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## 7th Grade Science All Domains (7thGradeScienceAI)

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1. A human blood cell is approximately what size?

- A. 7 millimeters
  - B. 7 micrometers
  - C. 7 nanometers
  - D. 7 picameters
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2.

Use the graph below to answer this question.



Two guinea pigs were fed different diets for a month. The graph shows what happened to their weight. Which statement is correct according to the information on the graph?

- A. Guinea pig X lost weight while guinea pig Y gained weight.
  - B. Guinea pig X and guinea pig Y weighed the same at the beginning of the experiment.
  - C. Guinea pig X and guinea pig Y weighed the same on day 10.
  - D. Guinea pig Y lost weight until day 15 and then gained weight.
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3. The correct SI unit symbol for a liquid's density is

- A. g/mg.
- B. g/mL.
- C. g/cm.
- D. g/°C.

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4.

Use the chart below to answer this question.

Body Part	Body System
tricep	muscular
femur	skeletal
bronchioles	respiratory
aorta	??
brain	nervous
kidneys	excretory

Which term would correctly complete the chart?

- A. nervous
- B. digestive
- C. circulatory
- D. respiratory

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5. Which is true of both mitosis and meiosis?

- A. Each process occurs in every type of cell.
- B. Each produces cells with half the number of chromosomes.
- C. Each process begins by copying the DNA in the nucleus.
- D. In each process, the cells produced are identical to the original cell.

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6. An organelle that contains digestive enzymes is the

- A. Golgi body.
- B. lysosome.
- C. mitochondrion.
- D. vacuole.

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7. Which is the name of our galaxy?

- A. Galactica
- B. Andromeda
- C. Milky Way
- D. Magellanic Cloud

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8. The scientific name for bread mold is *Rhizopus stonifer*. Which classification group is *Rhizopus*?

- A. genus
- B. class
- C. phylum
- D. species

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9. Oxygen is released into the air by

- A. the Sun.
- B. animals.
- C. volcanoes.
- D. plants.

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10. Photosynthesis is the way plants make food. Which of the following are always needed for photosynthesis?

- A. water, light, chlorophyll, carbon dioxide
- B. water, light, flowers, oxygen
- C. water, roots, stems, leaves
- D. water, light, fertilizer, oxygen

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11. When a cooler solid comes in contact with a warmer solid, the energy transfer is called

- A. conduction.
- B. convection.
- C. radiation.
- D. evaporation.

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12. Grasslands and savannas are biomes that are very valuable as areas for farming and grazing livestock. In the United States, these biomes are mostly found in the

- A. Southeast.
- B. Midwest.
- C. Northwest.
- D. Southwest.

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13. After a new species of fish is released in a lake, which possible development would have the **least** effect on the ecological balance in the lake environment?

- A. the new fish dying in the strange environment and then decaying
- B. the new fish competing for food eaten by the other species of fish
- C. the new fish becoming a popular food for other fish in the lake
- D. the new fish eating other species of fish in the lake

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14. In which part of the ocean are fish most plentiful?

- A. where the ocean has the most dissolved minerals
- B. where the ocean is deepest
- C. in the part of the ocean that is farthest from land
- D. where there are the most plants and algae

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15. Which is an example of a material that forms crystals when it becomes a solid?

- A. table salt
- B. butter
- C. glass
- D. candle wax

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16. Which animals from the phylum Chordata begin life in water breathing through gills, then later develop lungs for breathing on land?

- A. kingfisher and osprey
- B. turtles and alligators
- C. frogs and toads
- D. sharks and marlins

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17. Plants that grow on the shaded forest floor often have larger leaves than plants that grow in an open field. How does this adaptation help the forest plants?

- A. Large leaves keep the insects warm.
- B. Large leaves attract insects to the plants.
- C. Large leaves gather light for the plants.
- D. Large leaves gather water for the plants.

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18. Which Punnett square should be used to predict the results of a cross between two people with genotypes of Bb?

A.

	B	b
B	BB	Bb
B	BB	Bb

B.

	B	B
B	BB	BB
b	Bb	Bb

C.

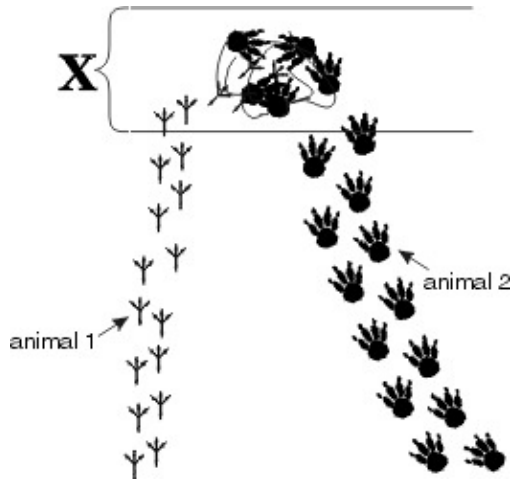
	B	B
B	BB	BB
B	BB	BB

D.

	B	b
B	BB	Bb
b	Bb	bb

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19. The picture below shows the animal tracks Jeremy found by a riverbank.



Which of the following events probably took place in area X of the picture?

- A. Animal 1 was eaten by animal 2.
- B. Animal 2 flew away.
- C. Animal 2 was eaten by animal 1.
- D. Animal 1 stepped in the tracks of animal 2 when leaving area X.

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20. The northern United States and southern Canada are characterized by forests of deciduous trees that lose their leaves in winter and coniferous trees that are evergreens. This area is a transition between which two major biomes?

- A. cold woodland and arctic tundra
- B. temperate forest and taiga
- C. northern prairie and deciduous forest
- D. desert and temperate forest

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21. In looking through a microscope at a plant cell, you notice some large, irregularly shaped green structures floating in the cytoplasm. These green structures are

- A. cell walls.
- B. chloroplasts.
- C. lysosomes.
- D. nuclei.

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22. How much genetic material is found in a cloned cell as compared to the original cell?

- A. twice as much
- B. the same amount
- C. half as much
- D. one-fourth as much

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23. Vertebrate animals that are distinguished by internal fertilization, placental development of the fetus, and production of maternal milk are

- A. mammals.
- B. birds.
- C. amphibians.
- D. reptiles.

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24. Which cell structure gives plants their green color?

- A. vacuoles
- B. chloroplasts
- C. Golgi bodies
- D. endoplasmic reticulum

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25. Which statement **best** describes the function of the small intestine?

- A. It changes food into a form that can be used by cells in the body.
- B. It eliminates wastes and excess water from the body.
- C. It transports nutrients to, and wastes from, the cells of the body.
- D. It provides a path by which gases enter and leave the body.

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(Answer Key)

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2. Guinea pig X lost weight while guinea pig Y gained weight.
3. g/mL.
4. circulatory
5. Each process begins by copying the DNA in the nucleus.
6. lysosome.
7. Milky Way
8. genus
9. plants.
10. water, light, chlorophyll, carbon dioxide
11. conduction.
12. Midwest.
13. the new fish dying in the strange environment and then decaying
14. where there are the most plants and algae
15. table salt
16. frogs and toads
17. Large leaves gather light for the plants.

- 18.
- |   |    |    |
|---|----|----|
|   | B  | b  |
| B | BB | Bb |
| b | Bb | bb |

19. Animal 1 was eaten by animal 2.
20. temperate forest and taiga
21. chloroplasts.
22. the same amount
23. mammals.
24. chloroplasts
25. It changes food into a form that can be used by cells in the body.