

Name: _____

FCIM Science Assessment

Big Idea 1: Nature of Science

SC.5.N.1.1

Test #1

- 1) Jane is investigating to find out if bean plants grow taller in ordinary topsoil or special potting soil over a three week period. She sets up her investigation with 10 bean plants of equal size in each type of soil.

What should Jane do each day to make sure she gets valid results?

- A. Water only the plants in special potting soil.
 - B. Calculate the average plant height for each soil type.
 - C. Move the plants in ordinary topsoil to different locations.
 - D. Estimate the height of each plant's stem and record the estimate.
- 2) Sonya wanted to know if mowing affects the health of grass during a drought. To find out, she collected data on how often her neighbors mowed their grass. Based on the information she collected, what is the BEST next step?

Location	How Often Mowed	Lawn Health
Jones' House	Once per month	Lawn is very green and tall. No bare spots.
Hodge's House	Every Saturday	Lawn is brown with some green. Patches of bare dirt.
Mitchell's House	Every two weeks	Lawn is green and tall. No bare spots.
Perez's House	Every Saturday	Lawn is green with some brown patches.
Sonya's House	Every two weeks	Lawn is green. No bare spots.
William's House	Every Saturday	Lawn has large bare patches and is mostly brown

- A. Report her findings to her neighbors.
- B. Develop a plan to save everyone's lawns.
- C. Stop her neighbors from mowing their lawns.
- D. Find out if other things might be affecting the grass.

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- 3) Thomas and Julie wanted to find out which material would insulate their teacher's coffee cup and keep the coffee hot for the longest period of time. They first wrapped her cup with bubble wrap and recorded the temperature of the coffee once every 15 minutes for 2 hours. They repeated the investigation, this time using newspaper instead of bubble wrap, but they got the same results for both materials.

What could they do to make sure their results are valid?

- A. Repeat their experiment.
 - B. Use tea instead of coffee.
 - C. Use a different thermometer.
 - D. Conduct their investigation in a colder room.
- 4) Brianna's class wants to determine if boys or girls recycled more paper each day. They set up separate recycling bins in the classroom and labeled them "Boys" and "Girls." The students then placed their paper items in the right bins.

Which of the following should the students do each day before emptying the bins?

- A. Make lists of the different types of paper in each bin.
 - B. Count and record the number of paper items recycled in each bin.
 - C. Make a list of which student recycled which paper item in each of the bins.
 - D. Record their estimate of the number of times students placed items in each bin.
- 5) Kevin wanted to find out which of his toy cars, the Corvette or the Mustang, would roll downhill faster. He made a ramp by putting several books under one end of a board so that the board was slanted. Which would be the best way for him to perform his experiment?
- A. Roll each car down the ramp separately five times and estimate which car looked faster.
 - B. Roll both cars down the ramp together one time and see which one gets to the bottom first.
 - C. Roll each car down the ramp separately one time, and time them with the second hand on his watch.
 - D. Roll both cars down the ramp together five times and record which gets to the bottom first each time.

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Answer Key:

1. B

2. D

3. A

4. B

5. D