

Name: _____

Date: _____

7th Grade Term 1 Review

- 1) Water has a density of 1.0 g/mL. You are given a rock with a density of 2.5 g/mL. Predict what will happen to the rock when put into a container of water.
- A. The rock will sink to the bottom of the water
 - B. The rock will sink half way to the bottom of the water
 - C. The rock will float on top of the water
 - D. The rock will float just below the surface of the water
- 2) Which of the following statements best explains why earth is layered in the following order: air -> water -> crust -> core?
- A. Things in nature like to order themselves by color, red to the bottom and blue to the top
 - B. Things in nature like to order themselves by density, most dense to the bottom and least dense to the top
 - C. Things in nature like to order themselves by particle size, largest particles to the bottom and smallest to the top
 - D. Things in nature like to order themselves by temperature, hottest to the bottom and coolest to the top
- 3) You are given the following materials and their densities and then asked to construct a model of the earth consisting of a core, mantle, crust, water, and air. Based on density, which material would be the best choice to represent the core of the Earth?

- A. cotton
- B. clay
- C. aluminum foil
- D. nickel

Cotton	0.2 g/mL
Glue	1.0 g/mL
clay	1.8 g/mL
Aluminum foil	2.4 g/mL
A Nickel	4.6 g/mL

- 4) Based on problem 3, which material would be the best choice to represent the crust of the Earth?
- A. cotton
 - B. clay
 - C. aluminum foil
 - D. nickel
- 5) You are given an unknown object. Its mass is 52 g and its volume is 5 mL. Your friend says that it is similar to material from the outer core of Earth. According to the data table below, what should you tell your friend?
- A. She is wrong because its density is approximately 1.4 g/mL.
 - B. She may be correct because its density is just over 10 g/mL.
 - C. She may be correct because it looks like it came from the outer core.
 - D. She is wrong because no one has weighed material from the outer core.

Layer	Approximate Density	Appearance
Water	1.0 g/mL	Green
Crust	2.7-3.0 g/mL	Orange
Mantle	3.3-5.7 g/mL	Black
Outer Core	9.0-12.0 g/mL	Black
Inner Core	12.7-13.0 g/mL	Shiny

- 6) Why are iron and nickel found in Earth's core?
- A. They have a higher density than most of Earth's substances
 - B. They have a lower density than most of Earth's substances
 - C. The core is hotter than the other layers of the earth
 - D. The core is colder than the other layers of the earth

7) You are given an unknown object. You find its mass to be 28g. You find its volume to be 10mL. Using the chart below, determine which layer of the Earth the object would belong to based on its density. Sample Earth density chart:
Which layer of the Earth would the unknown object belong to based on its density?

- A. Crust
- B. Mantle
- C. Outer Core
- D. Inner Core

8) In the past, many people thought that Earth was hollow. Why is this model of Earth not accepted now?

- A. Today scientists have collected data that support a layered model of Earth.
- B. The current layered model of Earth's structure has now been proven.
- C. Models of Earth's structure only last a certain amount of time and then they are replaced.
- D. Scientists have now taken samples of Earth's core and know the old model was wrong.

9) Pat is given the following items: a rock, sand, water, and metal bar. Pat calculates the density of each object. The results are shown below.

Rock = 3.2 g/mL	Sand = 1.9g/mL
Water = 1.0g/mL	Piece of metal = 6.5g/mL

Pat then puts all of the items into a jar and shakes it up. Pat lets the jar settle for 5 minutes. What would be the expected order of the items going from the top of the container to the bottom?

- A. rock, sand, water, metal
- B. metal, rock, sand, water
- C. water, sand, rock, metal
- D. sand, metal, water, rock

10) Which answer shows the following items in order from the highest density to the lowest density?

- A. water, atmosphere, core, crust
- B. atmosphere, crust, core, water
- C. crust, water, atmosphere, core
- D. core, crust, water, atmosphere

11) Why does the atmosphere of the Earth float above the planet's surface?

- A. The atmosphere has a higher density than the planet
- B. The atmosphere has a lower density than the planet
- C. The atmosphere formed before the planet did
- D. The atmosphere formed after the planet did

12) How would you distinguish between inference and evidence in a magazine or journal article?

- A. Evidence includes information such as numeric facts and figures.
- B. Evidence includes conclusions based on data.
- C. An inference includes fact and/or figures without conclusions.
- D. Inferences are conclusions that are always biased.

13) The development of the seismograph allows scientists to determine how fast waves travel through the Earth. From this, they can infer densities and states of matter of the materials inside Earth. How has this technology influenced current models of Earth's structure?

- A. It provides evidence that the core is composed of a liquid and a solid layer.
- B. It shows that the crust is solid and more dense than the mantle.
- C. It proves that the mantle moves with convection currents.
- D. It gives information about temperatures and pressures at the bottom of the sea.

14) Which answer below best describes the future of models of Earth's structure?

- A. Models will probably stay the same because scientists have learned all there is to know about the structure of Earth.
- B. Models will probably stay the same because scientists don't like to create new models.
- C. Models will probably change because scientists like to change things.
- D. Models will probably change because new technology will provide better information about the structure of Earth.

15) What is the primary body function our lungs serve?

- A. They transport oxygen to all parts of our body. Without oxygen we cannot live. The lungs are the distributor of oxygen.
- B. They clean our body of waste materials. The lungs are the main organs that filter waste materials out of our blood.
- C. They exchange oxygen and carbon dioxide.
- D. They keep bad gases out of our body.

- 16) Which of the following is one of the major functions provided by our skin?
- A. It extracts energy from food because skin is made of cells and energy is extracted in the cells.
 - B. It takes in oxygen from the atmosphere because it is our skin that comes in contact with the air around us.
 - C. It pumps blood through our body because when the skin contracts and expands it creates our pulse.
 - D. It protects the body from disease because skin acts as a barrier against disease-causing organisms.
- 17) Scientists studying the effect of different drugs on the circulatory system (the heart and blood vessels) have recently questioned the effects of a drug. They claim the drug may cause heart attacks. What must scientists now do to support their claim?
- A. Scientists must immediately inform the public of this risk.
 - B. Scientists must gain the support of more than half of the scientific community.
 - C. Scientists must collect specific evidence to support their claims.
 - D. Scientists must now gain the support of the drug manufacturer.
- 18) Which choice correctly identifies the 5 levels of cell organization from most complex to simplest?
- A. tissue, organs, organ systems, cell, organism
 - B. organism, organ system, organ, tissue, cell
 - C. organ system, cell, tissue, organ, organism
 - D. cell, tissue, organ, organ system, organism
- 19) Which of the following is an example of an organism?
- A. a mouse
 - B. a skull bone
 - C. a nerve cell
 - D. skin
- 20) Kelly is stranded on an island. He gets very thirsty and searches for water. There is no fresh water on the island. Kelly decides to drink ocean water. As the day wears on, Kelly gets even thirstier. Why might Kelly still be thirsty?
- A. Because of osmosis, the high salt concentration outside of Kelly's cells caused water to leave the cells, making Kelly thirsty.
 - B. Because the heat of the day has caused Kelly to sweat, making him hot and thirsty
 - C. Because turgor pressure outside of Kelly's cells has caused many of them to burst and lose water, making him thirsty.
 - D. Because the salt water does not taste good and so he quits drinking it.
- 21) Which of the following is an example of an organ?
- A. large intestine
 - B. inner lining of the stomach
 - C. digestive system
 - D. muscle fiber
- 22) Scientists studying the effect of different drugs on the circulatory system (the heart and blood vessels) have recently questioned the effects of a drug. They claim the drug may cause heart attacks. What must scientists now do to support their claim?
- A. Scientists must now write a book documenting their discovery.
 - B. Scientists must now do careful research under several different conditions.
 - C. Scientists must create a clear presentation for a scientific conference.
 - D. Scientists must now win a lawsuit against the drug manufacturer.
- 23) Where would a student best look in the library for information on kidneys and dialysis?
- A. A textbook about the human body
 - B. charts of the body organs
 - C. An encyclopedia article about the human body
 - D. The dictionary entry "kidney"
- 24) Which of the following is one of the major functions provided by our skin?
- A. It removes waste because when we sweat water, salt and other substances are excreted through our skin.
 - B. It extracts energy from food because skin is made of cells and energy is extracted in the cells.
 - C. It takes in oxygen from the atmosphere because it is our skin that comes in contact with the air around us.
 - D. It kills foreign bacteria because many disease-causing bacteria do not grow well at high temperatures.
- 25) The epidermis and dermis make up the two main layers of the skin. Skin is an example of which level of organization?
- A. cell
 - B. tissue
 - C. organ
 - D. system

26) Saliva contains an enzyme which begins to break down starch as soon as you put it into your mouth. If a person did not produce saliva, which would be most affected? Most directly affected would be their _____.

- A. digestive system
- B. blood cells
- C. nervous system
- D. liver

27) Which of the following is the most complex level of organization in living things?

- A. cell
- B. organ
- C. organ system
- D. organism
- E. tissue

28) Which answer below best describes the future of our knowledge about the heart?

- A. Knowledge about the heart will probably change because scientists like to change things.
- B. Knowledge about the heart will probably change because new discoveries will provide new information about the heart.
- C. Knowledge about the heart will probably stay the same. Scientists have learned all there is to know about the heart.
- D. Knowledge about the heart will probably stay the same. Scientists don't like to learn new information.

29) Scientists studying the effect of different drugs on the circulatory system (the heart and blood vessels) have recently questioned the effects of a drug. They claim the drug may cause heart attacks. What must scientists now do to support their claim?

- A. Scientists must inform the news media and create a press release.
- B. Scientists must gain the support of more than half of the scientific community.
- C. Scientists must create a clear presentation for a scientific conference.
- D. Scientists must now replicate their research.

30) Which letter correctly identifies the 5 levels of organization from simplest to the most complex?

- A. person, muscle cell, heart, circulatory system, cardiac muscle tissue
- B. person, circulatory system, heart, cardiac muscle tissue, muscle cell
- C. muscle cell, heart, cardiac muscle tissue, circulatory system, person
- D. muscle cell, cardiac muscle tissue, heart, circulatory system, person