

# Answer Key

Name \_\_\_\_\_ Hr \_\_\_\_\_

Test: Mon. or Tues.

## Science Process Skills Study Guide

Complete each sentence by writing the correct term in the blank. Use the following terms:

Scientific Method •

hypothesis •

observations •

experiment •

conclusion •

data •

inference •

qualitative •

quantitative •

classified •

measurement •

lab safety •

1. A balance, a graduated cylinder, and a ruler are examples of tools for measurement.
2. "A piece of candy weighs 1.3 grams." This is an example of a quantitative observation.
3. You use your five senses when you are making qualitative observations.
4. When you perform an experiment in science class, you need to go through each step of the scientific method.
5. Eating or drinking in the science lab would not be following our lab safety rules.
6. "The candy was red and square shaped. It dissolved when placed in water." Ellie used her senses to make these observations.
7. A conclusion is written after the experiment is completed and sums up the lab or gives the answer to the question.
8. This part of the Scientific Method should include your observations in the form of sentences, tables, or pictures. It is the data section.
9. "Shelley's hair was wet because she went swimming during Physical Education." This statement is an example of an inference.
10. John classified his M & M candies by color.

11. Scientists make an educated guess or a hypothesis to answer their scientific questions.
12. An experiment is designed to see if a scientists' predictions about the world are correct.

Match the following pictures to the correct names of the lab equipment.

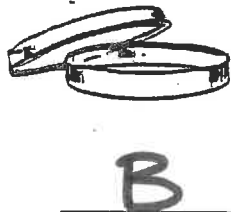
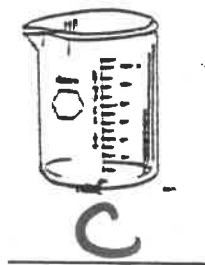
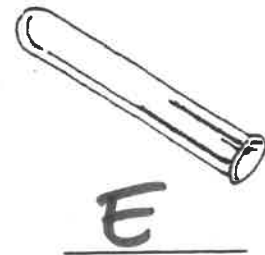
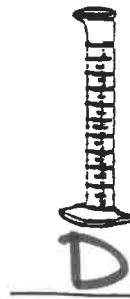
A. Safety Goggles

B. Petri Dish

C. Beaker

D. Graduated Cylinder

E. Test tube



Answer the following questions in sentences.

1. What is the difference between an inference and an observation?

*Inference is an explanation for something that happens and an observation is using senses to collect data*

2. "The penny is copper and shiny. The penny weighed 1.3 grams."

Identify the quantitative and the qualitative observations in this set of data.

*Quant. ~ The penny weighed 1.3g.*  
*Qual. ~ The penny is copper + shiny.*

from safety contract signed  
↓ by you + parent

3. List 3 important Lab Safety rules that students should always follow.

- Don't run in the lab.
- Wear safety goggles if needed
- I will act properly.

4. List the steps of the Scientific Method in order:

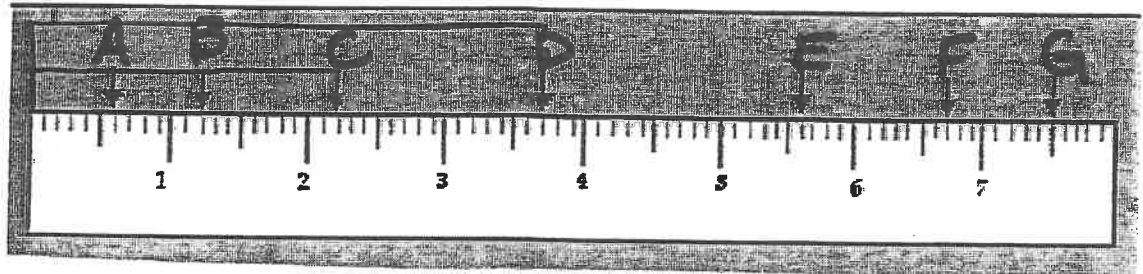
pg 34 or 36 in binder

5. List 3 different ways you could classify a collection of matchbox cars.

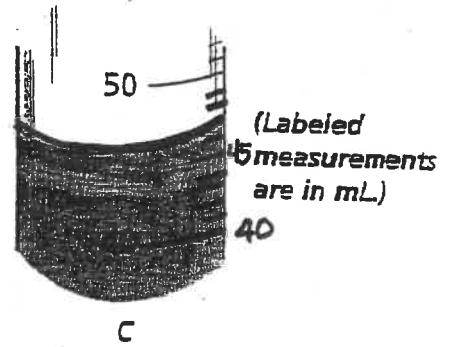
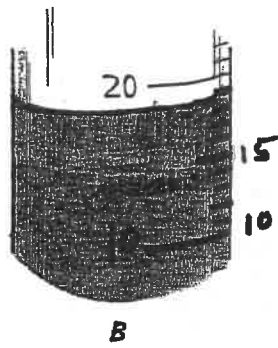
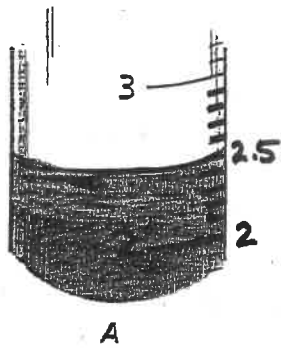
- color
- size
- model

Use the following pictures to answer the measurement questions.

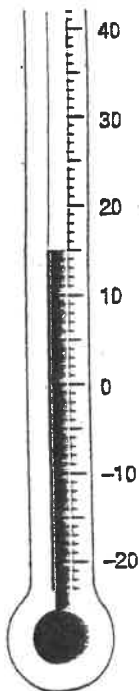
In the metric system, we always use decimals, never fractions.



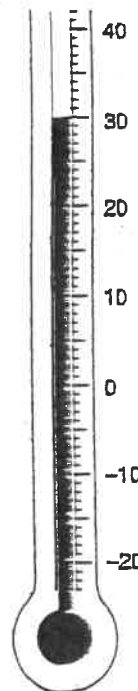
1. What is the length of Line D in cm? 3.7 cm
2. What is the length of Line D in mm? 37 mm
3. What is the length of Line C in cm? 2.2 cm
4. What is the length of Line C in mm? 22 mm



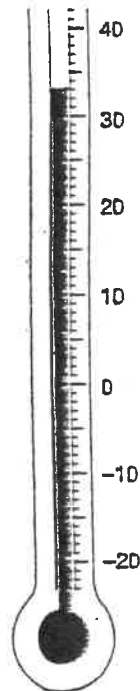
2.5mL What is the volume of water in graduated cylinder A?  
 18mL What is the volume of water in graduated cylinder B?  
 47mL What is the volume of water in graduated cylinder C?



Monday



Tuesday



Wednesday

How much did the temperature change between Monday and Tuesday?

How much did the temperature change between Monday and Wednesday?

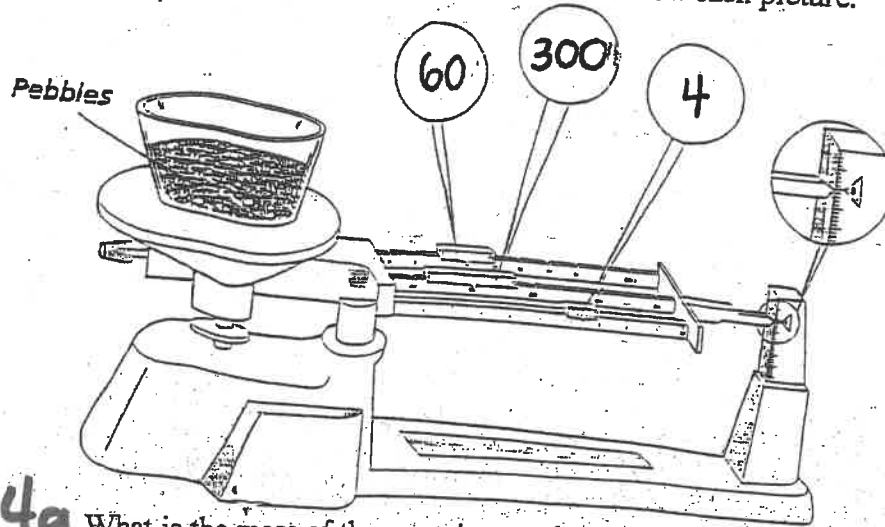
30-15

33-15

15°C

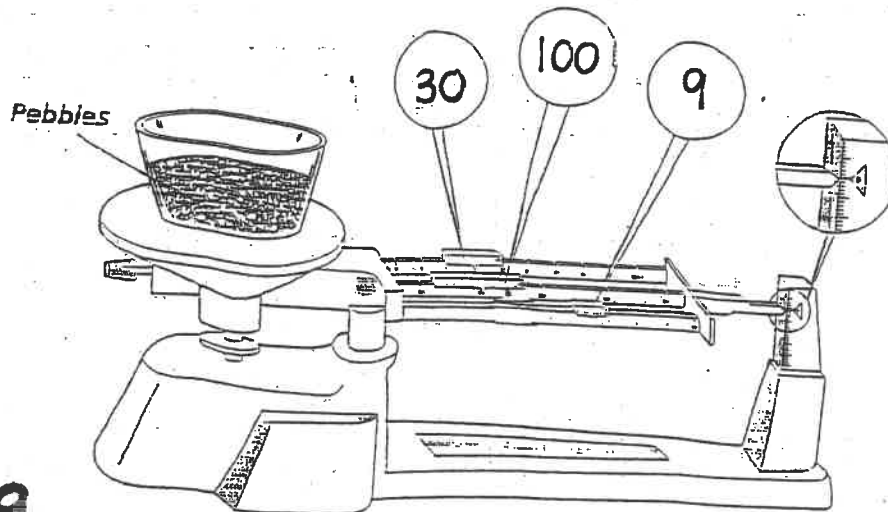
18°C

Study each picture below and answer the questions that follow each picture.



13. 364g What is the mass of the container and the pebbles together?  
 14. 360g If the container has a mass of 4.0 grams, what is the mass of the pebbles?

$$\begin{array}{r} 364.0 \\ - 4.0 \\ \hline \end{array}$$



15. 139g What is the mass of the container and the pebbles together?  
 16. 135.4g If the container has a mass of 3.6 grams, what is the mass of the pebbles?

$$\begin{array}{r} 8 \\ 139.0 \\ - 3.6 \\ \hline 135.4 \end{array}$$

