

I hope you and your students/children enjoy this activity as much as my students do! After reading the instructions, please feel free to email me (cookintheclassroom@gmail.com) or direct message me on Instagram ([@Cook_In_The_Classroom](https://www.instagram.com/Cook_In_The_Classroom)) with any questions or feedback you have. When you use this in your classroom, tag me in your posts and share with me how it went. I love hearing from you and cannot wait to see your students in action!

Happy Teaching!

Ty Cook

Email Me: cookintheclassroom@gmail.com Follow Me On Instagram: [@Cook_In_The_Classroom](https://www.instagram.com/Cook_In_The_Classroom) Follow My Blog: <https://cookintheclassroom.com>

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(Podcast Account: [@aaclassoftheirown](https://www.instagram.com/aaclassoftheirown) On Instagram)

THIS LESSON CREATED BY:



**COOK IN THE
CLASSROOM**

NAME: _____

DIGESTION LAB

SUPPLIES: Soda (Any Kind) Water Ziploc Bag
 Bread Scissors Paper Towels

STEP 1: Tear the bread into pieces. Then place it into the Ziploc bag. Add a small amount of water to the Ziploc bag and seal the bag and begin to carefully mash the two together. What do each of these represent in digestion? Describe what role each plays in digestion.

Tearing:

Water:

Mashing:

Next, add a small amount of Coca Cola to the mixture and seal the Ziploc bag closed. Carefully continue churning (squeezing) the mixture in the bag.

Soda:

Churning:

Now you will take your paper towels and triple or quadruple them on your desk creating a thick layer. Cut a small corner off of your Ziploc bag. Squeeze the mixture onto your paper towel from the Ziploc bag until it is all out of the bag. Then, roll your paper towel around the mixture and drain all of the liquid you can from the mixture.

Squeezing the Mixture from the Bag:

Paper Towels Removing Liquid:

Finished Product:

LESSON

PLAN

Lesson Overview: This hands on activity will walk students through the process of digestion. First, watch and introduce students to the digestive system by viewing the "For Lunch" episode (Season 1, Episode 2) of The Magic School Bus on [hoopladigital](https://www.hoopladigital.com). After students have been introduced to the digestive system and the process of digestion, have them complete this activity. Students will use the supplies given to mimic different phases of digestion beginning with eating and chewing food in the mouth. As students work through each step in the activity, they will draw comparisons from the activity to the actual process of digestion. Use the teacher answer key if you need to check to see what each stage of digestion is being represented during the activity.

Lesson Length: 60 Minutes/1 Hour (Including The Magic School Bus episode and activity).

If materials are not possible to secure for each student, here is a suggestion for how you as the teacher can facilitate this as a demonstration instead. Video yourself with the materials as you walk through the stages of digestion in this activity. Then, have students fill out the student worksheet as you go through each step. You could even host a live Google Meet or Zoom meeting where you do the demonstration for your students.

DIGESTION LAB

STEP 1: Tear the bread into pieces. Then place it into the Ziploc bag. Add a small amount of water to the Ziploc bag and seal the bag and begin to carefully mash the two together. What do each of these represent in digestion? Describe what role each plays in digestion.

Tearing: Tearing the bread represents our incisors. These are our front teeth and their primary job is to cut food. Our incisors are the first way we begin to digest and break down food.

Water: The water in this activity represents saliva. Our salivary glands produce saliva, which mixes with the food we eat in our mouths. Saliva begins breaking down our food chemically. This allows us to be able to swallow our food down our esophagus.

Mashing: As we mash the bread, it is representing our molars. These are large, flat teeth and located in the back of our mouths. The primary purpose of molars is to grind food. This grinding is part of mechanical digestion (when we physically break down our food to make it smaller).

Next, add a small amount of Coca Cola to the mixture and seal the Ziploc bag closed. Carefully continue churning (squeezing) the mixture in the bag.

Soda: The soda represents hydrochloric acid that is in our stomach. Hydrochloric acid is a potent chemical produced by the cells lining the stomach and your gastric glands. This acid helps break down our food chemically.

Churning: Churning the mixture represents how the stomach muscles contract periodically, churning food to enhance digestion. This is another example of mechanical digestion, which uses movement to break down food into smaller pieces.

Now you will take your paper towels and triple or quadruple them on your desk creating a thick layer. Cut a small corner off of your Ziploc bag. Squeeze the mixture onto your paper towel from the Ziploc bag until it is all out of the bag. Then, roll your paper towel around the mixture and drain all of the liquid you can from the mixture.

Squeezing the Mixture from the Bag: This stage represents the chyme (the mixture of food and acid in the stomach) moving into the small intestine. In the small intestine, nutrients are absorbed into the bloodstream by villi which line the walls of the small intestine.

Paper Towels Removing Liquid: Removing the liquid represents the job of the large intestine. The large intestine gets rid of liquids and sends them to the urinary system before disposing of the indigestible material.

Finished Product: Feces is the remaining indigestible material that is now ready to leave the body.