

NTTI Media-Rich Lesson

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NAME

“Food Fueling Frenzy”

LESSON TITLE

Fifth Grade

GRADE LEVELS

90 Minutes

TIME ALLOTMENT

OVERVIEW

The Digestive System is one of the many systems that make up the body. It is a group of organs that work together to digest the food we eat. In this lesson, students will have an opportunity to explore the various organs of the digestive system, as well as, understand how food is broken down by the digestive system.

SUBJECT MATTER

Life Science/Biology

LEARNING OBJECTIVES

Students will be able to:

- Identify the organs of the Digestive System.
- Analyze how food moves through the Digestive System.
- Explain how the body breaks down food.

STANDARDS

The following State of Georgia Learning Standards for Science are located on the Georgia Learning Connections Web-Site.

www.glc.k12.ga.us



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Georgia QCC Standard 5.4 – Actively engages in the learning process via hands-on /minds on science activities and experiences. Uses appropriate tools to collect and analyze data and solve problems.

Georgia QCC Standard 5.21- Names and describes important parts of the body and their basic function.

Georgia QCC Standard 5.22- Identifies the major body systems and their functions.

MEDIA COMPONENTS

Video

Healthy Human Body: Digestion & Nutrition #103

This is a video about the human body. It explores all the organs of the Digestive System, as well as, how food moves through the body during the digestion process.

Web Sites

Brain Pop

www.brainpop.com

This Internet site contains various animated movies for grades K-12. These original movies cover English, Math Science, Health and Technology concepts. It is an informative resource for teachers to use with their students in classroom instruction.

MATERIALS

Per Group of Four Students

1 large sheet of Post-It Chart Paper

1 Colored Marker

1 Computer with Internet Connectivity

1 Small Bag of Pop Corn

Hand Napkins

Cut out organs from the Science and Technology Human Body Systems Kit

1 poster outline of the human body from the Science and Technology Human Body Systems Kit

1 roll of Transparent Tape

1 Overhead Pen

Name that Organ Worksheet- **Handout 2**

Per Class

Television with Remote

VCR with Remote

Video Tape of the Healthy Human Bodies: Digestion and Nutrition

Overhead Transparencies



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Per Student

- 1 8 1/2 x 14 laminated picture of the human body digestive system
- 1 Dry Erase Marker
- 1 Overhead Pen
- 1 Brain Pop Digestive System work sheet- Movie Mania-**Handout 1**
- 1 Video Question Worksheet-

PREP FOR TEACHERS

Before teaching this lesson, **CUE** your videotape to the first segment you are going to use in the Learning Activity. Make certain that each of your Web Sites is book marked on all of the computers in your classroom and that all necessary links are still valid and running.

Make sure that all of the group tables have the necessary equipment in place for the start of the introductory activity. When using media, provide students with a **FOCUS FOR MEDIA INTERACTION**, a specific task to complete/and or information to identify during or after viewing the video segments or Web Sites.

Introductory Activity

Cue your video to the beginning of the Healthy Human Body: Digestion and Nutrition Tape.

Place one sheet of Post-it Chart Paper, 1 Colored marker, and one small bag of popped popcorn at each group of four students' table.

Make copies of the human body and laminate them for each student.

Brain Pop Activity (Step 7)

Bookmark the website www.brainpop.com

Make copies of the Movie Mania worksheet (One for each student)

Culminating Activity

Cut out 6 digestive system organs for each group of four students

INTRODUCTORY ACTIVITY: SETTING THE STAGE (Engage)

Step 1

Begin by asking students to raise their hands if they like to eat? Ask various student volunteers to give you one example of their favorite food. (Student answers will vary)

Ask students "Is it necessary that we eat?" Ask them why do we need food?

(Some sample student responses will be: Yes, because it helps us to live every day, it gives us energy, or it helps us to grow.)



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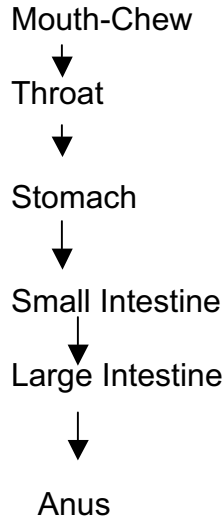


Step 2

Tell the students that they are going to work in groups of four to determine what happens to our food once we begin to eat it. Explain to them that to do this activity, they are going to eat a few of the Pop Corn Kernels from the bag on their table. As they are eating the popcorn, they are to think about what happens to the food once it is put into their mouth and what path the food travels.

Each group of four students should have one piece of Post-It Chart Paper and one marker. Tell students that once that have swallowed the popcorn draw a simple diagram of what happens to the food and where it is traveling in your body.

Student diagrams may look like this:



After students have finished the activity, post group responses around the room.

LEARNING ACTIVITY 1

Step 1

Insert the Video Tape **Healthy Human Bodies: Digestion & Nutrition** into your VCR. Cue the tape to the beginning.

Step 2

Provide your students with a **FOCUS FOR MEDIA INTERACTION**; asking your students to write down the verbal responses they gave to the question why do we need food? Allow your students a few seconds to write down their responses on the short video question worksheet. After they have written their answer to the question, they are to raise their hand to show that they are finished. **PLAY** the Video Tape. **PAUSE** the videotape when the narrator says **“That is food supplies fuel for the body.”** Allow students a few seconds to compare their answers to the answers the video provided. **CHECK FOR STUDENT COMPREHENSION** by referring back to the segment just viewed and discussing the video. Sample Questions:



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1. Based on what you saw on the tape is it necessary that we eat food?

Yes

2. What does food do for us?

Helps us to grow, and get better when we have been ill.

It gives us energy

It supplies fuel to the body

3. What would happen if we did not eat food?

We would not have energy to do various activities.

Step 3

Ask your students to refer back to the diagram they created about where food travels and what happens to it once you eat it. Ask them to quickly review their responses with their group members. Quickly ask one volunteer group to state where they think the food goes or where it travels in the body once it is eaten. Ask students what is the name of the system that our food moves through. (Responses will vary). (The correct answer is the **Digestive System**) giving each student a laminated picture of the outline of the body and a dry erase marker or an overhead pen. Again provide students with a **FOCUS FOR MEDIA INTERACTION**. Instruct students to watch the next video segment. They are to pay attention to how food travels as we begin to eat it. They are to trace on the path that food travel on the laminated picture of the human body.

Step 4

FAST FORWARD the video tape to the visual cue of a waiter bringing food to a man and woman seated in a restaurant and where you hear the narrator say “ We now are going to look at what’s going on when you eat.”

PLAY the tape to the visual cue of the human body torso and the narrator says the food goes through the throat to the esophagus.” **PAUSE** the tape and allow students time to trace the beginning path of food. Ask students to make a prediction about where they think the food will move after it leaves the esophagus. Ask students to tell the person seated next to them their prediction.

Step 5

RESUME PLAY until you hear “*From the Small Intestine to the Large Intestine.*”

PAUSE the tape to allow students a chance to check their predictions and continue tracing the path of food in the Digestive System. **RESUME PLAY** and **PAUSE** when you hear the narrator say the contents travel from the Large Intestine to the Rectum. From there they leave the body.” Give students time to complete the activity.

Step 6



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REWIND THE TAPE back to the previous segment so that students will have the opportunity to review the same segment.

Step 7

FAST FOWARD the tape to the visual cue of the Human Body Torso. **PAUSE** the Video Tape and **ELIMINATE THE SOUND**. Provide students with a **FOCUS FOR MEDIA INTERACTION** asking them to direct their attention to the Human Body TORSO on the Screen. Review the Torso on the Television Screen and have students to state how food travels. (The teacher should use the pen to trace the path on the TV).

LEARNING ACTIVITY 2

Step 1

Tell your students that they are now going to explore what happens to the food they as it travels through the digestive system. Give them a copy of a **MOVIE MANIA Worksheet**. Provide your students with a **FOCUS FOR IMEDIA INTERACTION** asking them to log on to the website www.brainpop.com. Explain that they are going to watch an animated movie about how food is digested in the body. Instruct them to double click on the icon **Health Movies** located at the top of the web page and then double click on *Digestive System*. **PLAY** the Brain POP Movie and ask students to answer the 5 questions on the worksheet. **SUPERVISE** the students as they interact with the Web Site.

Step 2

CHECK FOR COMPREHENSION by reviewing with students the answers they found on www.brainpop.com (See Worksheet)

CULMINATING ACTIVITY

Step 1

Distribute to each group of four students an envelope of Pre-cut organs from the STC HUMAN BODY KIT, a blank poster of the Human Body, a **Name That Organ** worksheet, and one container of transparent tape.

Step 2

Instruct them to study the basic organs in the envelope and write the name of the organ on the worksheet and write in their own words a fact about the organ. For example, the Esophagus- where foods go as it moves from the mouth.



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Step 3

After they have completed the identification worksheet, students are to work collaboratively to tape the organs on to the human body poster and label each part. After labeling each part, have students number each organ to show how food moves in sequence. For example, stomach– place a number 3 because that is the third place food travels when it is being digested into the body.

Step 4

Have one group share out. You can have more if there is time.

CROSS-CURRICULAR EXTENSIONS

Science/ Health/Language Arts

Have your students write a brief story about what would happen if you did not have teeth to start digestion.

COMMUNITY CONNECTIONS

Ask an internal medicine physician to visit the class and talk about the digestive system.



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Handout 1

MOVIE MANIA

Directions: Observe the Digestive System Movie on www.Brainpop.com and answer the following questions.

1. What is the definition of digestion?
2. Where does the digestion of your food start?
3. What happens to your food once it enters your mouth?



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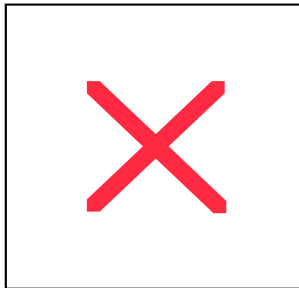
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4. What happens to food when it moves into your stomach?

5. How many hours does food stay in your stomach?

NAME THAT ORGAN



Organ Name	Function

HANDOUT 2



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