

Mid Term
Wyatt Killien

Week 1: concise writing 1

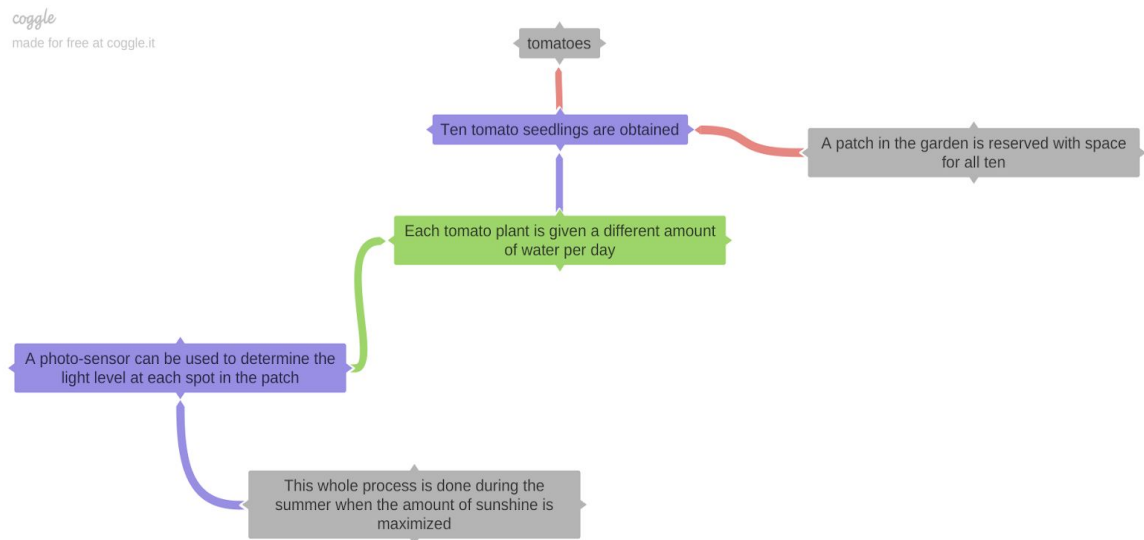
1.

(a) Knowing the orbits of the stars around the center of the galaxy, scientists calculate the mass of the object at the center of the galaxy. The object has a mass so large it has to be a black hole.

(b) Epidemiologists use the reproduction parameter, R_0 , which is the number of new infections resulting from one new infected person.

(c) According to Newton's Laws of motion, things of different masses still accelerate downward at the same rate when dropped.

2.

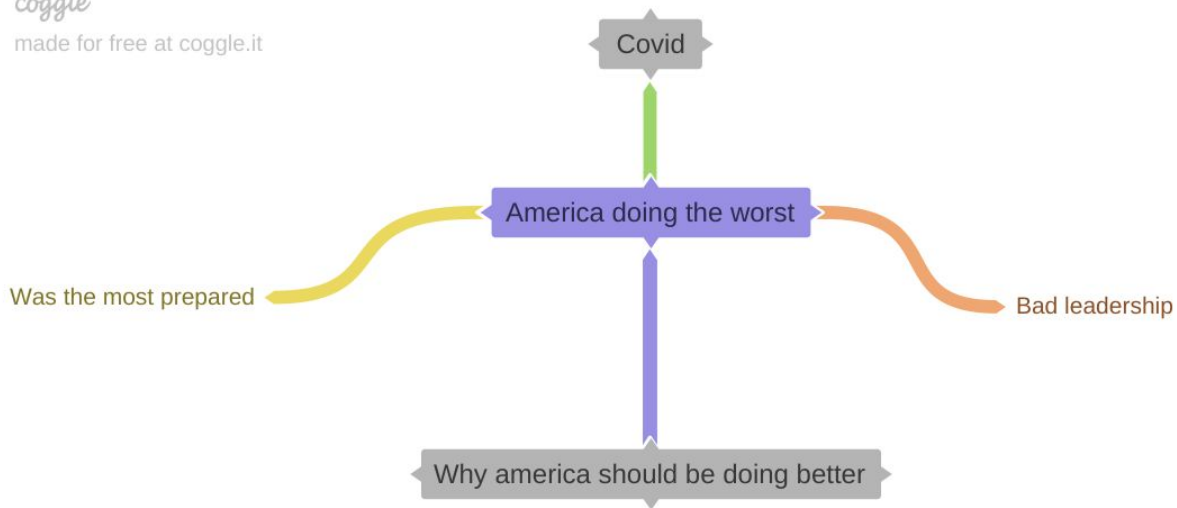


To start a tomatoes garden first, obtain the 10 seeds. Once obtained find a spot in the garden to plant them. Second, each plant should be given a different amount of water each day. Finally, a photo-sensor can be used to determine how much light each plant is getting. This whole process should be done during summer so as to maximise sunlight.

Week 2: concise writing 2

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The covid19 pandemic is at the forefront of the American people's minds. Despite being the most prepared for a pandemic[3]. One look at any real time covid map will confirm these claims[1]. There are only 2-3 countries that are doing as bad as America and most of them are third world countries. One of the most influential factors to these grim circumstances is the poor leadership presented by our president[2]. After perusing the wise words of the country's leader on one of the worst pandemics in the modern world. It's clear that the downplay of this virus was the first mistake[2]. The continued downplay and lack of safety standards as well as slow response was the second mistake. With almost zero input from the federal government the pandemic was a ticking time bomb in America. America has an actual playbook [3] for what to do in these exact situations. Yet failed to complete any of the tasks in it. With the departments like the CDC and WHO there's no reason this pandemic should've reached this level of mortality.

[1]<https://www.nytimes.com/interactive/2020/world/coronavirus-maps.html>

[2]<https://www.npr.org/2020/04/21/837348551/timeline-what-trump-has-said-and-done-about-the-coronavirus>

[3]<https://www.cdc.gov/flu/pandemic-resources/national-strategy/index.html>

Week 3: Technical description 1

1.

- When born, the baby was heavy and long.
- The baby grew, by the time she was 1 year old, she was longer.

- Radio transmission took a long time between the Earth and the Moon.
- A hiker walked 60 km in 4 days, making her average speed moderate.

2. To make chicken curry, first thaw out the amount of chicken required. Then get the ingredients Looking at the stove turn left, open the fridge and grab onions garlic and ginger. Then turn around, open the pantry, in the doors grab Coriander, cumin, turmeric, fennel seeds, cinnamon, pepper, ground mustard, ground cloves, cayenne pepper and salt. While in the pantry get chicken broth and a can of tomatoes. Once all the spices have been acquired mix them according to the family's taste. Then saute the onions garlic and ginger in olive oil, in a cast iron skillet. Once sauteed add broth and can of tomatoes. Let that simmer until the tomatoes are soft. While it is sauteing, cut the chicken into smaller pieces. After the mixture is done simmering put it into the blender to the right of the stove. Blend until smooth then return to the skillet. Add the spices to the sauce then mix harmoniously. Add chicken to the sauce then simmer until the chicken is cooked all the way through. Add cornstarch and cream as seen fit to thicken the sauce.

Week 4: Technical description 2

1. The acceleration due to Earth's gravity was measured, g , with a pendulum. First, the pendulum length was measured to be 20cm. Second, the pendulum was hung straight down and displaced the bob 5 cm to the right. The pendulum was released and the amount of times it returned to the center was measured. It was calculated that it returned to its original position every 0.90 seconds. The results were calculated using the formula predicted by Newton's Laws. The result for g was 9.81 m/s^2 .
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. First, a sample of 20 infected people was gathered. The height of each subject was required to be within 6 inches of 5 feet 6 inches tall. Second, petri dishes were arranged in 0.5 meter intervals out to 10.0 meters on the floor in front of the subject. The category of dishes with the largest colonies were the ones corresponding to 8.0 meters. 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 happens to be 8.0 meters away. These results inform the epidemiology of spreading bacteria.