

Domain	Probability and Informed Decisions	
Cluster	Use probability to evaluate outcomes and make decisions	
Standard(s)	M.ASHS.24	Evaluate claims based on data reports. Instructional Note: Data reports can be gathered from media.

Content Examples

- » Different Kinds of Probability and Making Decisions:
<https://sciencing.com/different-kinds-probability-8526104.html>
- » Making Decisions with Probability:
<https://youtu.be/8bK-xfh8-rY>

Relevant Content

Vocabulary

- » Quantitative Variable: A quantitative variable is a variable that takes numerical values that are quantities – counts or measurements.
- » Sampling Variability: Sampling variability involves the principle that different random samples of the same size from the same population produce different estimates.
- » Simulation: A simulation is an imitation of chance behavior, based on a model that accurately reflects the situation.
- » Statistically Significant: When the observed results of a study are too unusual to be explained by chance alone, the results are called statistically significant. If the P-value is smaller than alpha, we say that the results of a statistical study are significant at level, . In that case, we reject the null hypothesis and conclude that there is convincing evidence in favor of the alternative hypothesis.

Chapter 7 Stats Medic Lesson 7.1 Idea of a Confidence Interval

<https://www.statsmedic.com/intro-day102>

Chapter 7 Stats Medic Lesson 7.2 What Effects the Margin of Error?

<https://www.statsmedic.com/intro-day103>

Chapter 8 Stats Medic Lessons 8.1 Page 1 Is Mrs. Gallas a Good Free Throw Shooter?

<https://www.statsmedic.com/intro-day114>

Assessment Links or Tasks

- » Can you smell Parkinson's activity:
<https://www.statsmedic.com/apstats-day1>
- » Smelling Parkinson's Video Clip:
<https://www.bbc.com/news/uk-scotland-34583642>
- » Smelling Parkinson's PowerPoint Show
Doug Tyson has graciously shared his NCTM Conference presentation with West Virginia educators and students.
<https://www.dropbox.com/s/e6a6isyo1xrrn56/17%20Doug%20Tyson%20Smelling%20Parkinson%27s%20Disease%202017.pdf?dl=0>

Smelling Parkinson's T-Shirt Template

Cut out the Parkinson's T-shirts and mount on cardstock or construction paper.

On the back of each card, write "Parkinson's" or "No Parkinson's".

Place 12 cards in a baggie.

Each group will receive one bag of t-shirts.

Working in pairs, one student will hold the card, while the partner "sniffs" it.

The "sniffing" student will announce "Parkinson's" or "No Parkinson's".

The student displaying the cards will keep track of correct identifications.

At the conclusion of the activity, the students will switch roles.

After all groups have finished the activity.

Graph student results on butcher paper or chart paper.

Be sure to graph Joy Milne's result (11 correct identifications out of 12).

Discuss class results and evaluate Joy Milne's claim.

Smelling Parkinson's Activity:

<https://www.statsmedic.com/downloads-ap-day1>
