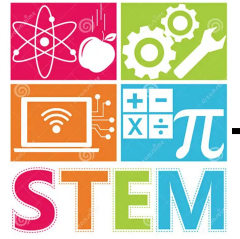


SCIENCE Newsletter

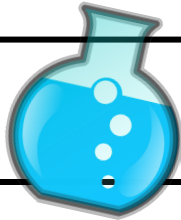


Week of : September 16th to 20th, 2024

4A,B,C,D,E Home Learning

	4A,B,C,D,E Home Learning
Monday	No Homework - Review for TEST tomorrow
Tuesday	Complete page 2 "Questions"
Wednesday	Complete page 3 "Hypothesis"
Thursday	Complete page 4 "Hypothesis"
Friday	No Homework! Enjoy your weekend :)

Vocabulary



**Topic 1a Vocabulary
Words / Quizlet**



Reminders



- **Topic 1a TEST on Tuesday 09/17**
- **Homework due Friday, September 20th.**
- **OPEN HOUSE Tuesday 09/17 @6:00**



Question

Name: _____

Determine if the questions below could be used for a scientific investigation. If the question could not be used for an investigation, rewrite it into a testable question.

1. How many dogs visit a dog park each day?

2. Which materials would keep your hands protected when handling items of a high temperature?

3. How do different types of music affect animal behavior?

4. How many hours does a dog sleep during the day?

5. Can a plant survive without water?

6. How many students are tired at school?

7. How will different types of foods affect athletes during games?

8. How far away from the sun is Mars?

9. Is plastic biodegradable?

10. What temperature does water have to be to brew tea?

Hypothesis

Name: _____

After a scientist has chosen their question to test, they must form a hypothesis. A hypothesis is a prediction of the outcome of the experiment. A hypothesis should be as specific as possible. For example, let's say a scientist asked the following question:

How does music affect plant growth?

The scientist could easily form the hypothesis: *Yes, I think music will affect plant growth.* This hypothesis, while it does reveal an expected outcome, could be much more specific. Instead of just saying yes, this scientist could say *I think calm, soothing music will help plants grow taller.* Or, *I think aggressive rock music will stunt plant growth.*

After being specific, the scientist could add on a justification. This means they can state why they predicted what they did. *I think calm, soothing music will help plants grow taller because it will create a positive atmosphere.* Usually a justification will come after the scientist conducts research. Research will help a scientist learn about their topic and will also help them design their experiment.

If a scientist makes a hypothesis that they find to be incorrect, that doesn't affect the validity of their experiment. If they conduct multiple trials and these results are consistent, then scientists will learn from their findings. Scientists are wrong all the time. That's why they do experiments and investigations. Don't ever become discouraged if your hypothesis is incorrect. That just means you learned something new!

Research Resources:

- ☐ Internet
- ☐ Books
- ☐ Articles
- ☐ Interviews

A hypothesis is often formed using the following statement:

I think _____ because
_____.

Hypothesis

Name: _____

Read each question below. Decide which hypothesis would best for each question. Write the number of the sticky note in the blank.

- _____ 1. What light brightness makes plants grow the best?
- _____ 2. Can the food we eat affect our heart rate?
- _____ 3. Which paper towel brand is the strongest?
- _____ 4. Does shoe design really affect an athlete's jumping height?
- _____ 5. Does having worms in soil help plants grow faster?
- _____ 6. What type of foods allow mold to grow the fastest?
- _____ 7. Does the color of a room affect human behavior?
- _____ 8. Do athletic students have better lung capacity?
- _____ 9. Can background noise levels affect how well we concentrate?
- _____ 10. What material would be best to wear to stay warm in winter?

1. I think athletes have a larger lung capacity because they need to be fit.

2. Room color will always affect human behavior.

3. I don't think eating certain foods will affect heart rate.

4. The greater the background noise, the more difficult it will be to concentrate.

5. Plants will always need light to help them grow.

6. Paper Towel Brand X will last longer without tearing.

7. Worms have nothing to do with plant growth.

8. Athletes have larger muscles, not larger lungs.

9. Thicker materials will help you stay warm in the winter.

10. Background noise will affect concentration.

11. Athletes can wear whatever shoes they want to wear.

12. The more cushioned the shoe, the higher an athlete can jump.

13. Foods with more moisture will grow mold quicker.

14. Brighter colors will cause more positive human behavior.

15. Any clothing will help keep you warm during winter.

16. Paper Towel Brand X is the strongest.

17. Foods with high amounts of sugar and fats will increase heart rate.

18. The brighter the light, the more the plant will grow.

19. All foods will grow mold.

20. The more worms in soil, the more nutritious it is, increasing plant growth.