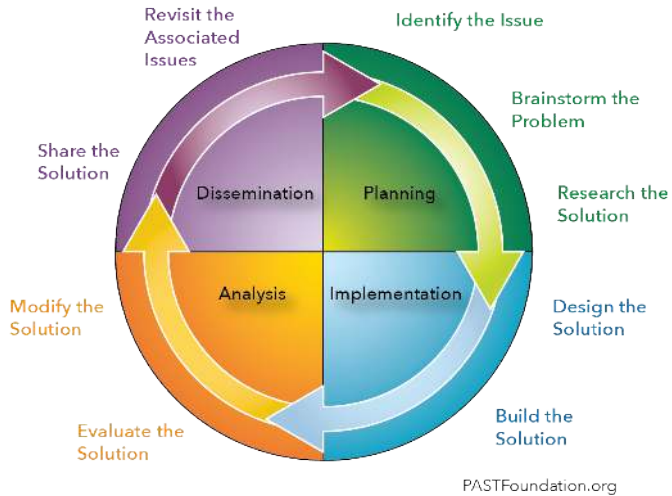


Alien Organism Mini Challenge

Name: _____

Date: _____



Problem Scenario:

You are an astronaut tasked with seeding life on Mars for future missions. You must design an organism that can live in the harsh Mars environment. Key characteristics of Mars:

- Alternating hot and very cold during the day/night (-100F to 80F)
- 95% of the atmosphere is Carbon Monoxide and only extremely little Oxygen
- Water is only located in polar ice caps and deep underground
- All water is in the form of ice

Challenge:

How can Mars someday sustain life?

Criteria/Supplies:

- Crayons/ markers and other drawing supplies
- Must be able to defend the adaptations based on scientific evidence (It has to be able to be done.)

1. Brainstorm: Use the space below to brainstorm the design and approach to designing an organism that can live in the Mars' environment.

Derive 2 adaptations per characteristic of Mars that can be designed into an organism.

1. Alternating hot and cold
2. 95% carbon monoxide
3. Water inaccessible
4. Water only as ice

2. Design:

Design an organism that can survive the conditions on Mars.

List the adaptations you will be designing into the organism from the brainstorm step. Be sure to not include mutually exclusive adaptations.

4. Evaluate:

Have a partner fill out this section of the sheet.
Help your partner refine the strategies developed.

- A. Are the adaptations thought through?
- B. Are the adaptations supported with evidence from Earth? How so?

5. Modify:

Using feedback, come up with two significant changes you can make to your model.
Write down any changes that you implemented in your model.

3. Build:

Design an organism that can survive the conditions on Mars.

List the adaptations you will be designing into the organism from the brainstorm step. Be sure to not include mutually exclusive adaptations.

6. Share:

Share your creation on Social Media!

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