



Digestion Demonstration

Lesson Summary

What happens to the apple you eat at snack time? Where does it go once you chew and swallow? In this lesson, students will explore how the human body digests food. They will build a model of a stomach and investigate what happens to the food we eat.

Big Idea

Students will be introduced to the process of digestion in the human body by making a model stomach.

This lesson will help students to:

- Make observations as they watch a model stomach “digest” food
- Ask scientific questions about the digestive process
- Use a model stomach to investigate the digestive process

Vocabulary

stomach

the organ in your body that digests food

digestion

when your stomach uses the food you eat and turns it into energy and nutrients for your body

acid

fluid in the stomach that helps break down food

Media Resources

Sid the Science Kid: Special Mom Day Meal - Part 3

Materials

- One large zip-top freezer bag - be sure to use a strong one to avoid a mess
- 1 cup lemon juice (or clear soda)
- 2-3 crackers
- “Digestion Investigation” printable (one per student)
- Optional: picture of the digestive system (found online)

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Teacher Prep:

Prepare the "Stomach":

1. Pour ½ cup lemon juice into the zip-top bag.
 - a. The juice will be the "strong liquid" that breaks down the food. It is an acid that works like the acids we have in our stomachs.
2. You'll need enough to cover the cracker (about a half cup should do it).

Lesson Activity

Introduction

1. Tell students that today they are going to learn about something that happens in everyone's bodies: digestion! **Digestion** is when your stomach uses the food you eat and turns it into energy and nutrients for your body.
2. Ask:
 - a. Have you ever noticed what happens to your body when you are very hungry?
 - b. What do you think happens to the food you eat inside your body?
3. Introduce the PBS KIDS program, *Sid the Science Kid*. (Sid is a kid who uses science to help him learn about the world and find answers to his questions.)
4. Show the clip, "Special Mom Day Meal - Part 3." Ask questions such as:
 - a. What is the part of our body that helps digest food?
 - b. How does food get to your stomach? (The **stomach** is the organ in your body that digests food.)
 - c. What happens to the food you eat when it's inside the stomach?

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Instructions

1. Tell students that they are going to make a pretend stomach to see what happens to the food we eat!
 - a. Emphasize that it is a pretend stomach-- kind of like the stomach in our bodies.
 - b. Optional: show students a picture of the digestive system, pointing out how food travels from our mouth to the stomach.
2. Show students the zip-top bag of lemon juice. Explain that **acids** are fluids in the stomach that help break down food. Tell students that we are going to pretend that this is the stomach inside our bodies. Explain that the lemon juice is kind of like the acids in our stomach that break down food into smaller pieces.
3. Have students draw their prediction of what the cracker (using the "Digestion Investigation" printable) will look like after the stomach has "digested" it.
4. Break the cracker into a few pieces into the bag. Explain that this is sort of like chewing it.
5. Put the cracker into the bag and zip the bag closed, while pushing out excess air.
6. Now shake the cracker in the lemon juice. You can use your hands to squeeze it, too.
 - a. Explain that this is like the action of the muscles that cause our stomachs to squeeze food during digestion.
7. Describe what's happening to the cracker as your "stomach" digests it.
 - a. The "stomach" juices (the lemon juice) are breaking down the food you ate (the cracker).
8. Have students complete the rest of the "Digestion Investigation" printable to show what the cracker really looked like.

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Extend the Learning

What Comes Next in the Digestive Process?

Materials:

- “digested” cracker and lemon juice
- pair of tights
- tray

Directions:

1. Put the “digested” cracker, along with the lemon juice, down through the tights.
 - a. This simulates the digested food’s journey through the small intestine.
2. Hold the tights over the tray and gently squeeze the liquid out.
 - a. The liquid collected on the tray represents the nutrients the body absorbs.
 - b. The food left behind in the tights represents the waste products that your body eliminates (going to the bathroom).
3. Cut a hole at the end of the tights and push the “waste matter” out.

Suggested Books

What Happens to a Hamburger? by Paul Showers

The Vegetables We Eat by Gail Gibbons

You Are What You Eat by Sharon Gordon

Where Does Your Food Go? by Wiley Blevins

School-to-Home Connection

Digesting and your teeth:

- Give your child a piece of apple (or other crunchy fruit/vegetable). Ask them to chew with only their front teeth, then using their back teeth. Talk about which way was easier to break down the food into smaller pieces, and how digestion starts with chewing your food.

PBS KIDS for Parents Resources

[Sid the Science Kid for Parents](#)

[Doing Science Every Day](#)

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Name _____

Digestion Investigation

Draw your prediction of what the cracker will look like after the stomach digests it.
Then draw what it really looked like.

My Prediction	What it Really Looked Like

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