4th Grade Changing Earth

Read and answer each question carefully.

1) What do scientists call the process of a rock being broken down into smaller pieces by water, wind, and natural forces?

   A) deposition  
   B) weathering  
   C) plate movement  
   D) erosion

2) A river delta is formed by which of the following processes?

   A) weathering  
   B) deposition  
   C) earthquake  
   D) plate movement

3) Wind breaking down rock walls is an example of ________________?

   A) rapid change  
   B) slow change  
   C) no change  
   D) chemical change
4th Grade Changing Earth

4) What can you tell from the data in the table?

<table>
<thead>
<tr>
<th>Stream Load</th>
<th>Flat</th>
<th>Steep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load Amount 1</td>
<td>2 grams</td>
<td>8 grams</td>
</tr>
<tr>
<td>Load Amount 2</td>
<td>4 grams</td>
<td>6 grams</td>
</tr>
<tr>
<td>Load Amount 3</td>
<td>3 grams</td>
<td>7 grams</td>
</tr>
<tr>
<td>Load Amount 4</td>
<td>3 grams</td>
<td>8 grams</td>
</tr>
</tbody>
</table>

A) Water carries the same amount of material on flat and steep slopes.
B) Water running on flat slopes carries more material.
C) Water running on steep slopes carries more material.
D) Water running on steep slopes carries less material.

5) An example of a negative impact that can result from dam construction is ________________

A) using water to produce electricity.
B) using the dam for boating, water skiing and fishing.
C) changing the habitat for plants and animals in the area.
D) using water for irrigation of crops.
4th Grade Changing Earth

6) What is the best way to show the data from this table?

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A) Venn diagram  
B) model  
C) stem-and-leaf plot  
D) bar graph

7) What would be the best way for a scientist to predict how a town would be affected by a flood?

A) model  
B) Venn diagram  
C) graph  
D) pie chart

8) What kind of weathering were you modeling when you blew over the sand pile?

A) sun  
B) rain  
C) wind  
D) snow
4th Grade Changing Earth

Use this diagram of the stream to answer questions 9 and 10.

9) What is the name of the feature that is labeled #1?
   A) source
   B) bank
   C) mouth
   D) lake

10) What is the name of the feature that is labeled #3?
    A) lake
    B) source
    C) bank
    D) mouth
11) What tool do scientists use to record data and to communicate (share) the results of their investigations?

A) notebooks
B) stream tables
C) the sand blaster
D) Email

You are planning to build a group of new houses along a stream. After watching four tests of floods on your stream table model, you have decided where to build your houses. Use the diagram to answer the following question.

12) Where will you build your group of houses?

A) at the mouth of the stream (# 4)
B) on the inside curve of the stream (# 3)
C) just below the dam of the stream. (#1)
D) along the outside curve of the stream (#2)
4th Grade Changing Earth

13) Volcanoes are an example of which of the following processes?

A) Erosion of earth material
B) Deposition of earth material
C) Building up of new earth material
D) Weathering of earth material

14) If the surface of the Earth is always eroding away, why hasn't it eroded away completely by now?

A) Not enough time has passed for it to erode away.
B) Eroded Earth materials are deposited somewhere else.
C) Earthquakes and volcanoes create new hills and mountains.
D) People change the Earth's surface as they build cities and towns.

15) When you ran a full flow of water through your stream table, which result most likely occurred?

A) The stream ran deeper and straighter than with less water.
B) The stream ran less deep than with less water.
C) There was no change.
D) The stream carried less soil than with less water.

16) Sam poured water quickly through a stream table. Then she poured water slowly through the stream table. What did she most likely observe?

A) There was no change in how much sediment was eroded by the stream.
B) The stream carried less sediment and ran faster when the water was poured quickly.
C) The stream carried more sediment and ran faster when the water poured quickly.
D) The stream carried the sediment farther when the water was poured slowly.
17) Sam poured water through a flat stream table. Then she poured water through a stream table with a steep slope. What did she observe?

A) The water flowed faster in the stream table with the flat slope.
B) There was no change in the speed of the water flow.
C) The water carried less soil when the slope was flat.
D) The water flowed faster when the slope was steep.

18) When you sprayed water on the steep slope model made of aluminum foil, what did you learn?

A) Water moved from higher ground to lower ground.
B) After you sprayed you could not tell where the water went.
C) Water moved from lower ground to higher ground.
D) Water soaked into the foil.

19) A volcano erupted. When scientists looked at the volcano area, they noticed that a lake near the volcano had been moved. Why do you think this happened?

A) The eruption sent a cloud of ash more than 12 miles high.
B) The volcano caused slow changes to the Earth's surface.
C) Scientists know that lakes move every 10-20 years.
D) The volcano caused rapid changes to the Earth's surface.

20) Which of the following is an example of a rapid change?

A) mountain building
B) earthquakes
C) plate movement
D) weathering
4th Grade Changing Earth

21) All of these are layers of the earth, except _____________________.
   
   A) crust
   B) core
   C) mantle
   D) sediment

22) Engineers built a dam on a river. What benefit might result?

   A) The habitat for animals and plants will be destroyed.
   B) Flooding to most of the surrounding areas will be controlled.
   C) An existing town located behind the dam will be flooded.
   D) Ancient archeological sites will be ruined.

23) Acid rain seeping into the ground to create caves is an example of which of the following?

   A) Physical weathering
   B) Erosion
   C) Plate movement
   D) Chemical weathering

24) Which of the following best explains why some rivers might flow from South to North and others flow from North to South?

   A) The plates under them are moving
   B) Water moves from higher ground to lower ground
   C) Their slopes are the same
   D) The wind blows them that direction
25) The movement of the Earth's layers cause all of the following EXCEPT

A) volcanoes  
B) earthquakes  
C) rivers  
D) mountains