

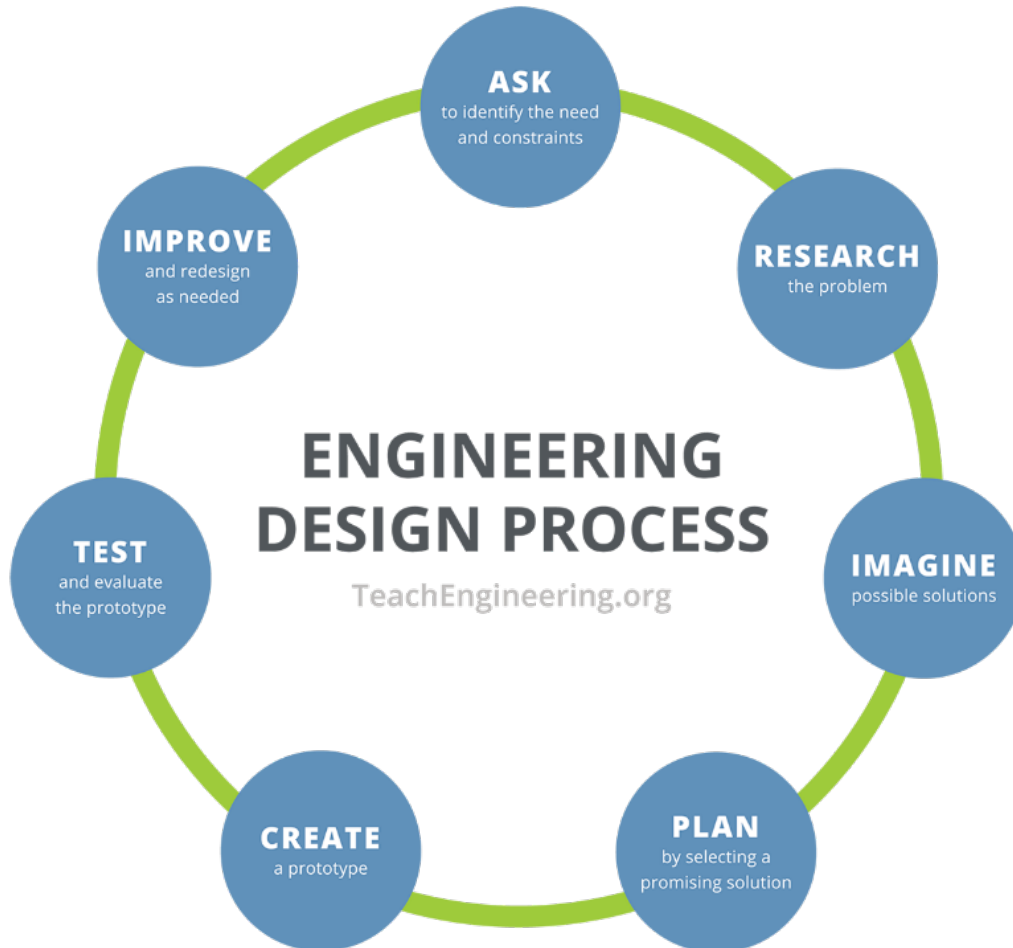
Name:

Date:

Class:

Exploring Density Solutions Worksheet

How Does Engineering Happen?



Step 1: Ask

1. Record your observations and reflections about what makes objects sink or float. (Use complete sentences.)

Name:

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Step 2: Research

Instruction: Using online research resources and/or science textbooks, define the following terms using complete sentences.

2. What is mass?

3. What is weight?

4. What is density?

5. What is relative density?

Name:

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Step 3: Imagine

6. Individually brainstorm 5-6 ideas of how you can make and test solutions with different relative densities. Think about what ingredients you would use, and how you would make those solutions.

a.	b.
c.	d.
e.	f.

Name:

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Step 4: Plan

Constraints

- Each mixture must be a solution.
- Each mixture must contain three ingredients.
- Each mixture must be 300 mL.
- Each mixture must have a different density.

Mixture #1
Ingredients
Procedure
Mixture Color

Name:

Date:

Class:

Mixture #2

Ingredients

Procedure

Mixture Color

Mixture #3

Ingredients

Procedure

Mixture Color

Name:

Date:

Class:

Step 5: Create

Create Mixture #1

Observations of the Process:

- I observed...

Did the mixture become a solution?

Create Mixture #2

Observations of the Process:

- I observed...

Did the mixture become a solution?

Create Mixture #3

Observations of the Process:

- I observed...

Did the mixture become a solution?

Name:

Date:

Class:

Step 6: Test

7. How will you test the relative densities of your mixtures? Describe your testing method below.

8. Using your above testing procedure, test each of your mixtures.

Test Mixture #1
Observations of the test:
Test Mixture #2
Observations of the test:
Test Mixture #3
Observations of the test:

Name:

Date:

Class:

Step 7: Improve

Improve #1

If not every mixture was a solution, what can you change to fix that?

Improve #2

Does each mixture have a different relative density? If not, what can you change to fix that?