**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due Date \_\_\_\_\_\_\_\_\_\_\_\_ ES9 Unit 1 Sheet: Sci. Literacy**

***Complete the Vocabulary and Study Guide sections on a separate piece of paper.***

**Essential Standards:**

2.1.2 Make Predictions Based on Data

2.1.2 Utilize Various Maps

**Students Will Be Able To:**

* Make predictions based on data and observations
* Investigate natural phenomena using the scientific method
* Identify SI units and make accurate conversions in the metric system
* Accurately measure distance, mass, volume, and density – including mathematical calculations
* Utilize latitude and longitude coordinates
* Read and understand topographic maps

**Vocabulary—Define, know, and be able to apply the following terms:**

1. Density

2. Latitude

3. Longitude

4. Topography

5. Contour Line

6. Contour Interval

7. Gradient

8. Hypothesis

9. Theory (Scientific)

10. Independent Variable

11. Dependent Variable

12. System

**Study Guide—Answer, know, and understand the following concepts:**

1. Draw a sample line graph with the following parts:
   1. Title
   2. X-axis Scale
   3. X-axis Label
   4. Y-axis Scale
   5. Y-axis Label
   6. Key
2. Describe how to determine the volume of a toy car using water displacement.
3. Identify the tool and unit best used to measure the following:
   1. Length of a calculator
   2. Mass of a cell phone
   3. Volume of a shoe box
   4. Volume of rainfall collected
4. Make the following metric conversions:
   1. 8.21 m = **?** cm
   2. 8,210 cL = **?** hL
   3. 821 mg = **?** kg
5. Identify at least two uses of topographic maps.
6. Describe the direction that parallels (lines of latitude) and meridians (lines of longitude) run versus how they are drawn.
7. Describe how to use latitude and longitude coordinates.
8. Describe each step of the scientific method.
9. Contrast hypothesis, scientific theory, and scientific law.
10. List several components (parts) of each of the four earth systems:
    1. Atmosphere
    2. Biosphere
    3. Geosphere
    4. Hydrosphere
11. Explain how the Earth functions as a closed system.
12. Identify the two major sources of energy for the Earth system.

**Supplemental--Do practice the following activities as you work through the unit:**

1. Create a sketch that illustrates the following on a topographic map: hill, depression, steep slope, gradual slope, and exact elevations.

2. Practice finding the following quantities: distance, volume (liquid, regular solid, and irregular

solid), and mass.

3. Practice identifying the latitude and longitude coordinates for various locations.

4. Practice analyzing different types of graphs (line, bar, pie charts, etc.).

**Unit Reading Material:**

* Class Notes and Handouts
* Hardcopy Textbook: Chapter 1 pages 7-9, 11-16, 18-22, 23-24, 728-733, 741-742
* Online Textbook: Ch. 2.1-2.3

**Unit 1—Scientific Literacy—Calendar**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|  | MLK Day: OFF | 1/22 | 1/23 | 1/24 | 1/25 | 1/26 |
|  | **Martin Luther King —No School** | Lab Safety  Graphing | Measurement/Density  Metrics | Topographic Maps  Mapping Lab | Latitude/Longitude  Earth as a System |  |
| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
| 1/27 | 1/28 | 1/29 | 1/30 | 1/31 | 2/1 | 2/2 |
|  | Scientific Method  Intro to Lab Report Template | Unit 1 Review  **Formative Assessment** | **Unit 1 QUEST**  Media Evaluation #2 |  |  |  |

**Unit 1 QUEST Analysis**

1. My quest grade was \_\_\_\_\_\_\_\_\_%.
2. I am \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with this grade because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. I studied all/most/some/a few/no days this unit (circle one).
4. I studied by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. I asked for help at \_\_\_\_ SMART lunches.
6. I missed the following questions:

|  |  |  |  |
| --- | --- | --- | --- |
| Question # | Question Topic | Study Guide #/Notes | I missed this question because . . . |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |