

From mouth to toilet

(Netherlands and Germany)

Background:

Model the process by which large insoluble molecules of food are broken down into smaller soluble molecules through the digestive system with this hands-on activity.

You will need:

- ✓ Bowl, scissors, potato masher, a sealable plastic bag, water/orange juice, tights, tissue, towels, food items (banana/biscuits/bread/yogurt) and a bin bag.

Follow these steps:

1. Prepare the demonstration area by putting newspaper down.
2. Place the food items into a bowl and gently crush with a potato masher to mimic the chewing action of our teeth.

3. Pour the crushed food into a sealable plastic bag and mimic the churning action of our stomach walls breaking down food.
4. Place the plastic bag containing the food over a tray.
5. Cut one corner of the plastic bag and squeeze the food contents into the open leg of the tights. The tights represent the small intestine.
6. Squeeze the food through the tights and collect the liquid that sweeps through the tights in the tray below. The liquid that ends up on the tray represents the nutrients that are absorbed by the body.
7. Cut the tights at the end and pass the solid food content (waste) through the opening and onto a tray containing tissue.
8. Dry the solid food with the tissue to represent the function of the large intestine.
9. Pass the dried solid food content into a bin bag to represent the function of the rectum.
10. Cut the black bin bag at the bottom and push the solid food content through.

So what happened?

At different stations, students simulate the digestive system processes together in a comprehensive inclusive setting that involves multiple senses: seeing, touching, and feeling.

What next?

In order to make models simple enough to communicate ideas some accuracy may be lost. Students should evaluate the digestive system model to identify the strengths and limitations of the model.

