Practice: Students will identify and become familiar with what an engineer is and what engineers do Students will discover which Mountain State Colleges and Universities are ABET Accredited Institutions Students will engage in discussions about the major Engineering Disciplines	
5-10 minutes	Check for Understanding/Summarize/Close: Students will discuss what they believe is the most important invention or innovation of the past 100 years detailing which engineering disciplines might have been involved in the creation of this item or system. (Optional) Students will prepare a 3-minute presentation for their invention/innovation to share with the class.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS CLUSTER

LESSON 2

Lesson Plan Title: Bridge Design Challenge		Instructor:
Suggested Total Time for Lesson (minutes): 50-180 minutes (2-4 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>0972.ST.2461.7 Identify principles of the problem-solving process 0972.ST.2461.8 Outline the steps in the design process 0972.ST.2461.10 Analyze Solutions, identifying strengths and weaknesses 0972.ST.2461.11 Develop Details of a Solution 0972.ST.2461.12 Develop, test, and redesign prototypes 0972.ST.2461.28 Make an oral presentation 0972.ST.2461.31 Contribute to a team project 0972.ST.2461.8 Solve problems using appropriate units in engineering systems</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> Engineering notebook (composition notebook, digital engineering notebook example, purchased professional notebooks) Pencil ¾ in. Linking Cubes (2) 1 sheet of 8 ½ x 11 in. cardstock Assorted construction tools such as scissors 		Resources: <ul style="list-style-type: none"> West Virginia Bridge Design & Build Contest. (n.d.). Retrieved March 1, 2022, from https://wvbridgedesignandbuildcontest.com/ Bridge design contest: Presented by engineering encounters. Engineering Encounters. (n.d.). Retrieved March 10, 2022, from https://www.bridgecontest.org/
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10-15 minutes	Get Started/Explain: Students will be introduced to Engineering Notebooks through documentation of the Design Process Bridges will be introduced either through the WV Bridge Design Challenge, The Bridge Failure Case Study, West Point Bridge Design Contest, or the Paper Bridge	
30-150 minutes	Discover/Engage/Practice: Option 1 Students will research bridge failure Option 2: Students will complete WV Bridge Design Challenge Option 3: Student will complete West Point Bridge Design Challenge Option 4: Students will complete Paper Bridge Option 4: TSA Problem Solving Challenge	
10-15 minutes	Check for Understanding/Summarize/Close: Students will explain the challenges of working within Teams Students will elaborate on why it is important to clearly define design constraints prior to creating a product Students will explain how they came about deciding on their designs	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS CLUSTER

LESSON 3

Lesson Plan Title: Design Process		Instructor:
Suggested Total Time for Lesson (minutes): 45-180 minutes (1-4 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>0972.ST.2461.7 Identify principles of the problem-solving process 0972.ST.2461.8 Outline the steps in the design process 0972.ST.2461.10 Analyze Solutions, identifying strengths and weaknesses 0972.ST.2461.11 Develop Details of a Solution 0972.ST.2461.12 Develop, test, and redesign prototypes 0972.ST.2461.28 Make an oral presentation 0972.ST.2461.31 Contribute to a team project 0972.ST.2461.8 Solve problems using appropriate units in engineering systems</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Design Process ppt • SWP Digital Notebook or Composition Notebook • Decision Matrix Template or Automated Template • Activity 1 Paper Table Challenge • Paper • Pencil • Scissors • Book(s) • 20 pcs of News Paper • 7 ft Masking Tape 		Resources: <ul style="list-style-type: none"> • Engineering design process activity for kids - paper table challenge DIY. Generation Genius. (2021, August 18). Retrieved January 15, 2022, from https://www.generationgenius.com/activities/engineering-design-process-activity-for-kids/ • The engineering process: Crash course kids #12.2. YouTube. (2015, May 29). Retrieved January 15, 2022, from https://youtu.be/fxJWin195kU
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10-15 minutes	Get Started/Explain: Students will be introduced to the Design Process utilizing the Design Process ppt/The Engineering Process: Crash Course Students will be issued Activity 1 Paper Table Challenge along with the Decision Matrix Template or Automated Template	
30-150 minutes	Discover/Engage/Practice: Students will form groups or teacher may assign groups of 3-4 Students will work within these design teams to create a paper table that can hold a book (or other known weight) at least 6in off a surface.	
10-15 minutes	Check for Understanding/Summarize/Close: Students will explain the challenges of working within Teams Students will elaborate on why it is important to clearly define design constraints prior to creating a product Students will explain how they came about deciding on their designs	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS CLUSTER

LESSON 4

Lesson Plan Title: Getting to Better		Instructor:
Suggested Total Time for Lesson (minutes): 45-65 minutes (1-2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>0972.ST.2461.7 Identify principles of the problem-solving process 0972.ST.2461.8 Outline the steps in the design process 0972.ST.2461.10 Analyze Solutions, identifying strengths and weaknesses 0972.ST.2461.11 Develop Details of a Solution 0972.ST.2461.12 Develop, test, and redesign prototypes 0972.ST.2461.28 Make an oral presentation 0972.ST.2461.31 Contribute to a team project 0972.ST.2461.48 Solve problems using appropriate units in engineering systems 0972.ST.2461.49 Demonstrate the principles and elements of design and demonstrate usage in the design process incorporating them into design solution 0972.ST.2461.50 Demonstrate the principles and elements of design in design solutions</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
<p>Materials:</p> <ul style="list-style-type: none"> • Activity 2 Getting to Better • Reverse Engineering ppt • Decision Matrix Template/Automated Template • SWP Digital Notebook • Paper • Water Bottle (1 per class) • Pencil 	<p>Resources:</p> <ul style="list-style-type: none"> • Actual size of Inch Ruler. (n.d.). Retrieved March 6, 2022, from https://www.piliapp.com/actual-size/inch-ruler/ • Nctm.org. (n.d.). Retrieved March 1, 2022, from https://www.nctm.org/Classroom-Resources/Illuminations/Interactives/Isometric-Drawing-Tool/ • Prof. Eduardo J. Stefanelli, profissão, E. S. E. por, Stefanelli, E., & profissão, E. por. (2017, January 23). Virtual dial caliper in thousandth of inch - simulator. Prof. Eduardo J. Stefanelli. Retrieved March 1, 2022, from https://www.stefanelli.eng.br/en/simulator-virtual-dial-caliper-thousandth-inch/ • Who we are. (n.d.). Retrieved January 10, 2022, from https://www.jamesdysonfoundation.com/who-we-are.html 	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10-15 minutes	<p>Get Started/Explain: Students will be introduced to Reverse Engineering utilizing Reverse Engineering ppt Students will be issued Activity 2 Getting to Better</p>	
30-35 minutes	<p>Discover/Engage/Practice: Students will form groups or teachers may assign groups of 3-4 Teacher will Place single Water Bottle of Choice in location that is viewable by entire class. Students may walk to the bottle and take notes but may not remove Bottle from the Working Area. Students will work within these design teams to reverse engineer a water bottle utilizing their best communication techniques. Students will come up with a product improvement for their water bottle.</p>	
10-15 minutes	<p>Check for Understanding/Summarize/Close: Students will present out their designs and complete conclusions questions for activity.</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS CLUSTER

LESSON 5

Lesson Plan Title: Zipline Adventures		Instructor:
Suggested Total Time for Lesson (minutes): 45-65 minutes (1-2 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.ST.2461.7 Identify principles of the problem-solving process 0972.ST.2461.8 Outline the steps in the design process 0972.ST.2461.10 Analyze Solutions, identifying strengths and weaknesses 0972.ST.2461.11 Develop Details of a Solution 0972.ST.2461.12 Develop, test, and redesign prototypes 0972.ST.2461.28 Make an oral presentation 0972.ST.2461.31 Contribute to a team project 0972.ST.2461.8 Solve problems using appropriate units in engineering systems		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • 1 Sheet of 11"x8.5" Cardstock • 2 Tongue Depressors • 2 Paper Clips • 2 Rubber Bands • 1 Bendy Straw • 1 Toilet Paper Roll • 12 inch of string • 6 inch of masking tape • Small figure (such as Lego man or similar object) • Scissors (cannot be in design) 		Resources: <ul style="list-style-type: none"> • https://wvtourism.com/fly-in-wv/
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10-15 minutes	Get Started/Explain: Students will be introduced to the Challenge and issued Activity 3 Zipline Adventures	
30-35 minutes	Discover/Engage/Practice: Students will form groups or teacher may assign groups of 3-4 Students will work within these design teams to create a transport vessel that would allow peoples pets to travel with them on some of West Virginias great zipline tours.	
10-15 minutes	Check for Understanding/Summarize/Close: Students will explain the challenges of working within Teams Students will elaborate on why it is important to clearly define design constraints prior to creating a product Students will explain how they came about deciding on their designs	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS CLUSTER

LESSON 6

Lesson Plan Title: Engineers to the Rescue: Blennerhasset Flood		Instructor:
Suggested Total Time for Lesson (minutes): 45-65 minutes (1-2 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.ST.2461.7 Identify principles of the problem-solving process 0972.ST.2461.8 Outline the steps in the design process 0972.ST.2461.10 Analyze Solutions, identifying strengths and weaknesses 0972.ST.2461.11 Develop Details of a Solution 0972.ST.2461.12 Develop, test, and redesign prototypes 0972.ST.2461.28 Make an oral presentation 0972.ST.2461.31 Contribute to a team project 0972.ST.2461.8 Solve problems using appropriate units in engineering systems		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • 3 Tongue Depressors • 24 inches of string • 5 rubber bands • 1 fork • 1 spoon • 12 inches of tape • 12 pipe cleaners • 1 hula hoop • 1 solo cup • Scissors (cannot be in design) 		Resources: <ul style="list-style-type: none"> • Activity Engineers to the Rescue • Decision Matrix Template/Automated Template • Design Brief • Digital Notebook
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10-15 minutes	Get Started/Explain: Students will be introduced to the Flood Challenge at Blennerhasset Island	
30-35 minutes	Discover/Engage/Practice: Students will form groups or teacher may assign groups of 3-4 Students will work within these design teams to create a method for transporting visitors of the mansion to safety	
10-15 minutes	Check for Understanding/Summarize/Close: Students will explain the challenges of working within Teams Students will elaborate on why it is important to clearly define design constraints prior to creating a product Students will explain how they came about deciding on their designs	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS CLUSTER

LESSON 7

Lesson Plan Title: Mini Golf Course Design		Instructor:
Suggested Total Time for Lesson (minutes): x minutes (x day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>0972.ST.2461.7 Identify principles of the problem-solving process 0972.ST.2461.8 Outline the steps in the design process 0972.ST.2461.10 Analyze Solutions, identifying strengths and weaknesses 0972.ST.2461.11 Develop Details of a Solution 0972.ST.2461.12 Develop, test, and redesign prototypes 0972.ST.2461.28 Make an oral presentation 0972.ST.2461.31 Contribute to a team project 0972.ST.2461.8 Solve problems using appropriate units in engineering systems</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Isometric Paper • Card Stock • Cardboard • Balsa Wood • Small Solo Cups • Felt • Playdough 		Resources: <ul style="list-style-type: none"> • <i>Oglebay - Almost Heaven - West Virginia: Almost Heaven - West Virginia (wvtourism.com)</i>
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
10-15 minutes	Get Started/Explain: Students will be introduced to the Challenge and issued Activity Golf Course Design Brief	
30-35 minutes	Discover/Engage/Practice: Students will form groups or teacher may assign groups of 3-4. Students will work within these design teams to design 3 consecutive holes of miniature golf. The 3 holes must have a consistent theme and be related to each other. Students will communicate design ideas nonverbally (simulate virtual design challenge)	
10-15 minutes	Check for Understanding/Summarize/Close: Students will explain the challenges of working within Teams. Students will elaborate on why it is important to clearly define design constraints prior to creating a product. Students will explain how they came about deciding on their designs.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?



TRANSPORTATION, DISTRIBUTION AND LOGISTICS CLUSTER

LESSON 1

Lesson Plan Title: Exploring Transportation		Instructor:
Suggested Total Time for Lesson (minutes): 90 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Students will list, discuss, and demonstrate knowledge of the most common modes of transportation, identifying the most efficient ways to deliver freight. (Leading to Culminating Event for Transportation, Distribution and Logistics- Power and Energy Rubber Band Car Project)		
0976.TR.2215. Global Logistics and Supply Chain Management (Advanced Career)		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Grid Paper • Drawing paper • Copies of Handouts 		Resources: <ul style="list-style-type: none"> • https://www.youtube.com/watch?v=w76uYW-38A0 Optional: <ul style="list-style-type: none"> • World Map • US Map • Digital Concept Mapping website (such as: www.visme.co)
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	<p>Get Started/Explain: Ask students and draw a concept map: "How do we get goods from one place to another?"</p> <p>Concept Map Example</p> <pre> graph TD A[Modes of Transportation] --- B[Land] A --- C[Maritime] A --- D[Air] B --- E[Rail] B --- F[Road] A --- G[Pipeline] </pre> <p>(Created at www.visme.co)</p> <p>Explain modes of transportation, show video (https://www.youtube.com/watch?v=w76uYW-38A0).</p> <p>Provide a scenario to students that involves different forms of freight delivery and ask students to develop their own scenario on the most efficient way to deliver the freight.</p>	
30 minutes	<p>Discover/Engage/Practice: Divide students into small groups for the exercises. They will be asked to write their scenario, draw maps illustrating the mode of transportation to different locations and a picture of their favorite mode of transportation. (Maps may be provided.)</p> <ul style="list-style-type: none"> • Your local Walmart needs 2 pallets of bananas delivered in 2 weeks. What is the most cost-effective and efficient way to deliver this freight? Ask the students to plan delivery from Indonesia and from Florida to Charleston, WV. • You are an oil broker, and you need to transport oil from your oil refinery in Dallas, Texas to Charleston, West Virginia for the next 20 years? What modes of transportation should be considered, and why? • You have a new job that starts this Summer. You will need to travel to Hollywood, California, then to Dallas Texas and then to Argon Spain. Discuss the different types of transportation needs for your most efficient mode of travel, i.e., time and money. 	

15 minutes

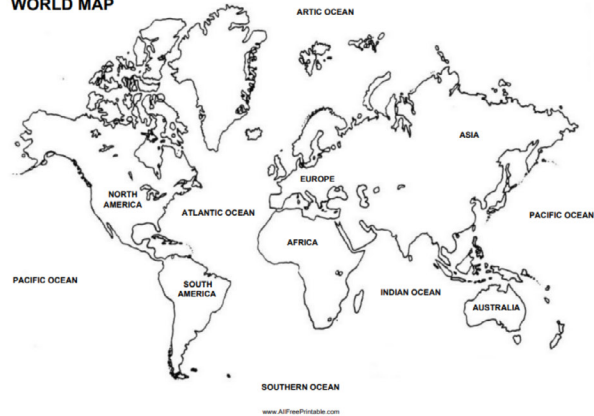
Check for Understanding/Summarize/Close:

Students will share their results and explain why they chose the different modes of transportation.

Modifications, Support, and Extensions (for those students with IEP)

Students may be paired with other students who can assist in completing the exercise. Maps may be provided for students requiring them.

WORLD MAP



World Map

United States of America



US Map

Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?



TRANSPORTATION, DISTRIBUTION AND LOGISTICS CLUSTER

LESSON 2

Lesson Plan Title: Purchasing a Vehicle		Instructor:
Suggested Total Time for Lesson (minutes): 90 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
Students will do an exercise in purchasing a vehicle for transportation, deciding between new, used, or leased, while considering their personal needs and budget. (Leading to Culminating Event for Transportation, Distribution and Logistics- Power and Energy Rubber Band Car Project)		
0976.TR.2215. Global Logistics and Supply Chain Management (Advanced Career)		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Pencil • Grid Paper • Copies of Handouts • Computer • Drawing paper 		Resources: <ul style="list-style-type: none"> • <i>Buy a Car Project - Mister G's Teacher Resources (mistergteacher.com)</i> • <i>preview_buying_a_car.pdf (cwpub.com) (Handout)</i>
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	Get Started/Explain: Students will do a project that involves purchasing a vehicle by researching (vehicle resources provided) and completing a project worksheet. This will involve thinking of career choices and pay associated with the career, cost of living and vehicle choice and affordability.	
30 minutes 30 minutes	Discover/Engage/Practice: Students will research different vehicles and create a budget based on the handout. Students will draw a picture of the vehicle that they chose to buy.	
15 minutes	Check for Understanding/Summarize/Close: Did students complete the project sections, and draw a picture of their vehicle of choice?	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



TRANSPORTATION, DISTRIBUTION AND LOGISTICS CLUSTER

LESSON 3

Lesson Plan Title: Careers in the Automotive Industry		Instructor:
Suggested Total Time for Lesson (minutes): 90 minutes (2 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>Students will list and discuss career opportunities in Automotive Technology, Collision Repair Technology, Diesel Equipment Technology, and Power Equipment Systems. They will identify which they like most and why. (Leading to the Culminating Event for Transportation, Distribution and Logistics- Power and Energy Rubber Band Car Project)</p> <p>0976.TR.1620 Automotive Technology 0976.TR.1670 Collision Repair Technology 0976.TR.1740 Diesel Equipment Technology 0976.TR.1960 Power Equipment Systems</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Pencil • Grid Paper • Drawing Paper • Computer (Research) 		Resources: <ul style="list-style-type: none"> • <i>PCTVS School of Automotive Technology - Bing video</i> • <i>1,000 HP COMPLETE CHEVELLE BUILD IN MINUTES! - Bing video</i>
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	Get Started/Explain: Student will watch the videos for a better understanding of <ul style="list-style-type: none"> • Automotive Technology • Collision Repair Technology • Diesel Equipment Technology • Power Equipment Systems 	
30 minutes 30 minutes	Discover/Engage/Practice: Students will draw the vehicle of their choice: <ul style="list-style-type: none"> • Identify the career area they are most interested in, such as...drawing an engine, special design to the exterior of the vehicle with color, maybe a tractor trailer, motorcycle. • Research careers in the related areas. 	
15 minutes	Check for Understanding/Summarize/Close: Students will explain the differences between the areas of Automotive Technology, Collision Repair Technology, Diesel Equipment Technology and Power Equipment Systems.	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



TRANSPORTATION, DISTRIBUTION AND LOGISTICS CLUSTER

LESSON 4

Lesson Plan Title: Designing a Rubber Band-Powered Car		Instructor:
Suggested Total Time for Lesson (minutes): 135 minutes (3 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>The students will individually design and build a car which is powered by no more than two (2) rubber bands. The car should be able to travel at least 6 feet. Your car must be well constructed and able to travel the distance multiple times. (Culminating Event for Transportation, Distribution and Logistics - Power and Energy Rubber Band Car Project)</p> <p>0976.TR.1620 Automotive Technology 0976.TR.1670 Collision Repair Technology 0976.TR.1740 Diesel Equipment Technology 0976.TR.1960 Power Equipment Systems</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials: <ul style="list-style-type: none"> • Grid Paper • Copies of Handouts • Hot Glue Gun • Straws • Rubber Bands • Plastic Bottle Tops • Wooden (dowel pins) Axles • Plastic bottle 	Resources: <ul style="list-style-type: none"> • <i>power and energy rubber band car project - Bing images</i> • <i>DIY RUBBER BAND POWERED TOY CAR! Coca Cola bottle! Super EASY and FUN! - Bing video</i> 	
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	Get Started/Explain: <ul style="list-style-type: none"> • Students will make a self-propelled car using materials provided by the teacher that will travel at least 18 feet. • Watch videos on design ideas for self-propelled cars. 	
30 minutes	Discover/Engage/Practice: <ul style="list-style-type: none"> • Students will use materials provided by the teacher or they can bring items from home to design a car that looks good and meets the requirements. • Looks count, so make the vehicle attractive. 	
45 minutes	<ul style="list-style-type: none"> • Cars must have at least 3 wheels and move without being pushed. • All cars meeting the specifications will compete to determine which car can travel 6 feet in the shortest time. 	
45 minutes	Check for Understanding/Summarize/Close: <ul style="list-style-type: none"> • The car is constructed to meet design specifications. • The car is eligible to race. • The car can travel a minimum distance of 6 feet. • The car can reach the destination in the shortest amount of time 	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		



TRANSPORTATION, DISTRIBUTION AND LOGISTICS CLUSTER

LESSON 5

Lesson Plan Title: SkillsUSA-Middle School		Instructor:
Suggested Total Time for Lesson (minutes): 45 minutes (1 day)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
<p>This lesson will provide students with an understanding of SkillsUSA as an Organization with a national membership association serving high school, college, and middle school students who are preparing for careers in trade, technical, and skilled service occupations, including health occupations, and for further education.</p> <p>Content for this lesson plan was collected from SkillsUSA Official Site Middle School - SkillsUSA.org</p>		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
<ul style="list-style-type: none"> Handouts 		<ul style="list-style-type: none"> https://www.skillsusa.org/wp-content/uploads/2021/07/Sk-Membership-Benefits-Guide-2021-HS-MS-mc-v8-web-FINAL.pdf MS-Chapter-Intregation-Guide.pdf (skillsusa.org)
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
15 minutes	<p>Get Started/Explain:</p> <ul style="list-style-type: none"> SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. SkillsUSA helps each student excel. SkillsUSA is only possible if there is first at least one CTE classroom that exists to which the chapter can connect. Classrooms and laboratories are the first component of a whole CTE program; A primary purpose is to develop technical skills and knowledge of a student in their desired career path. Work-based learning programs and workplace experiences are the second component of a whole CTE program; A primary purpose is to engage students in authentic experiences that aid in career preparation through the application of what's being learned in the classroom. CTSOs are the third component of a whole CTE program. The primary purpose is to develop leadership and career readiness skills in students and to recognize technical skills and knowledge. 	
20 minutes	<p>Discover/Engage/Practice:</p> <ul style="list-style-type: none"> Students will learn about interactive and memorable sessions. Each session is written to introduce students to different STEM careers and career clusters, and to the value of SkillsUSA. Students will be engaged in learning, and sharing specific career cluster and occupational information. The highlight of each session is a hands-on learning activity. 	
10 minutes	<p>Check for Understanding/Summarize/Close: Students expressing the benefits of joining SkillsUSA.</p>	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?

WRAP-UP LESSON PLAN

Lesson Plan Title: Discover Your Future Wrap up		Instructor:
Suggested Total Time for Lesson (minutes): 225 minutes (5 days)		
Content Focus - What Will Students Learn? (Content Skill Sets)		
0972.HU.0928.26 Career development skills to advance in careers 0972.BM.1409.45 Create an appropriate resume. 0972.BM.1409.48 Participate in mock interviews in various situations. 0972.BM.1409.50 Demonstrate appropriate dress in an interview situation.		
Materials and Resources- What do you need to assemble and prepare before the lesson?		
Materials:		Resources:
<ul style="list-style-type: none"> Portfolio rubric 		<ul style="list-style-type: none"> Employability Skills
Lesson Outline: What learning activities will your students do?		
Time	Sequence/Description of Learning Activity	
Introduction	Get Started/Explain: After learning about the career options throughout Discover Your Future, students will decide which career is in their future	
Days 1-2	Portfolio/Presentation: Students have been collecting documents for a Career Portfolio throughout the learning from Discover Your Future. Students will review their interests and decide upon a career of their choice. Using the research and content skill sets learned, students will create a presentation about the career of their choice to present to the class.	
Days 2-3	Ad: Students will create an ad to be posted online for a fictitious job opening in their career cluster category. Students will create a company and ad with a list of requirements to be hired for the position. Each ad will be shared in front of the class at the end of the assignment.	
Days 3-4	Resume: Students will complete a resume for their fictitious job opening. See sample resume in resource files	
Days 4-5	Mock Interviews: Students will participate in mock interviews. People from industry, administrators/office staff, or other teachers can assist in the mock interview process. As an additional resource, Students will take turns interviewing each other based on their fictitious job opening.	
	Check for Understanding/Summarize/Close: Were students able to gain knowledge about their chosen career?	
Modifications, Support, and Extensions (for those students with IEP)		
Reflection- Did the students learn the content outlined in the lesson focus? Why or why not?		

DISCOVER YOUR FUTURE SELF-REFLECTION

Name: _____

Cluster: _____

Was the content appropriate for the age of your learners and the number of learners in your class?
(Explain)

What improvements could be made to the equipment, supplies, references, and other resources for this cluster?

Were students actively engaged in the learning activities? If not, how could they be adjusted?

Were the provided lesson plan timelines appropriate? Does it need lengthened or shortened?

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