1. Concise Writing I
    a. Scientists use the known orbits of stars to calculate the mass of an object at the center of the galaxy. The object had a mass so large that it had to be a black hole.
    b. Epidemiologists use a parameter called the reproduction parameter, (R0), which the number of people one person can infect.
    c. According to Newton's Laws of motion, objects with different masses and shapes would still accelerate at the same rate when dropped.
2. Creating an Outline
    a. • Ten tomato seedlings are obtained
    b. • A patch in the garden is reserved with space for all ten
    c. • A photo-sensor can be used to determine the light level at each spot in the patch
    d. • Each tomato plant is given a different amount of water per day
    e. • This whole process is done during the summer when the amount of sunshine is maximized

    Outline-

    Hierarchy of information: Talk about the purpose of the experiment first. That way the rest of the paragraph is relating to the main point. Once it is clear what is being measured, talk about how we go about our experiment (a,b,d,e).

    Paragraph

    In order to determine the optimal growing conditions for tomato plants, a patch of a garden is reserved with space for ten tomato seedlings. During the summer, each plant will be given a different amount of water per day. Since sunshine is maximized during the summer, it will help the tomatoes grow even faster. To see what parts of the garden patch offer the best growing conditions, a photo-sensor will be used to determine the light level at each spot in the patch.
1. Concise Writing II
    a. Topic: Neutrino Observatory
        i. The Ice cube Neutrino Observatory is dedicated to observing neutrino particles. Neutrinos are an extremely abundant subatomic particle known for their ability to produce fluctuations in gravitational waves. Built in the South Pole, scientists have drilled holes in ice sheets and placed their sensors underground. “Thousands of sensors are located deep under the Antarctic ice across a cubic kilometre” [1] with the goal of detecting these particles.According to Jim Madison, a physics professor and researcher brought on to the ice cube project, the observatory itself follows a strict procedure for detecting Neutrinos. After about a month, the holes will freeze over, and neutrinos can begin to be detected. Here is an example of how neutrinos react with the sensors in the ice. John Conway, a physics professor at University of California, Davis said that “As neutrinos pass through [the ice] and interact, they produce charged particles, and the charged particles traveling through the ice give off light. That’s how

they're detected. It's like having a telescope for neutrinos underground"[2]. The ice is an essential part of the experiment, the neutrinos need it so the people studying them can do their jobs.

Sources:

https://www.youtube.com/watch?v=PYYyRjTaypI
https://www.youtube.com/watch?v=JzXuvowtZ6A

https://www.sciencedirect.com/science/article/abs/pii/S0920563203013379

Week 3: Technical Description I

1. When born, the baby was heavy and long.
2. Throughout the first year of its life, the baby grew very fast.
3. Radio transmission took multiple hours between the Earth and Moon
4. The hiker walked the 60km trail in 4 days, averaging 15km a day.

Week 3 Part II:

How to make Grilled Cheese

To start, grab two pieces of bread from your pantry. Coat each piece with mayonnaise on one side, and butter on the other. After you finish this, put a pan on your stove and turn it to medium heat. While your pan is heating up, grab a block of cheese and grate it onto a plate. Once you finish this, put the cheese onto the side of the bread where you applied the mayonnaise. Place the other piece of bread on top so that the sides with butter are on the outside. Place the sandwich onto your pan and cook until the cheese is melted.

Week 4: Technical Description 2

1. The acceleration of Earth's gravity, *g,* was measured with a pendulum. The 20cm pendulum was hung down with the bob placed 5cm to the right. After being released, the number of times it returned to its original position over a minute was measured. Returning to its original position every 0.9 seconds, this information was inserted into the formula predicted by Newton's laws. The result for g was found to be 9.81 m/s2.

2. The average horizontal distance bacteria travel after a person sneezes was measured. The trials were conducted in a room with no air conditioning, and therefore no air flow. The height of each subject was required to be within 6 inches of 5 feet 6 inches tall. First, a sample of 20 infected people were gathered. Second, petri dishes were arranged in 0.5 meter intervals out to 10 meters on the floor in front of the subject. Third, once each subject felt the urge to sneeze, the subject was required to aim the sneeze down the line without covering their mouth. Fourth, bacterial colonies were allowed to grow in the

dishes for one week under ideal conditions. The results show that when a person sneezes, it is possible to spread infection to someone who is 8 meters away. These results inform the epidemiology of spreading bacteria.