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

- The student will identify features of the human body, with a focus on the digestive system.
- The student will explore the needs of the human body by explaining the importance of good health in relationship to the body.
- The student will understand the functions and care of the human body and its organs.
- The student will gain an understanding of the digestive system and the way the human body processes food.

III. Procedures

A. Introduction/Motivation

1. Have the room arranged with the following materials on a table.

- Sentence strips with digestive system facts
- Digestive system visual aid (photo/picture/poster)
- Piece of string, ribbon, or yarn measuring approximately 32 feet long
- Index cards
- Clothespins
- 2 clear glasses
- Water, 1 teaspoon sugar, 1 teaspoon cocoa
- Coffee filter
• Spoon
• Crayons, colored pencils, colored markers for display project
• Poster Boards for Group Projects (Optional: Poster board can be cut into half or fourths for mini-poster projects instead a whole poster board.)

2. To motivate the students, tell them some neat facts about the human body.

3. Briefly tell the students what they are going to learn today and how it applies to real life.
   • Say..."Today, we are going to identify and describe the purpose of the digestive system of the body.
   • Say..."This is important to learn because digestion is the breakdown of food into small molecules, which are then absorbed into the body in the form of nutrients. The digestive system includes the salivary glands, mouth, esophagus, stomach, liver, gallbladder, pancreas, small intestine, colon, and rectum. The digestive system's organs are joined in a long, twisting tube from the mouth to the anus."
   • Say..."At the end of the lesson I will know that you learned. the material I taught today because you will have a digestive system project to complete with your cooperative group."
   • Say..."I have High Expectations that you will learn everything that I teach you today and I know that you will be a model student throughout the lesson even when we're having FUN!"

B. Study/Learning

1. Explanation
   • Divide the class in pairs for a Think-Pair-Share brainstorming activity. Let the students think about what they already know about the digestive system for 1 minute. Next, let them turn to their partner and discuss what they know for 1 minute. Finally, let them share with the class what they already know.
   • Be prepared to teach the following vocabulary. This will depend on the grade level of the students.
     • Digestive
     • Salivary glands
     • Organs
     • Mouth
2. Activity/Practice

a. Guided Practice

- Give the students a visual.
  - Take a piece of string, ribbon, or yarn that is already attached to a stationary object and stretch it across the classroom measuring 32 feet and attach it to another object.
  - Tell the students that this is the length of the intestine found in your body if it were uncoiled.
  - The teacher writes on an index card a fact such as: “The digestive system has a long tube that is made of muscle called the intestines.”
  - The teacher attaches the index card to the string, ribbon, or yarn with a clothespin.

- The teacher will provide information about the digestive system including the following:
  - The stomach mixes up food.
  - The stomach is a muscle.
  - The stomach is kind of like a “holding tank” for food.
  - The tongue helps us swallow food.
  - The food goes down the esophagus to the stomach after it has been swallowed.
  - Your teeth grind up food into small pieces to be digested by the stomach.
  - The stomach turns the particles into liquid.
  - The largest internal organ is the small intestine.
* In the intestines, some of the liquid is absorbed into the body to be used for fuel. The rest continues through the intestines as waste.

* The teacher will demonstrate the absorption with the following activity.
  o Using a coffee filter, form a funnel shape. Place the funnel in a clear glass.
  o Using a second glass, mix together the following solution — ¾ glass of water, one teaspoon sugar, one teaspoon cocoa. Stir together with a spoon until they are thoroughly mixed.
  o Pour the mixture into the glass with the coffee filter. Be sure to hold the filter in place with your fingers.
  o Watch the mixture drop through to the bottom of the glass.
  o The result that the students should see is that the filter holds back the particles of cocoa. Only the liquid can pass through the coffee filter.
  o Explain that this is the same function that occurs in the intestines.

b. Independent Practice

* The teacher will pass out index cards to the class. After discussing the features of the digestive system (including the intestines), the student will write a sentence with a fact about the digestive system on the index card. The student will attach their index card to the ribbon using a clothespin.

C. Culmination (closure)

**Summarize the learning/Involve the learner**

* Have the student answer the following questions:
  o Why is the digestive system important to the human body?
  o Why do you think the intestines are so long inside our bodies?
  o What happens to the nutrients found in our food when they go through the digestion process?
Why happens to the waste after all the nutrients are absorbed?

D. Follow-up (related to the objective)

1. Practice and reinforcement (homework, games, etc.)
   - Have students track what 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.

2. Evaluation (when and how will you evaluate for your objective(s)?)
   - Divide the class into groups of three or four students. The students will work in their cooperative learning group on this poster project. They will create a poster or mini-poster using the facts they learned about the digestive system. They can use the information located on the digestive system clothesline on their poster along with drawings.
   - If a student finishes early, the student may work on the Human “Body Word Search Puzzle“ (attached) or the “A-Maze-ing Organs of the Human Body” Word Search Puzzle (attached).

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.

Ideas for Journal/Writing Prompts

- Explain how the digestive system works.
- List three things that you learned about the digestive system and why they are important to know.