Lesson Plan: The Incredible Food Journey!

Materials Needed:

- A large, clear outline of a human torso drawn on poster board or a large sheet of paper. (Alternatively, a plain t-shirt or apron the student can wear.)
- Various craft materials:
    - A small funnel (for the mouth/esophagus)
    - A clear plastic tube or a piece of a pool noodle (for the esophagus)
    - A large Ziplock bag (for the stomach)
    - A long piece of yarn or a pair of pantyhose/tights (for the small intestine)
    - A shorter, wider tube, like a paper towel roll cut in half lengthwise (for the large intestine)
    - A small cup or container (for the end of the line)
- Tape, glue, or velcro dots to attach items to the torso outline/apron.
- Index cards and a marker for labeling.
- A few crackers or a piece of soft bread.
- A small cup of water.
- Optional: A small amount of juice or vinegar (to represent stomach acid).

1. Learning Objectives

By the end of this lesson, the student will be able to:

- **Identify** the main organs of the digestive system: mouth, esophagus, stomach, small intestine, and large intestine.
- **Describe** the simple function of each organ in the journey of food.
- **Construct and explain** a physical model of the digestive system, demonstrating the path food takes.

2. Alignment with Standards and Curriculum

- **Next Generation Science Standards (NGSS) Alignment:** This lesson aligns with **4-LS1-1**, which involves understanding that animals have internal structures that function to support survival and growth. We are exploring the internal structure of the digestive system and its function in breaking down food for energy.

3. Instructional Strategies & Lesson Activities

This lesson uses a hands-on, inquiry-based approach to make learning about anatomy active and memorable.

Part 1: The Spark - What Happens to Our Food? (5 minutes)

- **Introduction:** Ask the student: "What's your favorite food? Have you ever wondered what happens to that yummy pizza (or other food) after you swallow it? Where does it go?"
- **Engage with Food:** Give the student a cracker. Ask them to describe what their mouth is doing as they chew it (teeth grinding, tongue moving, getting wet with saliva). Explain this is the very first step of our "Incredible Food Journey"!

Part 2: Main Activity - Build-A-Belly! (25-30 minutes)

Here, we will build a working model of the digestive system on our torso outline or apron.

1. **Step 1: The Mouth & Esophagus.**
    - **Action:** Place the funnel at the top of the torso for the mouth. Attach the clear tube or pool noodle piece below it.
    - **Explanation:** "The funnel is our mouth, where the journey begins. The tube is the **esophagus**, a slippery slide that carries food down to the stomach."
    - **Label:** Write "Mouth" and "Esophagus" on index cards and place them next to the items.
2. **Step 2: The Stomach.**
    - **Action:** Attach the Ziplock bag under the esophagus.
    - **Explanation:** "This bag is the **stomach**. It’s like a muscular mixer that mashes up the food with special juices."
    - **Demonstration:** Put a few broken cracker pieces and a little water (and a splash of juice/vinegar for 'acid') into the bag. Seal it and let the student squish it. "See how the food gets broken down into a soupy mush?"
    - **Label:** Add the "Stomach" label.
3. **Step 3: The Small Intestine.**
    - **Action:** Attach the long piece of yarn or pantyhose below the stomach, coiling it up to show how long it is but how it fits in a small space.
    - **Explanation:** "This super long tube is the **small intestine**. It's where the body absorbs all the tiny nutrients—the good stuff!—from the food mush to give us energy."
    - **Label:** Add the "Small Intestine" label.
4. **Step 4: The Large Intestine.**
    - **Action:** Attach the wider paper towel roll around the coiled small intestine.
    - **Explanation:** "Whatever the body can't use goes to the **large intestine**. Its main job is to take out the water and get the leftover waste ready to leave the body."
    - **Label:** Add the "Large Intestine" label.
5. **Step 5: The End of the Line.**
    - **Action:** Place the small cup at the end of the large intestine tube.
    - **Explanation:** "And this is the end of the journey, where the waste (poop) leaves our body."

Part 3: Wrap-up & Narration (10 minutes)

- **Show and Tell:** Have the student put on the apron (if using) or stand by their poster.
- **Narrate the Journey:** Ask the student to be the tour guide. Hand them a piece of bread and have them narrate its "Incredible Food Journey" from start to finish, pointing to each part of their model and explaining its job. Prompt them with questions like, "And what happens in the stomach?" or "Where do the nutrients go?"

4. Assessment Methods

- **Formative (During the lesson):** Observe the student's ability to follow instructions and place the organs in the correct sequence. Listen to their answers to your guiding questions during the build.
- **Summative (End of lesson):** The student's narration of the "Incredible Food Journey" using their completed model serves as the primary assessment. Success is when they can correctly identify each of the 5 main parts and give a simple, accurate description of what happens at each stage.

5. Differentiation and Inclusivity

- **For Extra Support:** Pre-write the labels for the student. Focus on just three main parts first (e.g., mouth, stomach, intestines) and add the others if they are ready. Guide the model-building more directly, step-by-step.
- **For an Extra Challenge (Extension):**
    - Introduce other organs like the **liver** and **pancreas** (using sponges or other craft items).

    Explain they add more "juices" to help digestion.
  - Ask critical thinking questions: "What kind of foods do you think are easiest for your stomach to break down? Why?"
  - Have the student write or draw a comic strip about the food's journey from the food's point of view.

6. Creativity and Innovation

This lesson moves beyond diagrams in a book by having the student construct a tangible, large-scale model they can interact with. The "Incredible Food Journey" narrative transforms a scientific process into an engaging adventure, fostering curiosity and a deeper, more personal understanding of their own body.