

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

## Classification

\_\_\_ 1) The grouping of objects or events based on similar characteristics is called

- A) observation
- B) classification
- C) interpretation
- D) measurement

\_\_\_ 2) The information below is a classification of six common rocks, based on how they were formed. In which group would conglomerate rock be placed in this classification?

<u>Group A</u>	<u>Group B</u>
basalt	sandstone
granite	shale

Group C  
marble  
gneiss

- A) Group B
- B) Group C
- C) Group A

\_\_\_ 3) Scientists often use classification systems in order to

- A) make more accurate interpretations
- B) organize their observations in a meaningful way
- C) make direct comparisons with standard units of measurement
- D) extend their powers of observation

\_\_\_ 4) Which procedure is an example of classifying observed data?

- A) photographing the cloud cover for a location throughout 1 week
- B) measuring the angle of Polaris from two different locations
- C) grouping stars by brightness
- D) graphing temperature versus time for a particular date

\_\_\_ 5) Which property was probably used to classify the substances below?

<u>Group A</u>	<u>Group B</u>
water	aluminum
gasoline	ice
alcohol	iron

Group C  
water vapor  
air  
oxygen

- A) state (phase) of matter
- B) chemical composition
- C) abundance within the Earth
- D) specific heat

\_\_\_ 6) A number of objects are grouped on the basis of common properties. What is this process called?

- A) inference
- B) observation
- C) classification
- D) measurement

\_\_\_ 7) Which property is used to classify the land-derived sedimentary rocks listed in the *Earth Science Reference Tables*?

- A) mineral composition
- B) particle size
- C) fossil content
- D) color

\_\_\_ 8) A classification system is based on the use of

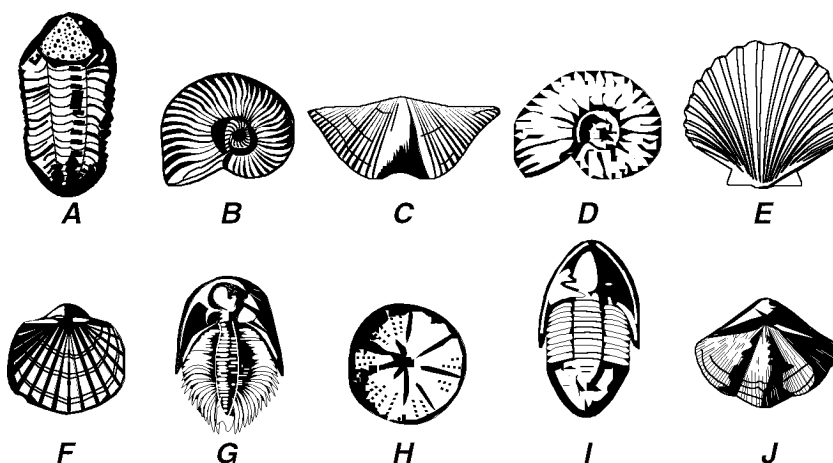
- A) the human senses to observe properties of objects
- B) inferences to make observations
- C) observed properties to group objects with similar characteristics
- D) instruments to observe properties of objects

- \_\_\_ 9) The primary purpose of a classification system is to enable people to
- A) eliminate inaccurate inferences
  - B) organize observations in a meaningful way
  - C) make measurements that are very accurate
  - D) extend their powers of observation

- \_\_\_ 10) A student is asked to classify several rocks. For *best* results, the classification should be based on
- A) inferences
  - B) interpretations
  - C) observations
  - D) hypotheses

- \_\_\_ 11) A student classifies several objects. The classification system should be based on
- A) observations
  - B) inferences
  - C) interpretations
  - D) hypotheses

- \_\_\_ 12) The diagrams below represent fossils found at different locations.



When classified by similarity of structure, which three fossils should be grouped together?

- A) C, F, and J
- B) A, F, and H
- C) E, G, and H
- D) B, D, and I

- \_\_\_ 13) The table below shows data for a student's collection of rock samples *A* through *I*, which are classified into groups *X*, *Y*, and *Z*. For each rock sample, the student recorded mass, volume, density, and a brief description. The density for rock *D* has been left blank.

Group	Rock	Mass (g)	Volume (cm <sup>3</sup> )	Density (g/cm <sup>3</sup> )	Description
<i>X</i>	<i>A</i>	82.9	34.4	2.41	Grey, smooth, rounded
	<i>B</i>	114.2	42.6	2.68	Brown, smooth, rounded
	<i>C</i>	144.7	63.2	2.29	Black, smooth rounded
<i>Y</i>	<i>D</i>	159.4	59.7		Black and grey crystals, angular
	<i>E</i>	87.7	33.1	2.65	Clear and pink crystals, angular
	<i>F</i>	59.6	21.0	2.84	White, grey, and black crystals, angular
<i>Z</i>	<i>G</i>	201.1	68.4	2.94	Grey, shiny, flat
	<i>H</i>	85.1	39.8	2.14	Brown, sandy feel, flat
	<i>I</i>	110.2	47.3	2.33	Dark grey, flaky, flat

The student's classification system is based on

- A) density  
 B) mass  
 C) color  
 D) shape