Done?	**March Student Led Conference Checklist**
	1. **IRIS** I am most proud of…. Post an artifact to IRIS. Be sure to include a comment about why you are proud.
	2. **IRIS** Set new goals for the next 3 months. Choose at least 2 goals. What do you really want to work on, improve on… BE SPECIFIC. Include what you are going to do in order to achieve your goal.
	3. **Conference portfolio**: • **Reading:** Reflection on Active Reading, include Diesel Spill Article vs TRAPPIST-1 Article and another article we read (Free Transfer, Indian Act, Colonial Clash, etc.) • **Writing:** Reflection on Writing: Writer's Workshop from last semester. Writer's Workshop from this semester. • **Podcast Project Package (neatly stapled together)** 1. The sheet with your podcast choice 2. Your research. 3. The research rubric you completed with a partner. 4. Your script. 5. The rubric that you have used to assess your script • **Mathematics:** Your choice: (Robotics, Operations, Volume, Area) • **Your Choice:** Sky Science mini-dictionary, Digital Book Cover, Visual Journal
	4. **Robotics/Makerspace:** Share your experience and what you are learning
	5. Identify a time when you had to have a **growth mindset**. Explain why and what you did.

March Conference Reflection

Use these sentence starters as a prompt to reflect on the work in your portfolio. You may write your reflection by hand in the space provided or type your answers in a document and print it off.

1. **Reading/Researching**: We have been working on reading for a deeper understanding of the text. When I am reading to gather information I…

2. **Writing**: Writer's Workshop has provided an opportunity to develop our voice as writers. In my own writing I have learned to…

3. **Mathematics**: Problem solving and reasoning have been a focus in math. When I am confronted with a math problem I…

4. **The Arts and Phys. Ed**: Being well-rounded individuals has been a focus in our classroom. When I look back, my proudest moment……

Use the following information to answer question 19.

Below the following figure there is a number line.

19. Which of the following mixed numbers could represent the length of the figure above?

A. $1\frac{9}{14}$ units

B. $1\frac{5}{9}$ units

C. $2\frac{4}{14}$ units

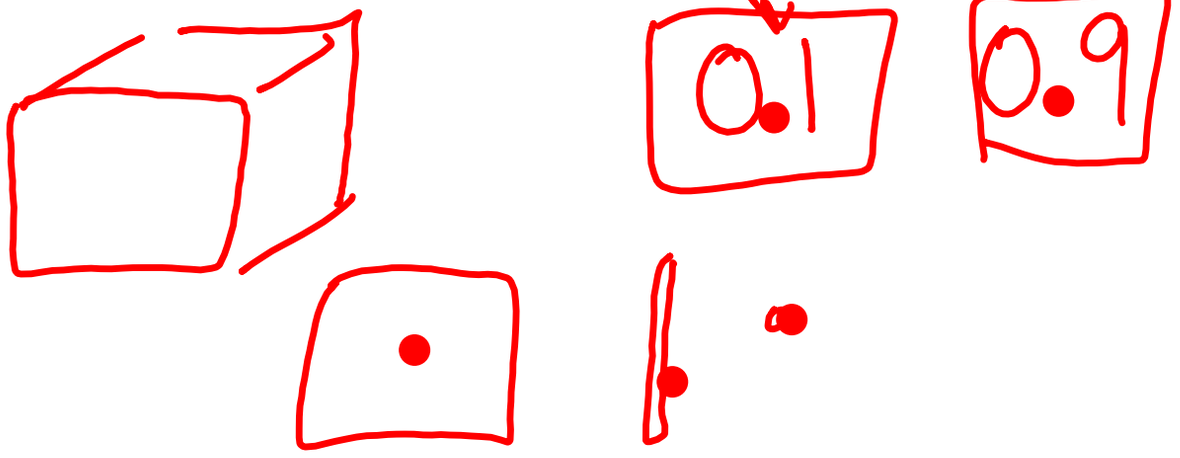
D. $2\frac{4}{5}$ units

Use the following information to answer question 33.

Decimal Numbers					
0.40	0.91	0.01	0.99	0.75	0.09

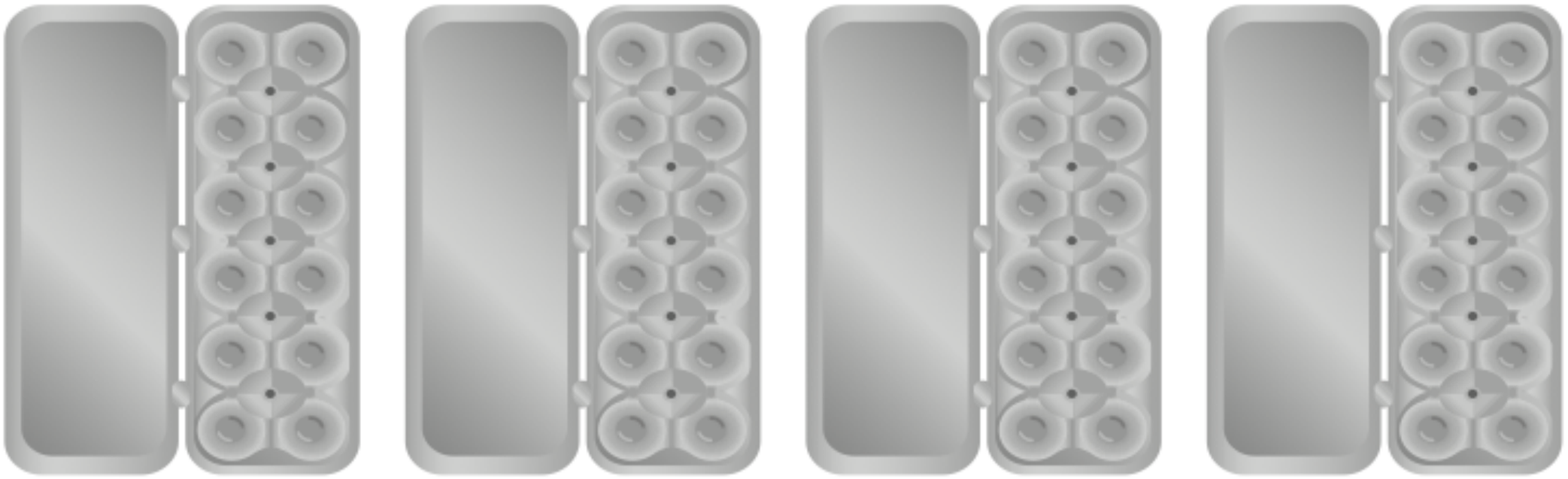
33. How many of the decimal numbers shown above are **greater** than $\frac{1}{10}$ and **less** than $\frac{9}{10}$?

A. 1
B. 2
C. 3
D. 4



Use the following information to answer question 38.

Patrick fills $3\frac{5}{12}$ of the egg cartons shown below with eggs.



38. How many eggs in **total** does Patrick have?

A. 35

B. 36

C. 41

D. 43

The Canadian Space Agency is in the market for a new planetary rover to explore the recently discovered planets in the TRAPPIST-1 system. You are required to construct and test a robot that is capable of following a set of commands to explore the planet's surface. Before the robot is deployed, it must be extensively tested to ensure it will perform as expected. You can't fly a technician to TRAPPIST-1 to reboot a robot!

Before we send our robot to space, we must first test it thoroughly here on earth. In order to observe your robot and see how it behaves you will be faced with a series of challenges. You will need to meet each challenge in order to receive the next challenge.

In order to complete each challenge you will need to work as a **team**. Prior to beginning each session you will assign roles to each team member.

1. **Programmer-** You will **touch the computer**, your group will collaborate but only the programmer will have access to the computer and will “drive” the mouse
2. **Engineer-** You will **touch the robot**, it will be your job to set up the robot on the challenge mat in order to test the programming. You will be responsible for finding the program on the brick and running the program.
3. **Scientific Observer-** your role will be to capture your groups experience for the day. You will create a new folder for each day and in the folder you will need to include the following:
    1. - A photo/drawing of a program that your team created
    2. - A video of your robot running the program
    3. - A tip you discovered either involving the building or the programming that you think might help another group.

4. At the end of each challenge you will be faced with a mathematical problem or equation that you need to solve in order to move on to the next challenge.

Robotics Reflection

Each day you will need to reflect on the following in your visual journal:

Today's Activities:
What did you do?
What happened?
Be sure to highlight your frustrations and celebrations in your reflection. Use problem solving questions to guide you.

A Sketch:
You will need to include a sketch/pictures of your robot and/or programs

Next Steps:
Based on today's work, what are your next steps? What problem(s) are you in need of solving? How might you improve your robot? What is the first thing you are going to do?

Problem Solving Questions:

What is the problem?
What is causing the problem?
How can we fix the problem?

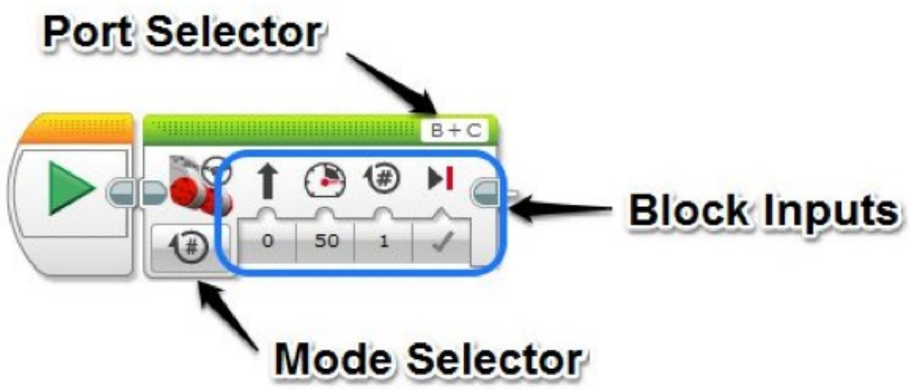
Programming Tips:

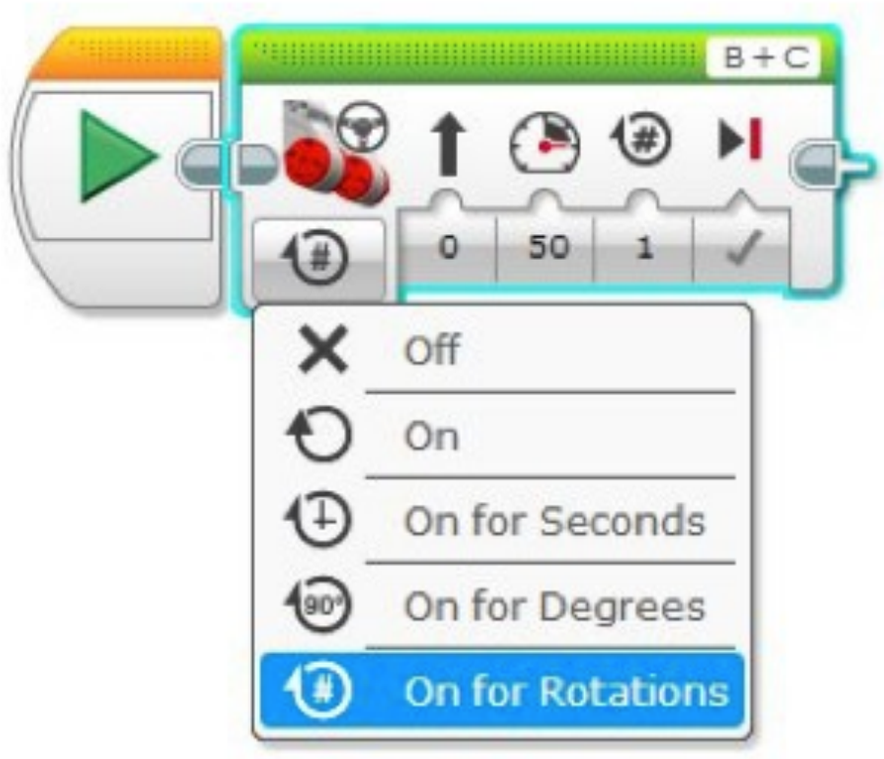
Be sure to name each new project with a names that will be easy for you to identify. For example:

team1_50cm.ev3

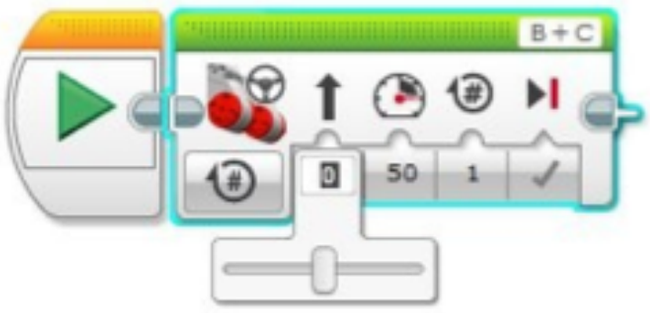
team1_3degree.ev3

This will make it much easier for your to run your program on the challenge mat when you are testing.

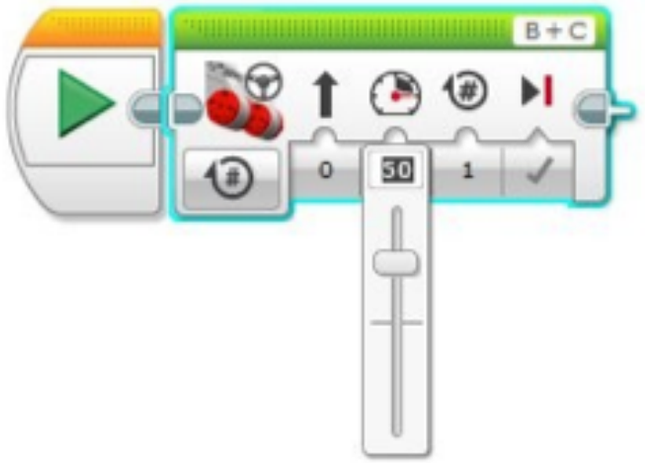




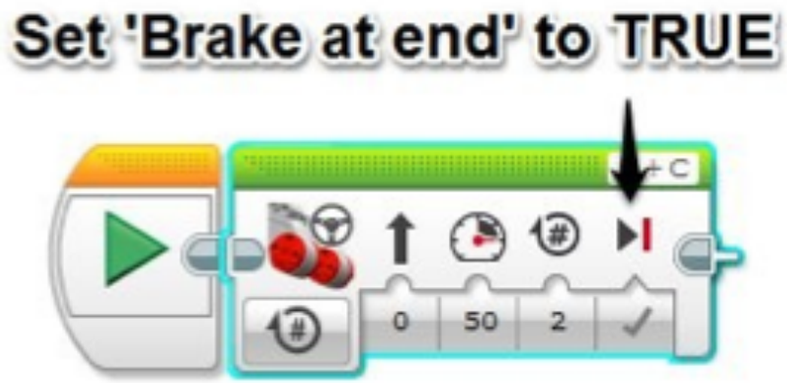
Keep the steering on '0' to go straight ahead



Set the power to 50% forward (-50 would be backwards)



Set the Rotations to '2'


Set 'Brake at end' to TRUE
0
50
2


'Download' or 'Run'
EV3

Challenge #1 - Movement

Congratulations you have built the base model of your robot. You have now graduated to the “challenge mat”. In order to learn the programming software and discover how to make your robot move you are challenged to program your robot to complete the following tasks:

1. Drive forward for 3 rotations of the wheels. How far did your robot travel? _____
2. Drive forward for 3 degrees of the wheels. How far did your robot travel? _____
3. Drive forward for 3 seconds of the wheels. How far did your robot travel? _____
4. Drive forward 50 cm (see challenge mat)
5. Drive forward 5 rotations slowly and then backwards 1800 degrees quickly

Sequel: Sensabot Challenge (see challenge mat)
You will need to build the arm for your robot (see page 54-67 in the instruction manual)

- Your robot will start in the starting block with it's arm lowered.

- The robot must move and stop at each line, lowering and raising its arm representing the inspection process. The arm must be directly over each line when the inspection is performed

- The robot must return to the starting box and must be completely inside the starting box

- **<u>Mathematics Problems-</u>**

- What is the circumference of the robots wheel?

- If your robot moved forward 1980 degrees. How would you write this as a mixed number in tire rotations?

- Use a mixed number and an improper fraction to explain how you programmed your robot to go 50cm.

Mandate

The mandate of the Canadian Space Agency is:

To promote the peaceful use and development of space, to advance the knowledge of space through science and to ensure that space science and technology provide social and economic benefits for Canadians.

Canadian Space Agency Act, SC. 1990, c. 13


?
?
?
CANADA'S FUTURE IN SPACE
L'AVENIR DU CANADA DANS L'ESPACE
CSA ASC

`BIG NEWS

The Canadian Space Agency has been contacted by a team of scientists from the TRAPPIST - 1 system. They have used prime numbers to contact us and let us know that are launching a team of astronauts to visit Earth.

Following our mandate and, being the very polite Canadians that we are, we have to create a guide to help the TRAPPIST - 1 team to navigate through our solar system, land on Earth, and continue exploring space with the Canadian Space Agency.

OUR MISSION

Create a complete guide to help TRAPPIST-1 scientists safely arrive on Earth so that they can share their discoveries and learn from us.

YOUR MISSION

Create a guide to help TRAPPIST-1 scientists safely arrive on Earth so that they can share their discoveries and learn from us.

MISSION PLAN

- As with all large scientific projects, we must break into teams. https://www.youtube.com/watch?v=1-JdqHxqkHA *(Disclaimer)*
- We will break into 6 teams created by your teacher. Each team will tackle a different topic to add to our guide for the TRAPPIST - 1 scientists.
- Think of it as creating a chapter for a final book.

Your Team's Mission

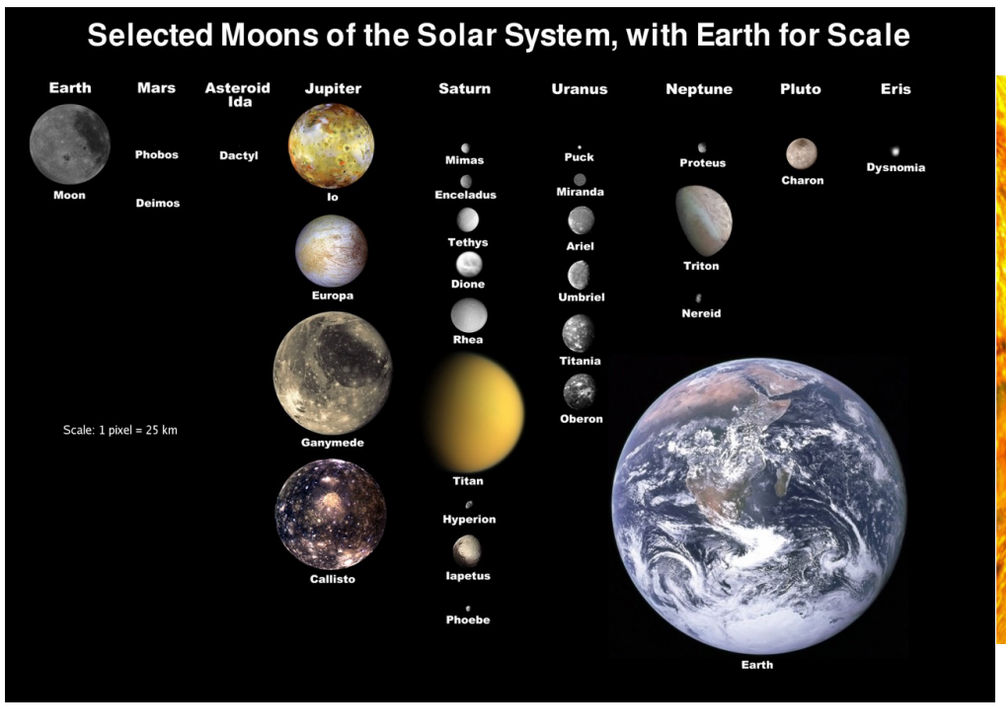
- You will have less than one week to complete your package.
- You must share accurate information that will help the TRAPPIST-1 scientists.
- Your package must have a visual element (we're not sure if the TRAPPIST-1 scientists speak English).
- How you present the information is up to you. A video, models, info package, digital, etc.

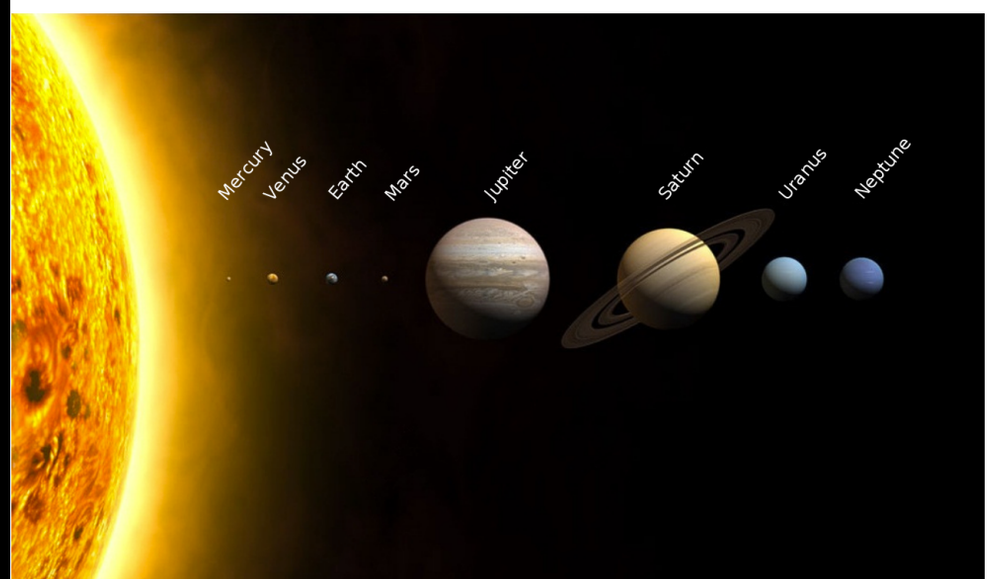
Field Testing Your Package

- Scientists have to share their work.
- "Field testing" is when you actually test something for the purpose it was designed.
- For our field test, your team will present your package to the class to see if it will make sense to TRAPPIST-1 scientists.
- The class will make notes and observations.

ALPHA TEAM: NAVIGATING OUR SOLAR SYSTEM

The team from TRAPPIST - 1 is traveling 39.5 light years to our solar system. The journey is long and dangerous. We can't help them the whole way, but we can help them when they arrive to our solar system.





ALPHA TEAM: NAVIGATING OUR SOLAR SYSTEM

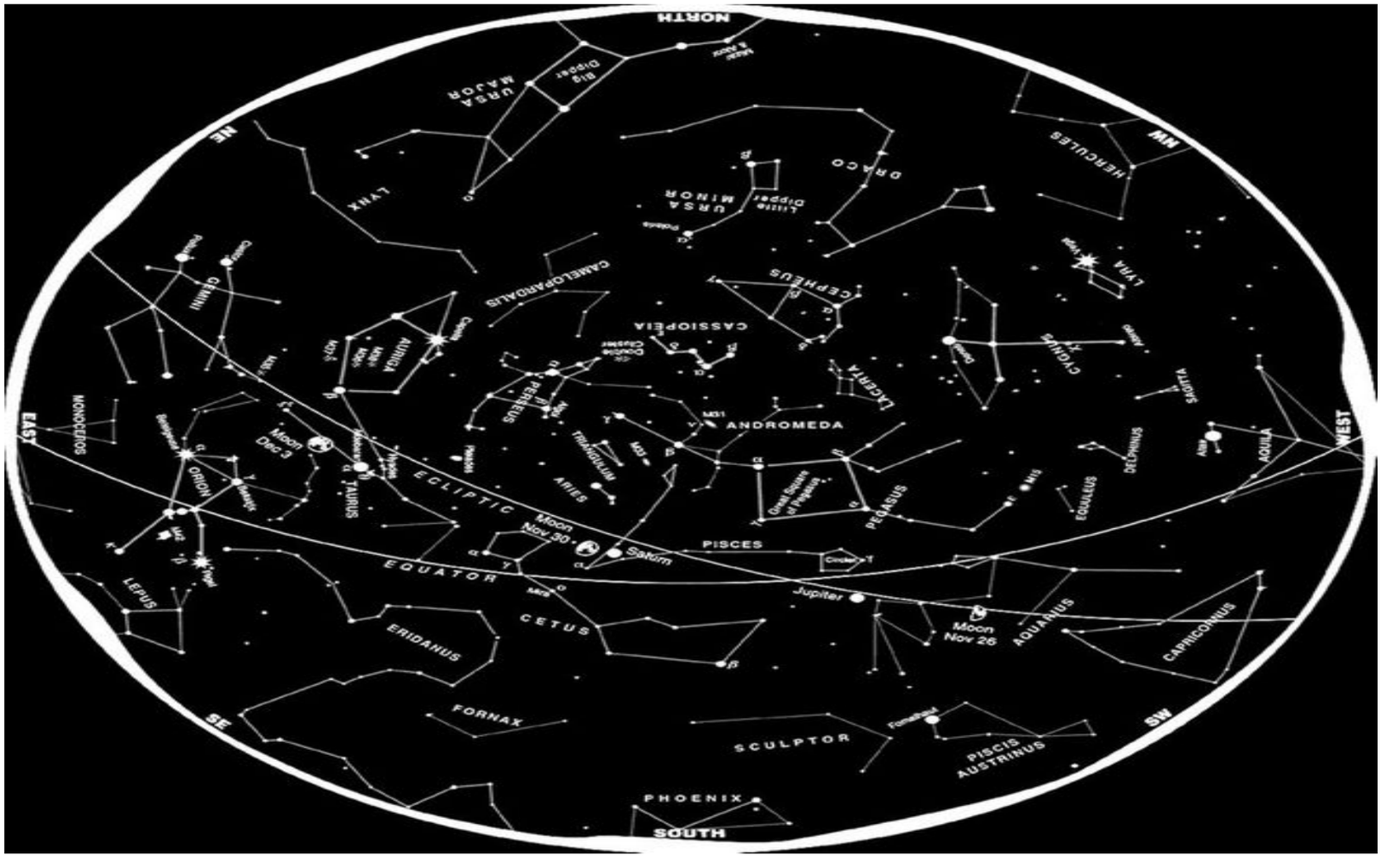
- What are some celestial bodies in our solar system?

- How do the bodies move? Do they rotate around each other?

- What should they look for? Are there any similar objects?

BETA TEAM: NAVIGATING NIGHT SKY

For centuries we have used the night sky to navigate on water and land. We want our TRAPPIST - 1 scientists to be able to navigate using our constellations.



BETA TEAM:
NAVIGATING NIGHT SKY

- What are constellations?
- Who "created" the constellations?
- Do constellations look like they are moving at night? Why?
- What are some of the constellations?

With any luck, the TRAPPIST - 1 team will navigate through our solar system and arrive on Earth.

But, even with the best technology and planning, things can go wrong...

https://www.youtube.com/watch?v=FG0fTKAqZ5g

GAMMA TEAM: TRACKING TIME

What if the TRAPPIST - 1 team crash lands on a remote part of Earth?

Without technology and without an Earthling to ask for assistance, how will they be able to tell time using the sky?

- Can you tell time without any technology? If so, how?

DELTA TEAM: UNDERSTANDING OUR MOON

As scientists and explorers, the Trappist - 1 Team is going to want to know as much as possible about our night sky when they arrive. It is entirely possible that they have used other moons to track time and remind them of home.

DELTA TEAM: UNDERSTANDING OUR MOON

- Does the moon move?
- How does the moon look from Earth?
- Is the moon always visible?

SIGMA TEAM: PREPARING FOR LIFE ON EARTH (ESPECIALLY IN CANADA....)

SIGMA TEAM: PREPARING FOR LIFE ON EARTH (ESPECIALLY IN CANADA....)

- Why are there different seasons on Earth?

- How do the seasons "work"?

- What can they expect when and where they land?

OMEGA TEAM: SHARING OUR SKY

SCIENCE

Don't forget our agency's mandate!

To promote the peaceful use and development of space, to advance the knowledge of space through science and to ensure that space science and technology provide social and economic benefits for Canadians.
Canadian Space Agency Act, SC. 1990, c. 13

OMEGA TEAM: SHARING OUR SKY

SCIENCE

- What technology do our scientists have that we can share with the TRAPPIST - 1 scientists?

- How do we know what we know about space?

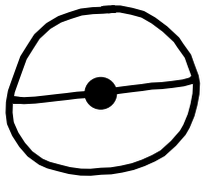
- How do we view cellestial objects?

As you move to the left, each position represents ten times as many as the position to its right.

The fairyfly is the world's smallest insect.

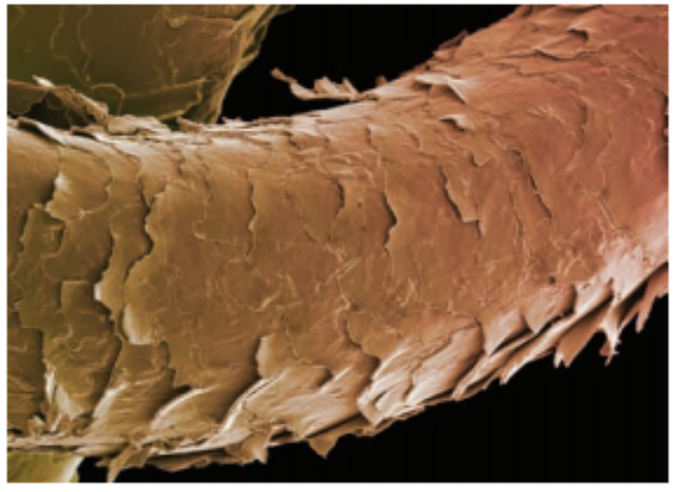
This place-value chart shows the length of the male fairyfly in centimetres.

Ones	•	Tenths	Hundredths	Thousandths	Ten-Thousandths	Hundred-Thousandths	Millionths
0	•	0	1	3	9	0	0
0		0.0	0.01	0.003	0.0009		



Circumference

The diameter of a human hair is 0.000 025 m. We read this number as: twenty-five millionths



A garden snail moves very slowly.
In 1 h, it travels 0.0483 km.
We read this number as:
four hundred eighty-three
ten-thousandths

$$\frac{483}{10\,000}$$

Sound travels very fast. It would take 0.0046 min for sound to travel from one end of a football field to the other.
We read this number as:
forty-six ten-thousandths

13. Which of the following word statements represents the value of 0.012?

A. Two thousandths

B. Twelve hundredths

C. Twelve thousandths

D. Twelve ten thousandths

Warm Up: 321 = 300 + 20 + 1

Write the following numbers in expanded form:

0.235 0.200 + 0.030 + 0.005 = 0.235

0.0045 0.004 + 0.0005 = 0.0045

Write the following in standard form:

0.5 + 0.02 + 0.004+ 0.0009 0.5249

ten thousandths