Science Lesson Plan

The Digestive System

I. Main Ideas/Conceptual Understanding/Goals

LIFE SCIENCE 3. Describe the characteristics, structures, life cycles, and environments of organisms.

Identify and describe the purpose of the digestive, nervous, skeletal, and muscular systems of the body. (DOK 1)

II. Specific Objectives/Lesson Focus

1. The student will identify the purpose of the digestive system of the body.
2. The student will identify the major components of the digestive system and summarize the digestion process.

III. Procedures

A. Introduction/Motivation

1. Have the room arranged with the following materials on a table.
   - Unsalted saltine crackers (one per student)
   - Apples (enough for each student to have half of an apple)
   - Pitcher of ice water
   - Small paper cups (one per student)
   - Orange
   - Panty hose leg (narrowest part)
   - Two large sheets of paper
   - Tape measure
   - String (at least fifty feet in length)
   - Glue
2. Discuss the Digestive System:
   - The digestive system is a very important system of the human body.
   - Without it, we could not live.
   - It is very important that we take good care of our digestive system by feeding it healthy foods.
   - Name some healthy and unhealthy foods. Write on the board using a T-chart.

3. Study Learning
   - Give each student a cracker and tell the students to take a small bite. Ask the students not to chew or swallow the cracker; just hold it in their mouths. Ask the following questions:
     - What happened to the cracker when it was in your mouth?
     - Why did it start to get softer?
     - What did you taste?
   - Wait a few minutes, then ask:
     - Has the taste changed?
     - Did it become sweet?
     - Did the cracker get soft in your mouth even if you were not chewing?
   - Using the teacher background information (attached), explain the digestive process and the role of the digestive system.
   - Teeth: Distribute the “Chewing Your Chow” handout (attached) and provide each student with half of an apple. The handout asks students about the chewing process and which teeth they used when eating the apple. As a class, do the activities and instruct students to record their responses.
   - Saliva: Distribute and direct students to complete “The Saliva Solution” handout (attached). Students will answer questions about how the saltine cracker is broken down from starch to sugar with saliva. Discuss answers with students.
• Swallowing: Give each student a cup of ice-cold water. Instruct them to drink and feel the cold water travel down the esophagus. Place the orange at the top of the pantyhose and use your hands to move it through to demonstrate how food moves through the esophagus.

• Stomach and intestines: Ask for two or more volunteers. Trace the students' bodies onto large sheets of paper. Using the “Digestive Diagram” teacher resource as a reference (attached), direct students to work in teams to draw and label parts of the digestive system into their life-sized silhouettes. The digestive tract is more than twenty-five feet long in a child who is four feet tall. Using a tape measure, instruct students to measure two twenty-five foot lengths of string. Direct them to fit and glue the “digestive tract” into their drawings.

4. Culmination

• Have students brainstorm ways to take care of their digestive system.
• Allow a few students to share their ideas.
• Students who have access to a computers or iPads can summarize what they learned today or do further research on the digestive system.

5. Follow-Up

• Have students track the food they eat each day for one week. Have a discussion on healthy and unhealthy eating habits.
• Have the students analyze their eating habits with a partner.
• An assessment may be the students' completed handouts.
Extensions and Connections (Assign as needed)

- Have students draw and label the digestive system.
- Allow time for students to compare their drawing and labeling to a partner in class. Let them discuss what they learned while doing the activity.
- Students can make a mini-poster about “how to take care of your teeth.”

Ideas for Journal/Writing Prompts

- Write a paragraph explaining how the digestive system works.
- List three things that you learned about the digestive system, and tell why those three things are important to know.