

Name:

Date:

Class:

Filtration System Design Packet

Research and Brainstorm

What are PFAS, and how do they enter bodies of water?

Design Your Filtration System

Sketch your filtration system design below. Label all parts and materials.

List the materials you will use in your filtration system.

Explain how your filtration system will work to remove PFAS from the water.

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Build Your System

Build your filtration system using the materials you listed.

Describe your procedure for testing the filtration system.

What are the layers in your filtration system? How many inches is each layer?

Layers	Material	Inches
Top Layer		
Bottom (the water will exit this layer and go into the cup)		

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Analyze Results

1. Compare the initial and filtered water. Did your system remove any impurities?

2. What worked well in your design?

3. What could be improved in your design?

Redesigning and Retesting Your Filtration System

Describe your procedure for testing the filtration system.

What are the layers in your filtration system. How many inches is each layer?

Layers	Material	Inches
Top Layer		
Bottom (the water will exit this layer and go into the cup)		

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How much water did you get in the cup?

What was the color of the water in the cup?

Which was the better system?

Why was it the better system?

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Reflection

1. How effective was your filtration system?

2. What challenges did you encounter during the design and testing process?

3. How might your design be used in real-world applications to address water pollution?