

CONSTRUCTED RESPONSE

1)Your class is taking part in an exciting project with the Canadian Space Agency (CSA). CSA has sent tomato seeds to the International Space Station to see if they can be used as a food source for astronauts. During the same timeframe, your class is going to grow tomato plants in the classroom.

The overall goal of the project is to observe the difference between tomato seeds grown in space and tomato seeds grown on Earth in your classroom.



A)Write a testable question that your class can investigate related to the overall goal of the project. (204-2)

How will being in orbit effect the growth of tomato seeds as compared to seeds grown on Earth?

B)Make a prediction about the possible differences or similarities between tomato plants grown in space and tomato plants grown on Earth. (204-3)

Any plausible answer:

Tomato seeds grown in space will be smaller because there is no natural sunlight.

Tomato seeds grown in space will be a different colour because of no natural light.

Tomato seeds grown in space will produce larger tomatoes because of microgravity.

C)Write a series of 5 or more steps to help conduct an experiment in your classroom related to the overall goal of the project. (204-7)

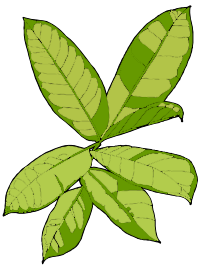
Steps associated with growing tomatoes under varying conditions: vary the sunlight, soil, amount of water, room temperature, orientation of plant, etc.)

2) A scientist poses a question: "How can I grow plants in different conditions?"

A) Identify and explain 3 or more variables that this scientist needs to control in order to answer this question. (204-4)

Answer depends on the choice of different condition. For example, when varying sunlight, keep soil, temperature, water, container and amount/type of seeds constant.

B) The scientist succeeds in growing these three plants. Describe the similarities and differences that you observe. Write 3 or more observations. (205-5)



Plant #1



Plant #2



Plant #3

Not sure if these came from the same seeds

Any plausible answers:

all green (if shown in colour)

#2 and #3 have stems

#2 and #3 stems are different colours

#3 has a different leaf-end than other two

C) Write a follow-up question that the scientist could investigate next. (206-9)

Not sure if this is still relating to tomato growing

How do growing conditions affect the type of tomato stems?

3)At Max’s birthday party, his friends participate in a flight simulator video game competition on his Playstation 4. They play two rounds. The first round is a practice round and the second round is the championship round. The table below was used to record the results of the competition:

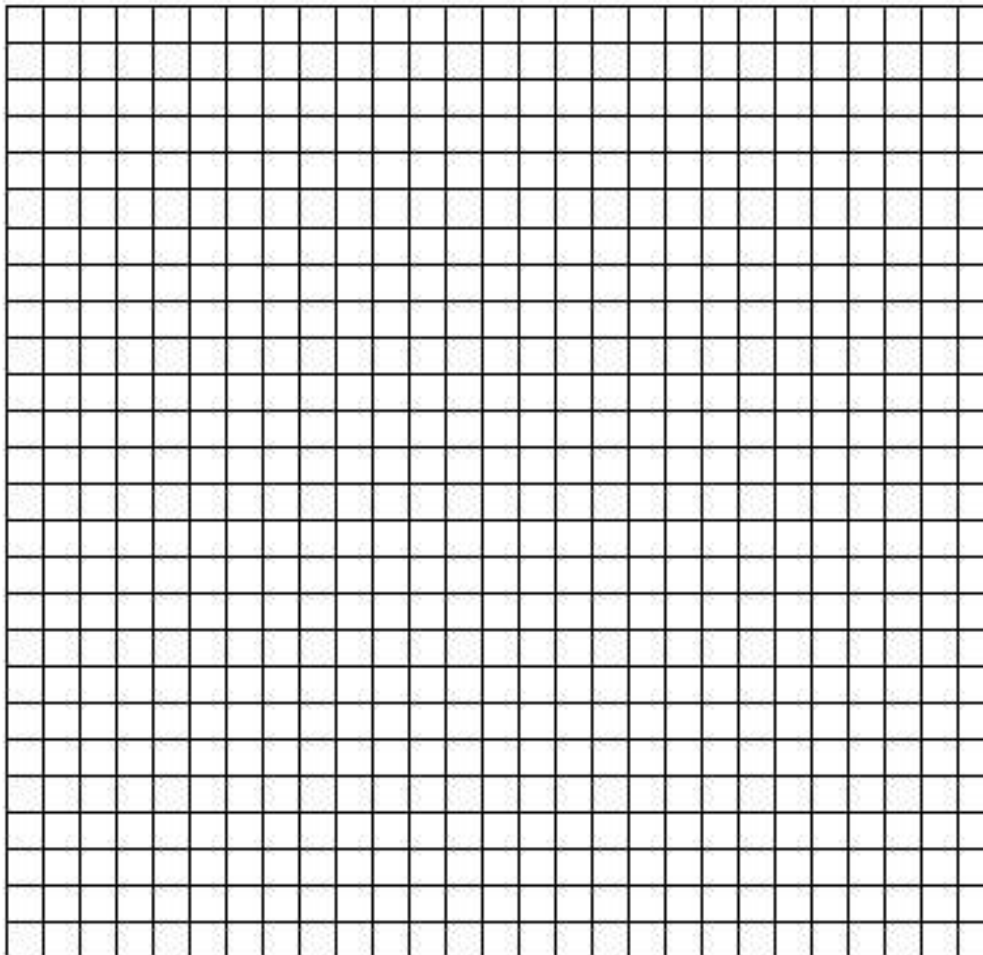


Name	Practice Round Points	Championship Round Points
Justin	45	65
Robert	15	30
Max	100	120
Charles	55	5



A)Use the results of this table to create a graph. (205-7, 207-2)

Points earned on flight simulator



*create a bar graph showing the two results for each child

Points - scale of 5 per square to max graph space

B) Describe a pattern or irregularity that you observe in the data. (206-3)

Everyone but Charles scored more points in the championship round than in the practice round.