

Unit 1 Formative Assessment – Science Literacy

Name: _____ Date: _____

Earth Science Overview:

1. Earth’s four major spheres are the _____.
 - a. Hydrosphere, atmosphere, geosphere, and biosphere
 - b. Hydrosphere, atmosphere, lithosphere, and biosphere
 - c. Hydrosphere, asthenosphere, lithosphere, and biosphere
 - d. Hydrosphere, geosphere, lithosphere, and asthenosphere

2. Earth is considered a system because all of its parts _____.
 - a. Represent separate closed systems
 - b. Interact
 - c. Were formed at the same time
 - d. Are powered by the same energy sources

3. Create a list of the four earth spheres and list three (3) areas of scientific study for each.

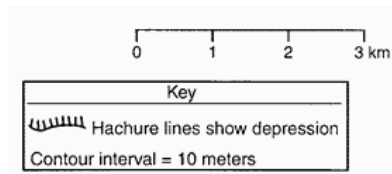
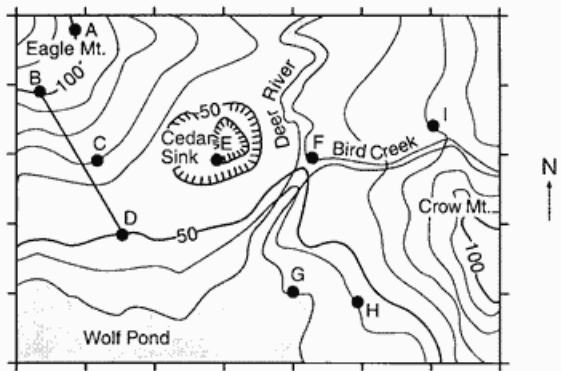
Earth’s Sphere	Areas of Scientific Study

Mapping:

4. On the global grid, the prime meridian is at _____.
 - a. 0 degrees latitude
 - b. 0 degrees longitude
 - c. 90 degrees latitude
 - d. 90 degrees longitude

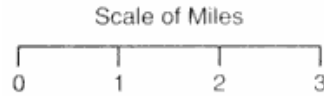
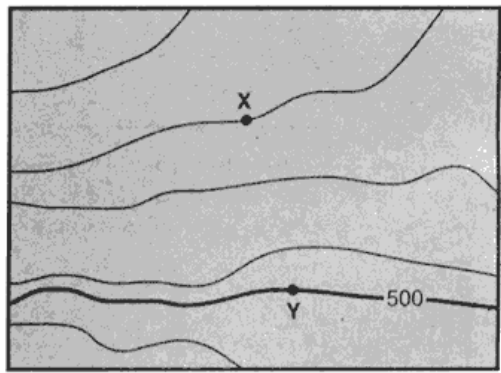
5. On a topographic map, contour lines that are closer together indicate _____.
 - a. Forest
 - b. A mountain top
 - c. A steeper slope
 - d. Roads

6. What locations have the same elevation?

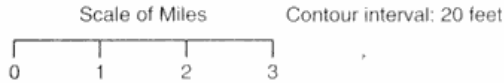


- a. A and E
- b. C and I
- c. D and H
- d. B and D

7. What is the approximate gradient between X and Y?



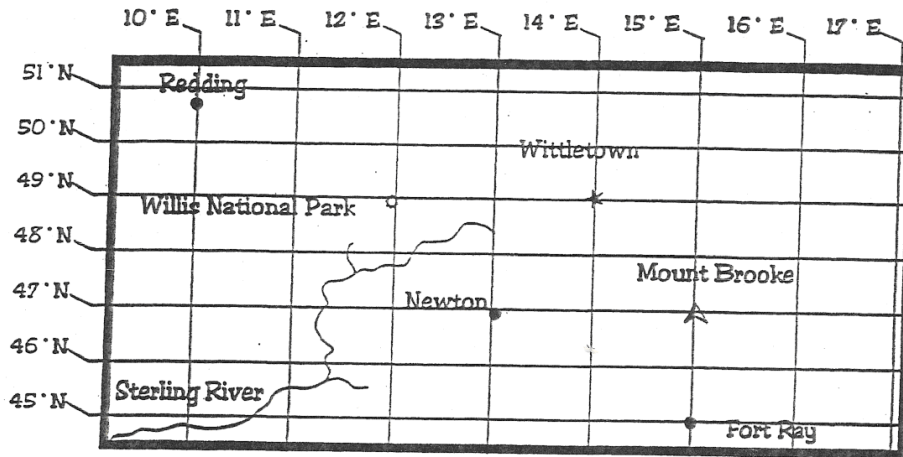
Contour interval: 20 feet



Contour interval: 20 feet

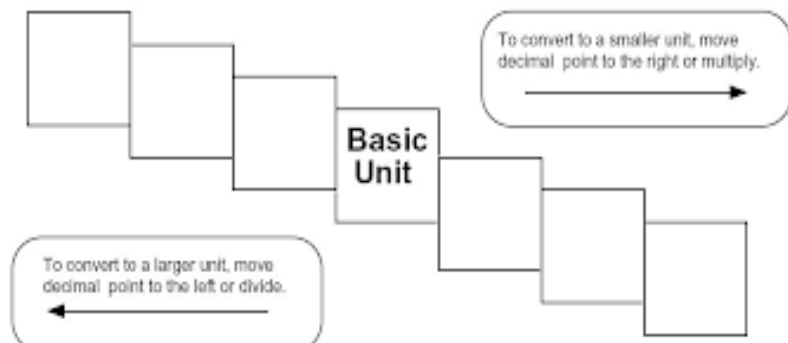
- a. 15 ft/mi
- b. 20 ft/mi
- c. 30 ft/mi
- d. 60 ft/mi

Use the following map below to answer the next seven (7) questions.



- 8. What is located at 49° N latitude and 12° E longitude? _____
- 9. What two places are located at 15° E longitude? _____ ; _____
- 10. The city of Newton is located at _____° N and _____° E
- 11. The city of Wittletown is located at _____° N and _____° E
- 12. What is located at 51° N latitude and 10° E longitude? _____
- 13. Lines of latitude run _____ and _____ parallel to the equator.
- 14. Lines of longitude run east and west of the _____.

Metrics and Measurement:



15. 100,654 g = _____ dg 18. 0.7737mm = _____ km
16. 307.345 cg = _____ kg 19. 29.1 hL = _____ mL
17. 9.9 mL = _____ L 20. 2016 m = _____ cm

Scientific Method:

21. What makes a hypothesis scientifically useful?

- a. Many people think it is a good idea c. It contains numerical data
 b. It can be tested d. It applies directly to Earth Science

22. In scientific inquiry, when competing hypotheses have been eliminated, a hypothesis may be elevated to the status of a scientific _____.

- a. Estimate c. Theory
 b. Idea d. Truth

23. A Horticulturist wants to determine if fertilizer speeds the growth of her tomato plant. She applies one teaspoon of fertilizer a month to one plant for one year, and none to the other over the same time span. Both plants are placed in under the same growing conditions including soil, access to sunlight and amount of water. What was the dependent variable in the experiment?

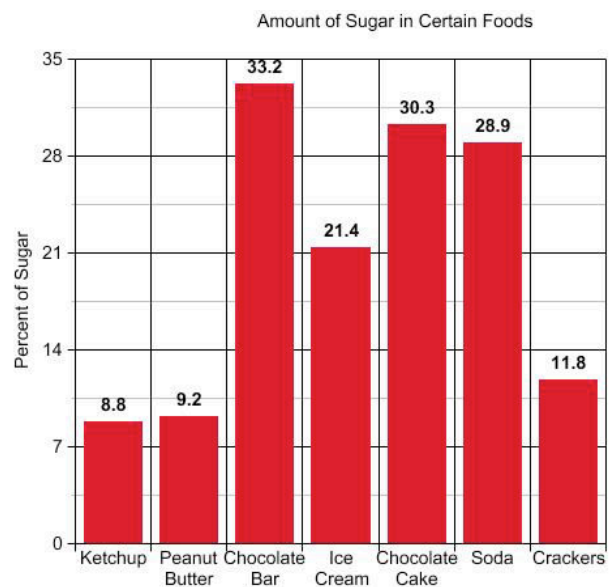
- a. The fertilizer c. The sunlight access
 b. The rate of growth d. The ambient temperature

24. In the classroom during a visual inspection of a rock, a student recorded four statements about the rock. Which statement about the rock is an observation?

- a. The rock was from the Precambrian Era c. The rock is black and shiny
 b. The rock formed deep underground d. The rock cooled very rapidly

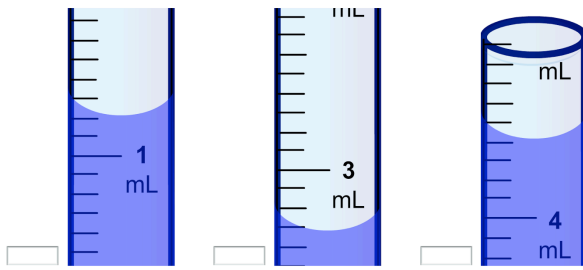
25. Using the bar graph to the right, answer the following questions:

- a. What percent of ketchup is sugar?
- b. Which foods would you group as the most sugary?

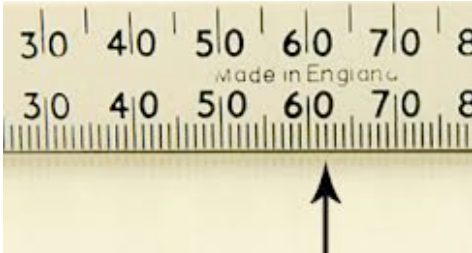


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26. Read and record the volume (with correct unit) of each graduated cylinder:



27. Read and record the length (with correct unit) on the ruler:



28. Read and record the mass (with correct unit) on each triple beam balance:

