

Name: _____ Date: _____

Answer Key: Operation Petri Dish: A 7th Grade Microbe Hunters Quiz

Students practice identifying fundamental microbial structures and their ecological roles through a foundational recall-based assessment.

1. Which of these specialized tools is most likely used by a scientist to view the tiny details of a tobacco mosaic virus?

Answer: B) Electron microscope

Viruses are far too small to be seen with light; they require the high magnification and resolution of an electron microscope.

2. The thick-walled 'survival pods' that some bacteria create to stay alive in harsh conditions are called _____.

Answer: B) Endospores

Endospores allow bacteria to remain dormant and survive extreme heat or dryness until conditions improve.

3. True or False: Most types of bacteria on Earth are harmful pathogens that cause disease in humans.

Answer: B) False

Actually, the vast majority of bacteria are either harmless or beneficial, helping with digestion, plant growth, and decomposition.

4. A scientist finds a single-celled organism in a pond that uses a long, whip-like tail to move. What is this tail called?

Answer: C) Flagellum

A flagellum is a whip-like structure used by many microbes, like the Euglena, for locomotion.

5. Which of these microorganisms is responsible for making bread dough rise by releasing carbon dioxide gas?

Answer: C) Yeast

Yeast is a microscopic fungus that ferments sugar, producing CO₂ bubbles that get trapped in the dough.

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6. Microbes that can make their own food using sunlight, such as Diatoms, are known as _____.

Answer: B) Producers

In an ecosystem, organisms like algae and diatoms are producers because they perform photosynthesis.

7. True or False: Viruses are considered living things by all scientists because they can reproduce on their own.

Answer: B) False

Viruses cannot reproduce on their own; they must hijack a living host cell, which is why many scientists consider them non-living.

8. When a bacterium divides into two identical daughter cells, what is this process called?

Answer: A) Binary fission

Binary fission is the primary method of asexual reproduction for prokaryotic organisms like bacteria.

9. Penicillin is a famous medicine used to kill bacteria. It was originally discovered coming from a _____.

Answer: C) Mold

Alexander Fleming discovered penicillin in the *Penicillium* mold, which is a type of microscopic fungus.

10. True or False: Prokaryotic cells, like bacteria, do not have a nucleus to hold their DNA.

Answer: A) True

The defining feature of prokaryotes is the lack of a membrane-bound nucleus; their DNA just floats in the cytoplasm.