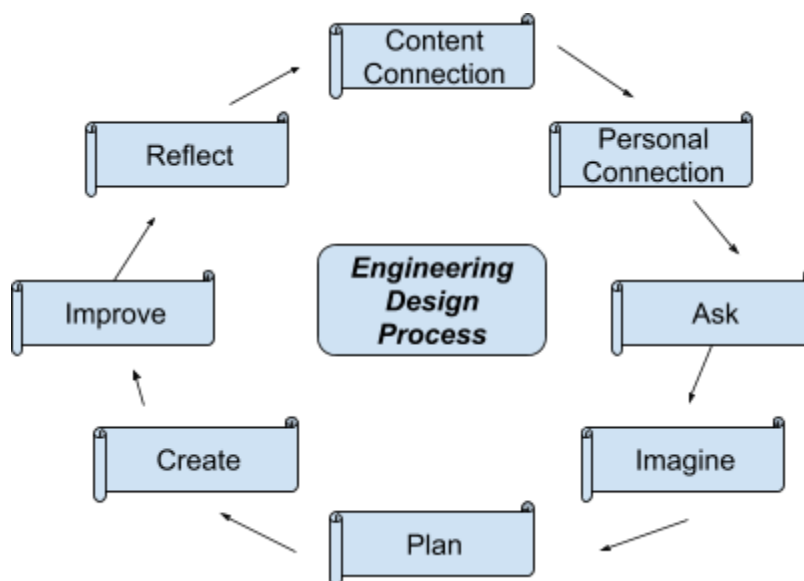


Design Thinking



Directions: *Imagine you are an engineer and have just been given a problem to solve. Work in your group to design, test, and improve your product. You are to use this document to track your thinking as you progress through the engineering design process. Keep in mind as you design, create, and test your model, you will be required to explain both your thinking and how the design challenge and your model connects to the science content.*

Content Connection

1. What content are we currently studying in class?

2. How does the problem connect to the content?

3. How does the content connect to the real world? Give a specific example.

Personal Connection

Draw or write a personal connection you may share with the content. Explain how this connection also relates to a social justice issue/concern.

Ask

1. What is the problem? (In your **OWN WORDS**)

2. What are the constraints?

3. What materials are available for our use? How can you use them?

4. Information/Ideas gained through research:

Name _____

Date _____

Mod _____

Imagine

Possible Solutions	Pros	Cons
1.		
2.		
3.		
4.		

Plan

Description of blueprint (drawing)

Blueprint (INCLUDE LABELS)

Materials to be used

Name _____

Date _____

Mod _____

Create

Sketch of your model prototype with labels

Results after test

What needs to improve? Explain why.

Improve (Redesign/Modify)

Improvements Made	Results	What Still Needs to be Improved

Name _____

Date _____

Mod _____

Final Results

Sketch

Results

Were you successful (Circle one)?

YES or NO

Reflection

1. If you had the opportunity to repeat this challenge, what would you do differently and why?

2. Identify how your thinking has changed as a result from the beginning of this activity to now.

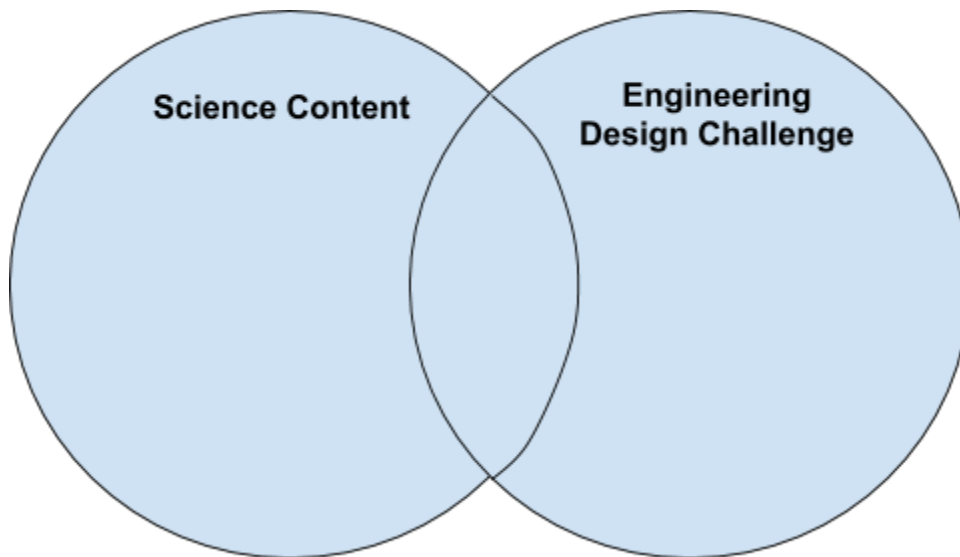
3. Describe any challenges you faced while completing this design challenge. How will you account for them during your next design challenge? If you didn't have any, why do you think that is?

4. How can you use what you learned during this design in the future?

Content Connection

Venn Diagram:

Complete the Venn diagram below to demonstrate how the science content relates to the engineering design challenge.



CER Explanation of Engineering Design Challenge and the Science Content

Claim: How does the engineering design challenge you just completed relate to the science content you are currently learning?

Evidence: Use evidence from both the engineering design you just completed and what you have learned in class.

Reasoning: Support your evidence with reasoning.
