

Testing Plant Variables in a Lab and Infographic RST

In this investigation, you will be testing one variable that can affect the growth of your plant:

- a) 30mL of water
 - b) Light during day, Dark at night
 - c) Getting either water, protein, coffee, sugar, salt or carbonated water
1. You will be growing corn seeds.
 2. Once growth occurs:
 - a. Choose a factor to test (one of part c above): one pot is your control pot and one is your test pot.
 - b. Check & record the height of plants for 14 days in a table and make qualitative observations.
 - c. Once completed place plants in garbage and soil back in container.
 - d. Collect all class data – 1 table for each of the 5 different fluids variables. Make a line graph that shows the average growth of each group.
 3. You must produce an infographic **using your lab information** but only show:
 - a. Purpose: What were you trying to discover (write in the form of a question)
 - b. Line Graph showing the average change from each day for the different fluids given to the corn. You will need to calculate the average height for each plant each day, then calculate how much they grew (or shrunk) up to the next day.
 - Graphs must use the entire page
 - The x and y axis must be labeled (y axis is growth (cm) x axis is growth period (days))
 - Do not make your graph and insert the values on the y axis until you know what your maximum growth was
 - Use the handout to organize you information.
 - c. Introduction: Research what plants need to grow as it relates to this experiment. You should include at least one fully formatted picture or graphic. Include the websites where you found you information
 - d. Describe at least 6 conditions of the planet and it location within the Solar System. Include at least one picture or graphic that aids your explanation.
 - e. Describe 4 factors you would have to consider (and why) if you were to design a greenhouse on your planet/moon to grow food.
 - f. Analysis:Conclusions: What did you learn from the data in this experiment about how these factors affect plant growth?

Example of an infographic:

WORLD OCTOPUS DAY

ALL SPECIES ARE VENOMOUS, BUT THE BLUE-RINGED OCTOPUS IS THE ONLY ONE DANGEROUS TO HUMANS, RESPONSIBLE FOR **AT LEAST TWO DEATHS.**

one hundred thousand IS THE MAXIMUM NUMBER OF EGGS THAT A FEMALE OCTOPUS CAN LAY, BUT THE AVERAGE LITTER SIZE IS ONLY 80.

OCTOPUSES VS. OCTOPI

THE PLURAL IN ENGLISH IS "OCTOPUSES," BUT THE GREEK PLURAL FORM "OCTOPODES" IS SOMETIMES USED. "OCTOPI," WHILE COMMONLY USED, IS CONSIDERED INCORRECT.

AN OCTOPUS HAS 3 HEARTS

THE GIANT PACIFIC OCTOPUS CAN WEIGH MORE THAN 600 POUNDS

THE GIANT PACIFIC OCTOPUS CAN INHABIT DEPTHS OF UP TO 5,000 FEET

OCTOPUSES ARE ABOUT **90%** MUSCLE

A mature female octopus can have up to 280 suckers on each arm! Each sucker contains thousands of chemical receptors, with sensitivities to both touch and taste.

OCTOPUSES CAN QUICKLY CHANGE THE **COLOR** AND **TEXTURE** OF THEIR SKIN

Octopuses inject their prey with venom using a beak similar to a bird's made from the same tough material as a lobster shell.

BECAUSE THEY DON'T HAVE BONES, EVEN LARGE OCTOPUSES CAN FIT THROUGH AN OPENING THE SIZE OF A QUARTER

300

RECOGNIZED SPECIES OF OCTOPUS

NATIONAL AQUARIUM | aqua.org

Assessment and Evaluation

The lab report will be evaluated in the same manner as all labs we have done to date.

- Purpose – 10%
- Hypothesis – 15%
- Materials – 10%
- Procedure – 15%
- Observations – 35%
- Format - 15%

Infographic Checklist

Format

- Done on poster board or a single 11x17 sheet of paper _____
- Sections are clearly titled and underlined _____
- Colour, diagrams and images and used to help show you material _____
- Fonts and colour pattern is consistent _____

Content

- Introduction is clear and explains key features that plants need to live _____
- Graph uses a whole page _____
- Graph has the axis labeled with units _____
- Graph uses a key to tell the difference between the different colours for each liquid _____
- All lines on the graph are included and accurate _____
- There are images showing plant growth that contribute to your infographic _____
- Conclusion uses specific data from your graphs in your lab. _____
- Greenhouse design includes images _____
- Each factor of you planet/moon is clearly explained/shown _____
- There are images of you planet/moon that contribute to you infographic _____
- How these factors are dealt with is clearly explained/shown _____

