**Category-** Mark an “X” in space in front of the category of your project. Pick one only.

1. Animal Sciences

2. Behavioral

& Social Sci

3. Biochemistry

4. Biomedical

& Health Sci

5. Cell

& Molecular Biology

6. Chemistry

7. Computational Bio

& Bioinformatics

8. Earth Science

& Env Sci

9. Embedded Systems

10. Energy

11. Engineering

12. Material Science

13. Mathematics

14. Microbiology

15. Physics

& Astronomy

16. Plant Sciences

17. Robotics

& Intelligent Machines

18. Systems Software

**West Virginia Science & Engineering Abstract for Middle School 2020**

|  |
| --- |
| *Title:* |
| *Abstract:* |

|  |  |
| --- | --- |
| 1. As a part of this research project, the student directly handled, manipulated, or interacted with (check ALL that apply):   \_\_\_\_\_\_\_ human subjects  \_\_\_\_\_\_\_ vertebrate animals  \_\_\_\_\_\_\_ potentially hazardous biological agents  \_\_\_\_\_\_\_ microorganisms  \_\_\_\_\_\_\_ rDNA  \_\_\_\_\_\_\_ tissue | ­­­­­\_\_\_\_\_\_\_Yes \_\_\_\_\_\_ No |
| 1. This abstract describes only procedures performed by me/us,  reflects my/our own independent research, and represents one year’s work | \_\_\_\_\_\_\_Yes \_\_\_\_\_\_ No |
| 1. I/we worked or used equipment in a regulated research institution or industrial setting: | \_\_\_\_\_\_\_Yes \_\_\_\_\_\_ No |
| 1. This project is a continuation of previous research. | \_\_\_\_\_\_\_Yes \_\_\_\_\_\_ No |
| 1. My display board includes non-published photographs/visual depictions of humans (other than myself): | \_\_\_\_\_\_\_Yes \_\_\_\_\_\_ No |
| 1. I/we hereby certify that the abstract and responses to the to the above statements are correct and properly reflect my/our own work | \_\_\_\_\_\_\_Yes \_\_\_\_\_\_ No |

**West Virginia Science & Engineering Fair 2020**

**Checklist for Adult Sponsor (1)**

**REQUIRED for ALL Middle School Projects**

To be completed by the Adult Sponsor in collaboration with the student researcher(s):

Student’s Name(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. I have reviewed the ISEF Rules and Guidelines.
* 2. I have reviewed the student’s completed Student Checklist (1A) and Research Plan/Project Summary.
* 3. I have worked with the student and we have discussed the possible risks involved in the project.
* 4. The project involves one or more of the following and requires prior approval by an SRC, IRB, IACUC or IBC:

|  |  |  |  |
| --- | --- | --- | --- |
| * Humans | Potentially Hazardous Biological Agents | | |
| * Vertebrate Animals | * Microorganisms | * rDNA | * Tissues |

* 5. Items to be completed for ALL PROJECTS

|  |  |
| --- | --- |
| * Adult Sponsor Checklist (1) | * Research Plan/Project Summary (1A2) |
| * Student Checklist (1A) | * Approval Form (1B) |

* + - Regulated Research Institutional/Industrial Setting Form (1C) (when applicable; after completed experiment)
    - Continuation/Research Progression Form (7) (when applicable)

Additional forms required if the project includes the use of one or more of the following (check all that apply):

* **Humans,** including student designed inventions/prototypes. (Requires prior approval by an Institutional Review Board (IRB); see full text of the rules.)
* Human Participants Form (4) or appropriate Institutional IRB documentation
* Sample of Informed Consent Form (when applicable and/or required by the IRB)
* Qualified Scientist Form (2) (when applicable and/or required by the IRB)
* **Vertebrate Animals** (Requires prior approval, see full text of the rules.)
* Vertebrate Animal Form (5A) ‑ for projects conducted in a school/home/field research site (SRC prior approval required.)
* Vertebrate Animal Form (5B) ‑ for projects conducted at a Regulated Research Institution. (Institutional Animal Care and Use Committee (IACUC) approval required prior experimentation.)
* Qualified Scientist Form (2) (Required for all vertebrate animal projects at a regulated research site or when applicable)
* **Potentially Hazardous Biological Agents** (Requires prior approval by SRC, IACUC or IBC, see full text of the rules.)
* Potentially Hazardous Biological Agents Risk Assessment Form (6A)
* Human and Vertebrate Animal Tissue Form (6B) ‑ to be completed in addition to Form 6A when project involves the use of fresh or frozen tissue, primary cell cultures, blood, blood products and body fluids.
* Qualified Scientist Form (2) (when applicable)
* The following are exempt from prior review but require a Risk Assessment Form 3: projects involving protists, archae and similar
* microorganisms, for projects using manure for composting, fuel production or other non-culturing experiments, projects using color change coliform water test kits, microbial fuel cells, and projects involving decomposing vertebrate organisms.
* **Hazardous Chemicals, Activities and Devices** (No SRC prior approval required, see full text of the rules.)
* Risk Assessment Form (3)
* Qualified Scientist Form (2) (required for projects involving DEA-controlled substances or when applicable)
* **Other**
  + Risk Assessment Form (3)

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Adult Sponsor’s Printed Name Adult Sponsor’s Signature Date of Review (mm/dd/yy)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Phone Email

**West Virginia Science & Engineering Fair 2020**

**Student Checklist (1A)**

**REQUIRED for ALL Middle School Projects**

1. a. Student/Team Leader:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade: \_\_\_\_\_\_\_\_\_\_\_

Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. Team Member: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ c. Team Member: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Title of Project: ­­­­­­­­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. School: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ School Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

School Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Adult Sponsor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Phone/Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. Does this project need SRC/IRB/IACUC or other pre-approval?  Yes  No Tentative start date: \_\_\_\_\_\_

6. Is this a continuation/progression from a previous year?  Yes  No

If Yes:

a. Attach the previous year’s Abstract and Research Plan/Project Summary (1A2)

b. Explain how this project is new and different from previous years on

 Continuation/Research Progression Form (7) from ISEF

7. This year’s laboratory experiment/data collection:

Actual Start Date: (mm/dd/yy) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_End Date: (mm/dd/yy) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. Where will you conduct your experimentation? (check all that apply)

 Research Institution  School  Field  Home  Other:

9.List name and address of all non-home and non-school work site(s):

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. Required Forms

\_\_\_ WVSEF Abstract for Middle School

\_\_\_ WVSEF Adult Sponsor Checklist (1) for Middle School

\_\_\_ WVSEF Student Checklist (1A) for Middle School

\_\_\_ WVSEF Research Plan (1A2) for Middle School

\_\_\_ WVSEF Approval Form (1B) for Middle School

\_\_\_ WVSEF Rules Agreement Form for Elementary and Middle School

**Additional Forms May Be Necessary-** see the ISEF 2020 Rules at [http://bit.ly/ISEFrulesforms](https://nam01.safelinks.protection.outlook.com/?url=http%3A%2F%2Fbit.ly%2FISEFrulesforms&data=02%7C01%7Crobin.sizemore%40k12.wv.us%7Cc6aa3cceb40640d2d8f708d74c25d02f%7Ce019b04b330c467a8bae09fb17374d6a%7C0%7C0%7C637061597592200199&sdata=uFOLnJRgX9%2Fxcb9oT7HG1xjZSM%2FzovvQ93PnOUwgm28%3D&reserved=0).

\_\_\_ Form when using human subjects

\_\_\_ Form when using vertebrate animals

\_\_\_ Form when using Potentially Hazardous Biological Agents

\_\_\_ Form when using Hazardous Chemicals, Activities, or Devices

**West Virginia Science & Engineering Fair 2020**

**Research Plan (1A2)**

**REQUIRED for ALL Middle School Projects Before Experimentation**

**You may type and print this form onto another paper; be sure to include all the information from this page and in the same order. The research plan for ALL projects is to include the following:**

A. Question being addressed

B. Hypothesis/Problem/Engineering Goals

C. Description in detail of method or procedures

Procedures:

Data Analysis:

D. Bibliography: List at least five (5) major references

1.

2.

3.

4.

5.

**West Virginia Science & Engineering Fair 2020**

**Approval Form (1B)**

**A completed form is required for each middle school student, including team members.**

|  |
| --- |
| **1. To Be Completed by Student and Parent**   * 1. **Student Acknowledgment:**      + I understand the risks and possible dangers to me of the proposed research plan.      + I have read the ISEF Rules and Guidelines and will adhere to all International Rules when conducting this research.      + I have read and will abide by the following Ethics statement   Student researchers are expected to maintain the highest standards of honesty and integrity. Scientific fraud and misconduct are not condoned at any level of research or competition. Such practices include but are not limited to plagiarism, forgery, use or presentation of other researcher’s work as one’s own, and fabrication of data. Fraudulent projects will fail to qualify for competition in affiliated fairs and ISEF.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Student’s Printed Name Student’s Signature Date Acknowledged (mm/dd/yy)  (Must be prior to experimentation.)  **b. Parent/Guardian Approval:** I have read and understand the risks and possible dangers involved in the  **Research Plan/Project Summary**. I consent to my child participating in this research.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Parent’s/Guardian’s Printed Name Parent’s/Guardian’s Signature Date Acknowledged (mm/dd/yy)  (Must be prior to experimentation.) |

**2. To be completed by the local or affiliated Fair SRC.**

**(Required for projects requiring prior SRC/IRB APPROVAL. (Sign 2a OR 2b as appropriate.)**

|  |  |  |
| --- | --- | --- |
| a. Required for projects that need prior SRC/IRB approval BEFORE experimentation (humans, vertebrates or potentially hazardous biological agents).  The SRC/IRB has carefully studied this project’s **Research Plan/ Project Summary** and all the required forms are included. My signature indicates approval of the **Research Plan/Project Summary** before the student begins experimentation.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_  SRC/IRB Chair’s Printed Name Date Acknowledged (mm/dd/yy)  (Must be prior to experimentation.)  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Signature | **OR** | b. Required for research conducted at all Regulated Research Institutions with no prior fair SRC/IRB approval.  This project was conducted at a regulated research institution (not home or high school, etc.), was reviewed and approved by the proper institutional board before experimentation and complies with the ISEF Rules. **Attach (1C) and any required institutional approvals (e.g. IACUC, IRB).**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_  SRC/IRB Chair’s Printed Name Date Acknowledged   (mm/dd/yy)  (Must be prior to experimentation.)  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Signature |

**3. Final ISEF Affiliated Fair SRC Approval (Required for ALL Projects)**

|  |
| --- |
| **Science Review Committee (SRC) Approval After Experimentation and Before Competition at State.**  I certify that this project adheres to the approved **Research Plan/Project Summary** and complies with all ISEF Rules.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Regional SRC Chair’s Printed Name Signature Date of Approval (mm/ss/yy)  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Regional SRC Chair’s Printed Name Signature Date of Approval (mm/ss/yy) |

**THE WEST VIRGINIA SCIENCE & ENGINEERING FAIR**

**2020 Rules Agreement Form for ELEMENTARY AND MIDDLE SCHOOL STUDENTS**

I grant the West Virginia Department of Education (WVDE) the right to use my image for the creation of marketing materials that will be used in a variety of formats, including but not limited to, television, print and online. I understand that I must be 18 or older to participate without the permission of a parent or guardian. I understand that this permission does not include use of my image by other parties for any other purpose that is not affiliated with WVDE. I waive any right that I may have to inspect and/or approve the finished product or products or the editorial or advertising that may be used in connection with this project. I understand that I will not be paid for my participation in this project.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

WVSEF Participant Name

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

WVSEF Participant Signature Date

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

WVSEF Participant Parent/Guardian Signature Date