

Engineering Activity 6: Reuse in Action: Create a Process

Does our final water reuse process meet our water quality goals?

Planning a Process

Environment: _____

Water Sources: _____

The goal is to produce

_____ cups of somewhat contaminated water

_____ cups of clean water

How will you order your water samples and Filter Bases?

Consider these questions when planning your water reuse process:

- Which water sample(s) should go into the first filter?
- Which water sample(s) should go into the second filter?
- Which materials should be used in the first filter?
- Which materials should be used in the second filter?

Draw a detailed plan of your group's water reuse process.

- Label the locations in your drawing.
- List the materials you would like to use in your filter(s).

Materials List

Material	Number Needed
Rubber bands	
Paper towel (half sheet)	
Cheesecloth (1' × 1')	
Cotton ball (1)	
Sand (1/4 cup)	
Charcoal (2 Tbsp)	
Limestone (2 Tbsp)	

Humans have never been to a planetary body beyond the Moon, so it's important to make sure astronauts are able to reuse water when they travel to Mars, asteroids, and beyond.

Testing a Process

Record the final results of your water reuse process here.

Test	Trial 1	Trial 2
Clarity		
Color		
pH		
Smell		
Texture		

Does the final water sample meet the water quality goal?

Did You Know?

Remember that failure is natural in engineering!
Engineers gain information from failed designs and
use it to make future designs better.



NASA Career Spotlight



Phyllis Friello

My job at NASA is to work with my space medicine team to develop and provide what we need to keep our astronaut crews on moon and Mars missions healthy and safe.



NASA Career Spotlight



Daniel Sturber

My job at NASA is to work with astronauts and other engineers to make sure spaceships work the way astronauts need them to work.