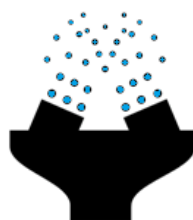


Study Island

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Lab Tools & Safety

1.



In many labs, the image above indicates the location of the

- ☐ A. fire extinguisher.
 - ☐ B. eye wash station.
 - ☐ C. psychrometer.
 - ☐ D. microscopes.
-

Lab Tools & Safety

2. Cory wants to do an experiment to confirm that matter is conserved during a chemical reaction. He decides to use the reaction of baking soda and vinegar. When added together, the two substances foam and bubble. Cory gathers the following equipment:

- a scale to measure masses
- a large flask in which to mix the vinegar and baking soda
- vinegar
- baking soda
- a lab book and pen

What does Cory still need in order to do his experiment?

- ☐ A. a way to capture and measure gas
 - ☐ B. a way to measure the volume of liquids
 - ☐ C. a hot plate
 - ☐ D. a way to calculate how much baking soda to use
-

Scientific Investigations

3. There are many different types of scientific investigations, including controlled experiments, observational field studies, the collection of specimens, and model-building. Which type of investigation is best used to study global weather patterns?

- ☐ A. controlled experiments
 - ☐ B. the collection of specimens
 - ☐ C. model-building
 - ☐ D. observational field studies
-

Organizing, Analyzing & Communicating Data

4. Sean enjoys studying the stars. He used a photometry tool to calculate several stars' apparent magnitudes (how bright a star looks in the sky). He then researched the stars' distances from Earth. He recorded his results in the table below.

Star	Apparent Magnitude	Distance from Earth
Sirius A	-1.47	8.6 light-years
Alpha Centauri A	-0.01	4.4 light-years
Rigel	0.12	770 light-years
Procyon	0.34	11 light-years
Alpha Centauri B	1.33	4.4 light-years

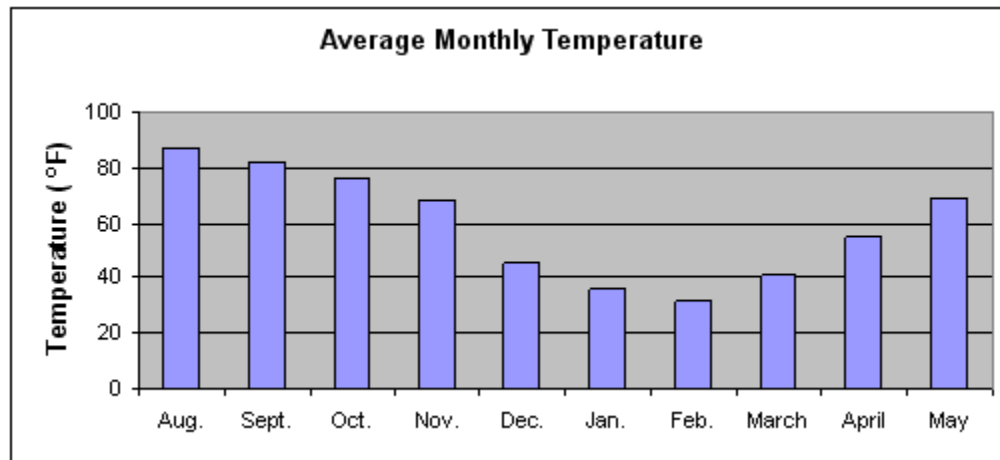
What conclusions can Sean draw from his chart?

- ☐ A. A star's apparent magnitude is not directly related to its distance from Earth.
 - ☐ B. A star's apparent magnitude decreases if it is very close to another star.
 - ☐ C. A star's apparent magnitude decreases as its distance from Earth increases.
 - ☐ D. A star's apparent magnitude increases as its distance from Earth increases.
-

Organizing, Analyzing & Communicating Data

5. Mr. Swanson's science class used a thermometer to measure the outside temperature each day throughout the school year.

They used their results to make the graph below.



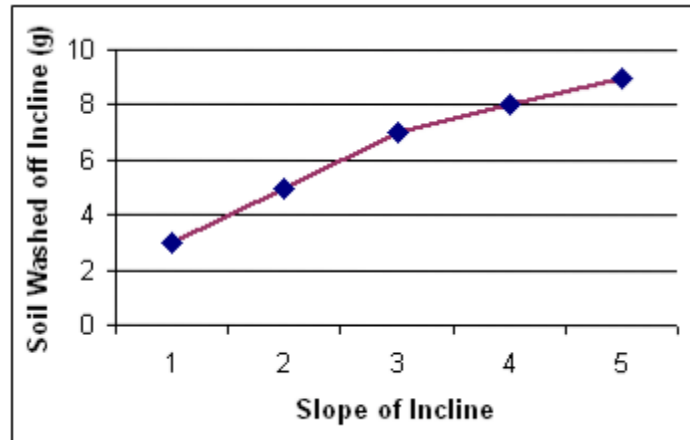
Which month had an average daily temperature of around 69 degrees?

- ☐ A. October
 - ☐ B. May
 - ☐ C. April
-

Organizing, Analyzing & Communicating Data

6. Mrs. Strunk's Earth Science class used an erosion model to investigate the relationship between the slope of a hill, or incline, and the amount of soil that washes off of the incline.

The class increased the slope of the incline from 1 to 5. Then, they poured 100 ml of water down the incline. Finally, they collected the soil from a tray at the bottom of the incline, dried the soil in an oven, and used a balance to find the mass of the soil. The data from their study is shown below.



Based on the graph, more soil is washed away when

- ☐ A. the slope of the incline is steeper.
 - ☐ B. the slope of the incline is less steep.
 - ☐ C. the soil is made mostly of sand.
 - ☐ D. there are fewer rocks in the soil.
-

Organizing, Analyzing & Communicating Data

7. Technology Enhanced Questions are not available in Word format.

Scientific Investigations

8. Scientific questions can be asked based on which of the following?

- ☐ A. previous research
 - ☐ B. scientific investigation
 - ☐ C. observations
 - ☐ D. all of these
-

Scientific Investigations

9. Estelle wants to find out which plants are most abundant in her yard. Which kind of scientific investigation should she use?

- ☐ A. development of a model
 - ☐ B. a field study
 - ☐ C. a review of existing work
 - ☐ D. a controlled experiment
-

Lab Tools & Safety

10. What is the most important laboratory procedure to follow before entering the lab area?

- ☐ A. Read the directions thoroughly and make sure you are familiar with safety issues.
Know the location of any stock solutions or general supplies that will be needed for the
 - ☐ B. lab.
 - ☐ C. Make sure you know where your lab station is located and with whom you are working.
 - ☐ D. Come prepared for lab with a pencil, paper, and a calculator, if necessary.
-