Name

Date

Germs All Around Us-ANSWERS

Directions: As you learn about microbes, germs, and an experiment about guinea pigs and the flu, use the spaces below to write down your thoughts and ideas.

Part A: ***Introducing Microbes and Germs Image Gallery***

The difference between a **microbe** and a **germ** is:	
Microbes are living things that are too small to see without a microscope.	*Germs* are microbes that make us sick.

The three main types of germs are:		
Viruses	Bacteria	Fungi
One example of each type of germ is:		
Coronavirus, Influenza, Rhinovirus	Penicillium, Streptococcus,	Trichophyton, Microsporum, and Epidermophyton (common fungi that cause ringworm)

Two new questions that I have about germs in the winter are:	
Student responses will vary	

Part B: *Guinea Pigs Can Get the Flu, Too!* Infographic

Identify the Testable Question: The testable question that Dr. Palese and his team were interested in:

How does temperature and humidity affect the spread of the influenza virus between guinea pigs?

Write a Prediction: I predict that more guinea pigs will get sick in the environmental condition that is **warmer/cooler** AND **higher/lower** humidity as compared to the guinea pigs in the environmental condition with the **warmer/cooler** AND **higher/lower** humidity, because _____.

Defining Important Terms: *Humidity* means how much water vapor, or moisture, is in the air.

Understanding Results: Circle the words below that correctly describe the results of the guinea pig experiment.

Cooler Environmental Condition: Low Temperature five degrees Celsius (41°F) Graph: The low humidity (35 percent) condition had **more/fewer** sick guinea pigs than the high humidity (80 percent) condition.

Warmer Environmental Condition: High Temperature 20 degrees Celsius (68°F) Graph: The low humidity (35 percent) condition had **more/fewer** sick guinea pigs than the high humidity (80 percent) condition.

Which combination of environmental conditions had the *least* amount of sick guinea pigs?

Low Temperature five degrees Celsius (41°F) and Low Humidity (35 percent)	Low Temperature five degrees Celsius (41°F) and High Humidity (80 percent)
High Temperature 20 degrees Celsius (68°F) and Low Humidity (35 percent)	High Temperature 20 degrees Celsius (68°F) and High Humidity (80 percent)

Interpreting Results:
Therefore, we can conclude that viruses are best able to survive and spread in environmental conditions that have **high/low** temperature and **high/low** humidity.
Revisiting My Prediction: My prediction was supported by the data. My prediction was not supported by the data.

Part C: Connect to the Unit Driving Question and Final Product

How does the guinea pig experiment change your ideas about why germs make us sick more often during the winter? Student responses will vary

What new facts or ideas do you want to share with your community through the Germology Game Show? Student responses will vary