



## Backwash

# Does backwash really happen?

@home

BEST FOR GRADES  
2-6

ESTIMATED TIME  
5-10 Minutes

### You Will Need

- 1 teaspoon of colored powdered drink mix
- A clear bottle of water

### Directions

**Note:** The experimental question in this module is NOT the same as the one in the Science-U video. The experiment conducted by the Science-U campers involved growth of bacteria in a lab, so a different experiment that is more easily conducted at home is described here.

1. Ask student to create a testable question.
2. Put 1 teaspoon of the powdered drink mix into your mouth and let it sit on your tongue for a few seconds.
3. Take 2 sips of water from the water bottle.
4. Observe if any of the colored drink mix goes into the water.



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## Backwash

# Discovery Questions & Keywords

## Discovery Questions

### Beginning the Experiment

What is “backwash”?

Why is backwash considered bad?

### During the Experiment

Can you feel if the saliva goes into the water bottle?

What does it mean if the water is colored after you drink it?

What does it mean if the water isn't colored after you drink it?

### After the Experiment

What would happen if you used a straw?

Can you change the way you drink to increase or decrease the amount of backwash that goes back into the container?

Can the cold temperatures from a fridge be enough to kill the germs found in containers from backwash?

## Keywords

### Backwash

The liquid that flows back into a bottle, glass, etc., after someone has taken a drink, assumed to contain that person's saliva.

### Bacteria

Tiny, one-celled creatures that get nutrients from their environments in order to live.

In some cases that environment is a human body. Bacteria can be beneficial for humans, but some bacteria can cause illness!



## Backwash Does backwash really happen?

### How does it work?

Backwash is the term used for fluid which makes its way from a person's mouth back into a drinking container. When you drink from a bottle or a cup the liquid goes into your mouth and when you stop drinking, some of that liquid can be pushed out of your mouth and back into the container.

The saliva that would be in the backwash contains bacteria, which is mostly harmless or helpful. However, when you're sick, you could be putting sickness causing bacteria back into the container and if someone else drinks from it, they could get sick too.



## Backwash

# Discovery question answer key for parents and teachers.

### Beginning the Experiment

What is “backwash”?

*Backwash is the term used for fluid which makes its way from a person’s mouth back into a drinking container.*

Why is backwash considered bad?

*If you’re sick, you could be putting sickness causing bacteria back into the container and if someone else drinks from it, they could get sick too.*

### During the Experiment

Can you feel if the saliva goes into the water bottle?

*It depends on how much you are paying attention! You may be able to feel it, but most of the time you won’t even notice!*

What does it mean if the water is colored after you drink it?

*Some of the saliva from your mouth got washed back into the bottle of water. Yuck!*

What does it mean if the water isn’t colored after you drink it?

*None of your saliva got washed back into the water bottle. How did you do it?*

### After the Experiment

What would happen if you used a straw?

*Experiment to find out!*

Can you change the way you drink to increase or decrease the amount of backwash that goes back into the container?

*Experiment to find out!*

Can the cold temperatures from a fridge be enough to kill the germs found in containers from backwash?

*Cold temperatures can slow bacteria’s rate of growth, but it won’t kill most germs.*