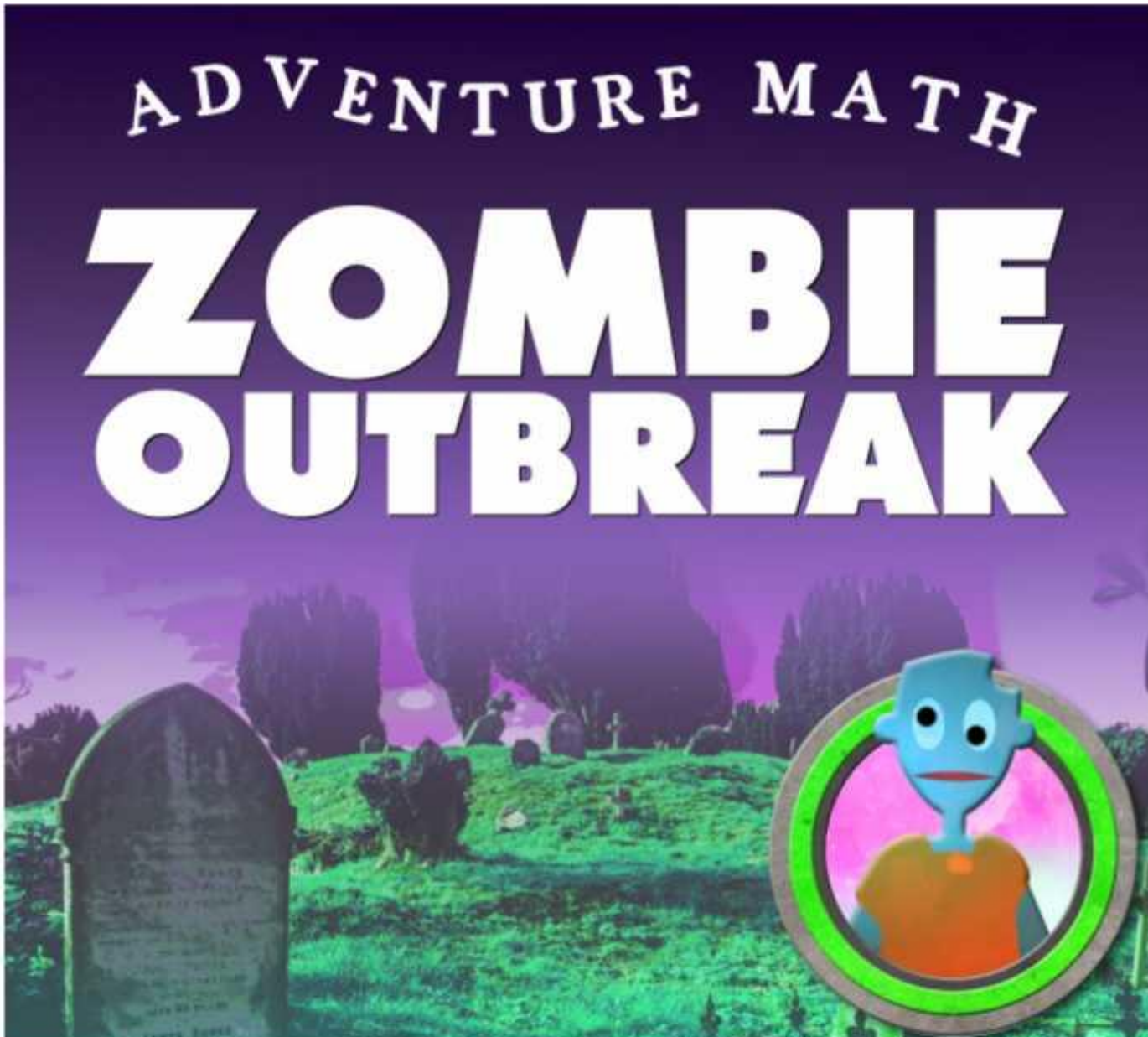


ADVENTURE MATH

ZOMBIE OUTBREAK



VIRUS X OUTBREAK

EMERGENCY NOTIFICATION

Doctors have identified a dangerous virus that is spreading across America. They have named it Virus X. When people become infected with Virus X they come down with a variety of symptoms including coughs, fevers, and nausea. While some people infected with Virus X recover; others turn into zombies.

You are part of a medical research team that works for the Center for Disease Control (CDC.) Your team has been flown to an airport in Oregon to study a group of people with Virus X. These patients are quarantined in the airport to prevent the virus from spreading.

Analyze their information and help the CDC understand the virus. Figure out where the virus is coming from and why some people recover while others become zombies.

Research report prepared by: _____

Date: _____

ZOMBIE OUTBREAK

The Project:

Students pretend to be epidemiologists investigating a zombie outbreak occurring in the United States. Students apply their statistical skills to determine:

- Where the virus is originating
- Which patients are likely to become zombies
- Which symptoms are most common

Students practice:

- Creating dot plots and bar graphs
- Describing the distribution of data
- Determining mean and mode
- Evaluating the usefulness of the measure of central tendency based on the data's distribution

Printing:

- Print pg 3-8 for each student.
- Print a set of data for each student or each pair of students
- Print both maps for each student or each pair of students. (The maps will help students figure out which region each state belongs in.)

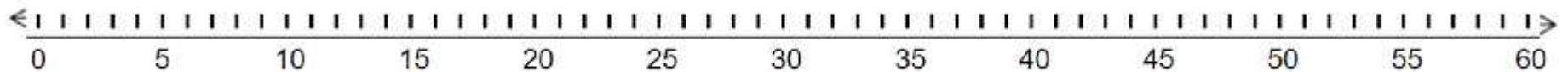
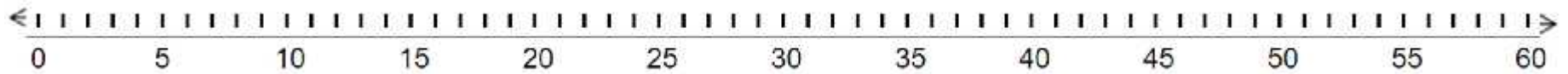
Tips:

- Start by explaining what epidemiologists do (get the kids to say the word aloud a few times!)
- Dramatically introduce the Virus X Outbreak
- Explain that the students are going to be epidemiologists investigating the outbreak
- Introduce the materials:
 - Data set with *actual* information about the infected patients.
 - Maps of the United States
 - An analysis packet
- Let students know that the CDC is counting on them for a thorough analysis completed quickly

Thanks so much for your purchase! I hope you and your students enjoy this activity. Don't forget to leave feedback to earn TPT credits! Please let me know how it goes and whether you have any suggestions for improvement.

1. Who recovers and who becomes zombieified?

a) It's difficult to analyze the data in list form. Start your analysis by creating two dot plots on the number lines shown below. Make one dot plot for the ages of the people who became zombies and another dot plot for the ages of people who recovered. Be sure to write a title for each dot plot .



b) Compare the dot plots. What do you notice? What conclusions can you draw?

c) Find the mean age of people who become zombies. Show your work.

d) Find the mean age of people who recovered. Show your work.

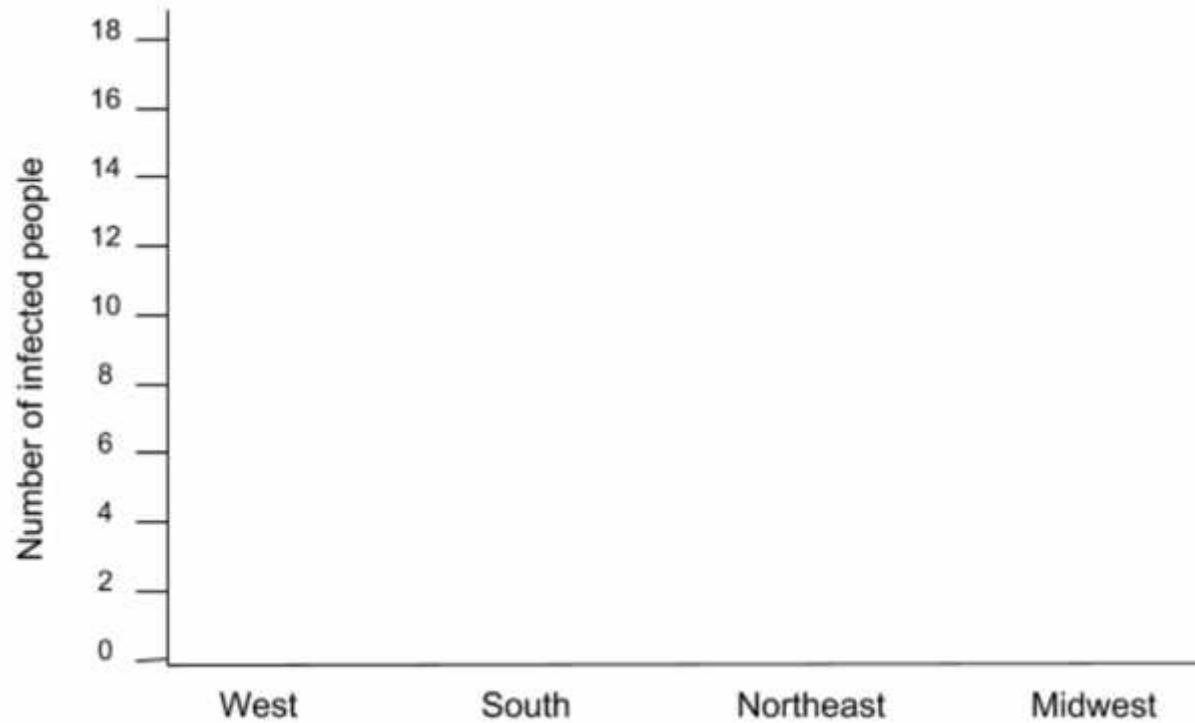
Summarize:

What do you notice about the means that you just found? Do both statistics give a good picture of the data or are they maybe misleading?

If you had to give an interview to the press, would you share the information about the means? Explain .

2. Where is the VIRUS X originating?

a) Epidemiologists also want to figure out the source of the virus - they need to figure out where it's coming from. Use the data and the maps to create a bar graph showing where the infected people were traveling from. Tip: Use the maps to figure out the regions.



b) What conclusions can you draw from the data?

3. How can doctors diagnose VIRUS X?

a) Determine the most common symptoms experienced by people who become zombies by creating a frequency table.

Symptom	# of people who became zombies

4. Press release

Write a short article that can be published on the CDC's website explaining everything you've discovered about the Virus X so far.

5. A New Victim: Dana Watson

A new patient has come to you for assistance. Answer her questions using the data to support your answers.

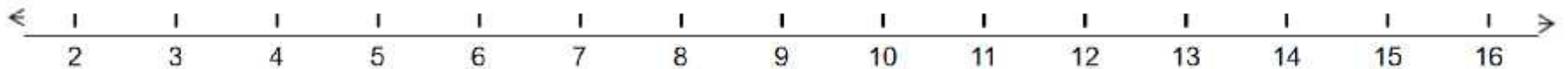
Dana: "Hello, my name is Dana. I'm 31 years old, and I'm from South Carolina. I've had a variety of symptoms: headaches, a fever, and a rash. Do you think I will recover or become a zombie?"

Doctor:

Dana: "Since I'm probably going to _____, how many days do you think it will take?"

Find the range the mean, median, and mode of days it will take. Then draw a box-and-whisker plot. (Use the workspace below to show your work). How do the means of days before recovery and zombification compare?

Workspace:



In average, it takes _____ days before a person recovers and it takes _____ days for a person to become a zombie. What will the doctor tell Dana? Provide her with a detailed overview of what to expect.

Doctor:

Virus X Patient Data

Compiled from patients quarantined at the Portland International Airport

Name	Age	Symptoms	State	Days of illness before recovery or zombification	Zombified or Recovered
Ada	52	fever, headache	Georgia	6	Recovered
Skye	20	stomachache, headache	Wisconsin	11	Zombie
Anthony	11	stomachache, fever	Florida	8	Recovered
Samuel	5	fever, cough	Mississippi	8	Recovered
Ruth	29	fever, headache	Tennessee	13	Zombie
Jonathan	16	nausea, headache	Washington	5	Recovered
Eric	20	cough, fever	Florida	9	Zombie
Mia	15	fever, headache	Wyoming	9	Recovered
MInaya	4	fever, headache	Texas	5	Recovered
Giovanni	51	fever, headache	Alabama	5	Recovered
James	33	nausea, headache	Arizona	15	Zombie
Juliet	24	fever, headache	Oregon	12	Zombie
Naomi	41	nausea, headache	South Carolina	10	Zombie
Fatima	55	stomachache, fever	New York	14	Recovered
Andre	41	stomachache, headache	Montana	6	Zombie
Tyshawn	42	fever, headache	Arizona	9	Zombie
Christopher	51	stomachache, fever	Florida	8	Recovered
Jahmilia	11	fever, cough	Idaho	7	Recovered
Daniel	35	fever, nausea	Florida	8	Zombie
Mahmoud	60	fever, cough	California	3	Recovered
Gabrielle	12	nausea, cough	Georgia	5	Recovered
Katie	32	headache, fever	Pennsylvania	14	Zombie



Census Regions and Divisions of the United States

