**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_**

**Physical Science**

**Ch. 1 Homework Packet**

**1.1 Graphing**

|  |  |
| --- | --- |
| Time (s) | Temperature (Celsius) |
| 1 | 100 |
| 2 | 50 |
| 3 | 25 |
| 4 | 12 |
| 5 | 6 |
| 6 | 3 |
| 7 | 1 |

1. Graph the above data (using a line graph)

Title:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Topic and Units:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. How would doubling the time affect the temperature? (Use complete sentences)

Pg. 25 – Question 5 (Use complete Sentences to Answer)

3. When would you choose a line graph to present data?

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4. When would you choose a bar graph to present data?

**1.2-Measurements** (from pgs. 14-20 in book)

*Match the SI base unit with the quantity that is used to measure.*

**SI Base Unit**

**1.** meter

**2.** kilogram

**3.** kelvin

**4.** second

**Quantity**

a. Mass

b. Time

c. Length

d. Temperature

*Fill in the following table:*

|  |  |  |  |
| --- | --- | --- | --- |
| **SI Prefixes** | | | |
| **Prefix** | **Symbol** | **Meaning** | **Multiply Unit By** |
| giga- | G |  | 1,000,000,000 |
| mega- | M | million (106) |  |
| kilo- | k | thousand (103) | 1000 |
| deci- | d |  | 0.1 |
| centi- |  | hundredth (10-2) | 0.01 |
|  | m | thousandth (10-3) | 0.001 |
|  | μ | millionth (10-6) | 0.000001 |
| nano- |  | billionth (10-9) | 0.000000001 |

**5.** Is the following sentence true or false? Units in the SI system  
include feet, pounds, and degrees Fahrenheit.

**6.** Circle the letter of the value that is expressed as 3 × 108.

a. 300 b. 300,000

c. 30,000,000 d. 300,000,000

**7.** Why is scientific notation useful?

8. What does “SI’ mean? (What are SI units?)

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**1.3 – Scientific Method**

**Scientific Methods (pages 7–9)**

**1.** Name three types of variables in an experiment.

a. b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3.** Is the following sentence true or false? If the data from an  
experiment do not support your hypothesis, you can revise the  
hypothesis or propose a new one.

**2.** How does a scientific theory differ from a hypothesis?

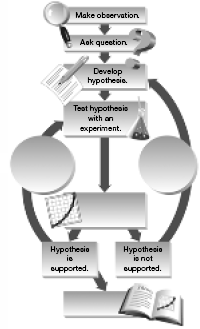
*Match the following vocabulary terms to the correct definition.*

**Definition**

**3.** Information that you obtain  
through your senses

**4.** A well-tested explanation  
for a set of observations

**5.** A proposed answer to a question

**Vocabulary Terms**

d.

c.

a. theory

b. hypothesis

c. observation

a.

b.

**Continue**

**6.** Complete the model **on the previous page** of a scientific method by filling in the  
missing steps.

a. b.

c. d.

**Scientific Laws (page 9)**

**7.** Is the following sentence true or false? A scientific law attempts to  
explain an observed pattern in nature.

**8.** All scientists may accept a given scientific law, but different  
scientists may have different to explain it.

**Scientific Models (page 10)**

**9.** Why do scientists use scientific models?

**10.** Circle the letters that correctly state what scientists do if data show  
that a model is wrong.

a. Change the model. b. Replace the model.

c. Ignore the data. d. Revise the data.

**Working Safely in Science (page 11)**

**11.** Circle the letters of safety precautions to follow whenever you  
work in a science laboratory.

a. Study safety rules. b. Never ask questions.

c. Read all procedural steps. d. Understand the procedure.

**12.** Why should you wash your hands after every experiment?

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