

ADOWN THE HATCH@

A Lesson on Digestion

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Title: ADown the Hatch@ CA Lesson on the Digestive System
Subject: Science
Grades: Three and Four

Description: This lesson plan was designed to allow students the opportunity to learn more about the in-s and out-s of how food is digested. This will require students explaining the path food takes, using proper terminology for body parts involved, knowing location, function, and appearance of same, length of the process, and how it provides fuel for the body. Being that eating is a very essential daily activity, (even though we can go three days without it) students need to understand this process.

Faith Integration:

From the beginning of life on this planet, there has been the issue of food. It was part of the plan which Satan used to tempt and deceive our first parents. Food is a necessary part of our existence and God wants the right foods in our body to be digested. If we digest nutritious food, we will be healthy and therefore be better equipped to do His will and become better learners. Though different in ability and temperament, the Master Teacher gave each of the disciples what was needed for their development and it is to this end and with His help that I strive to equip my students.

Curriculum Benchmarks:

- \$ Use keyboards and other common input and output devices
- \$ Use general purpose productivity tools and peripherals to support personal productivity.
- \$ Use technology tool (e.g.,multimedia authoring, presentation, Web tools) for individual and collaborative writing, communication and publishing activities to create knowledge products for audiences inside and outside the classroom.

Materials/Hardware/Software:

Taped recording of the Bible verses for this lesson

Cassette Recorder

Pictures of food

Pretzels

Copy of the words **All** Belong to Jesus@

The Magic School Bus: Inside the Human Body video

The Magic School Bus: Inside the Human Body CD(Microsoft Corporation. 1995.)

Kid Pix Deluxe 3 Broderbund, (The Learning Company. 2000)

Computer with internet access

TV

VCR

Paper and Pencils

Books for reference: Disgusting Digestion/Arnold,Nick, The Human Body: the digestive system/Elgin, Kathleen, Food and Digestion/ Parker, Steve,

Eating/Sandeman, Anna, What Happens to a Hamburger/Showers, Paul

Teacher Preparation:

Study background for topic

Make arrangements for a Dietitian to visit the classroom

Compile a list of necessary websites that will be used for reinforcement, research, pictures and evaluation

Copies of rubric to be distributed to students

Consult with Media Specialist to select books appropriate for topic and grade level

Pictures and models of the digestive system

Student Preparation:

Be able to access the internet

Be able to navigate comfortably on the internet

Be able to use the tools in Kid Pix

Be able to set up a slide show

Be able to import pictures from the internet to Kid Pix

Be able to save and retrieve work in a personal file

Be able to operate the printer

Activities/Procedures:

Display pictures of food and brainstorm about how the picture makes them feel. Pay particular attention to comments made about the mouth watering. Then distribute a snack to the students that they will begin eating when signaled to do so.(lets hope they wait) After placing the pretzel in their mouth tell them that this is the second step in

this very important process, the first step being salivating and mouth beginning to water. These are the only two things we control in this process called DIGESTION. It involves the interior of the body and works involuntarily without any conscience thinking. Discuss how long they think it will possibly take food to complete this trip. Students will interview ten classmates about five foods which they like to digest, and will rank according to preference. This data about favorite foods will be later used to make a graph in Kid Pix.

The following verses from the Clear Word Bible will be read and discussed as a basis for this lesson.

- ▼ Psalm 139:14 **BI** praise You, for this body is incredibly and wonderfully made. Your whole creation is a marvel.
- ▼ 1 Cor. 10:31 **B**Whether you eat or drink, or whatever you do, do everything to honor God.
- ▼ 1 Cor. 6:19,20 **C**Your body became a temple for the Holy Spirit. Your body belongs to the Lord Jesus Christ

In connection with the above verse, <http://www.cyberhymnal.org> will be used to listen to and sing **AI** Belong to Jesus@.

Show the video **A**The Magic School Bus: Inside the Human Body. After a discussion and questions of same, the class will be taken to the computer lab where they will do an interactive study using The Magic School Bus: Inside the Human Body .The students will visit each digestive organ where the CD will play out the role and function relating to the digestive process. This will give the students a general overview of what's involved.

After the explanation of Step 1 which involves the mouth, teeth and tongue, students will work with partners and do an exploration activity. Partners will take turns being blindfolded and tasting five items. They will identify each food and record whether it's bitter, sweet, salty or sour. After both partners have participated, they will check their responses with an answer sheet that will be provided. As a follow-up to this activity, students will make a page displaying the four categories with appropriate foods and other graphics or words using Kid Pix Deluxe 3. They will save this in their existing folder to be checked by the teacher at a later time. To demonstrate the importance of the tongue in the digestion process, ask students if we could eat without using the tongue. After the pros and cons are discussed they will eat a food item and then state their findings. Step 2 begins when the food leaves the mouth where it has

been moistened with saliva, and proceeds to the stomach through the esophagus. To simulate the peristaltic movement which takes place when food is dry and solid and muscles must push food into the stomach, students will take turns pushing a golf ball through a sock.

The website <http://www.yucky.com/body/systems/digestion> will be used as a whole class demonstration using a TV/computer connection to discuss the other steps.

The following websites will be used independently to review location, function and appearance of the digestive organs: <http://www.innerbody.com/htm/body.html> (an interactive site),

<http://www.quia.com> ,(concentration, puzzles, matching and flash cards)

<http://www.brainpop> (a movie about the digestion system) and

<http://www.harcourtschool.com/activity/digest/index.htm> (an excellent drag and drop format. Students place the digestion parts in the diagram, if it is the wrong place it will not stay. A picture of a particular food can be chosen and its digestion path explained.)

Assessment/Evaluation:

Create a slide show using Kid Pix demonstrating an understanding of the digestive system or organize and prepare an oral presentation of the information learned.

Identify and label parts of the digestive system on a diagram retrieved from <http://www.enchantedlearning> This will be done by students in Kid Pix to be saved and graded at a letter time. Digestion Review & Digestion Route worksheets from Rockets and Raisins



Multimedia Project: **Slideshow**

Teacher name: Ms. Lynch

Student Name _____

CATEGORY	Excellent	Good	Satisfactory	Needs Improvement
Requirements	All requirements are met and exceeded.	All requirements are met.	One requirement was not completely met.	More than one requirement was not completely met.
Content	Covers topic in-depth with details and examples. Subject knowledge is excellent.	Includes essential knowledge about the topic. Subject knowledge appears to be good.	Includes essential information about the topic but there are 1-2 factual errors.	Content is minimal OR there are several factual errors.
Attractiveness	Makes excellent use of font, color, graphics, effects, etc. to enhance the presentation.	Makes good use of font, color, graphics, effects, etc. to enhance to presentation.	Makes use of font, color, graphics, effects, etc. but occasionally these detract from the presentation content.	Use of font, color, graphics, effects etc. but these often distract from the presentation content.
Originality	Product shows a large amount of original thought. Ideas are creative and inventive.	Product shows some original thought. Work shows new ideas and insights.	Uses other people's ideas (giving them credit), but there is little evidence of original thinking.	Uses other people's ideas, but does not give them credit.
Presentation	Well-rehearsed with smooth delivery that	Rehearsed with fairly smooth delivery that	Delivery not smooth, but able to maintain	Delivery not smooth and audience

	holds audience attention.	holds audience attention most of the time.	interest of the audience most of the time.	attention often lost.
Workload	The workload is divided and shared equally by all team members.	The workload is divided and shared fairly by all team members, though workloads may vary from person to person.	The workload was divided, but one person in the group is viewed as not doing his/her fair share of the work.	The workload was not divided OR several people in the group are viewed as not doing their fair share of the work.

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Follow-up Activities:

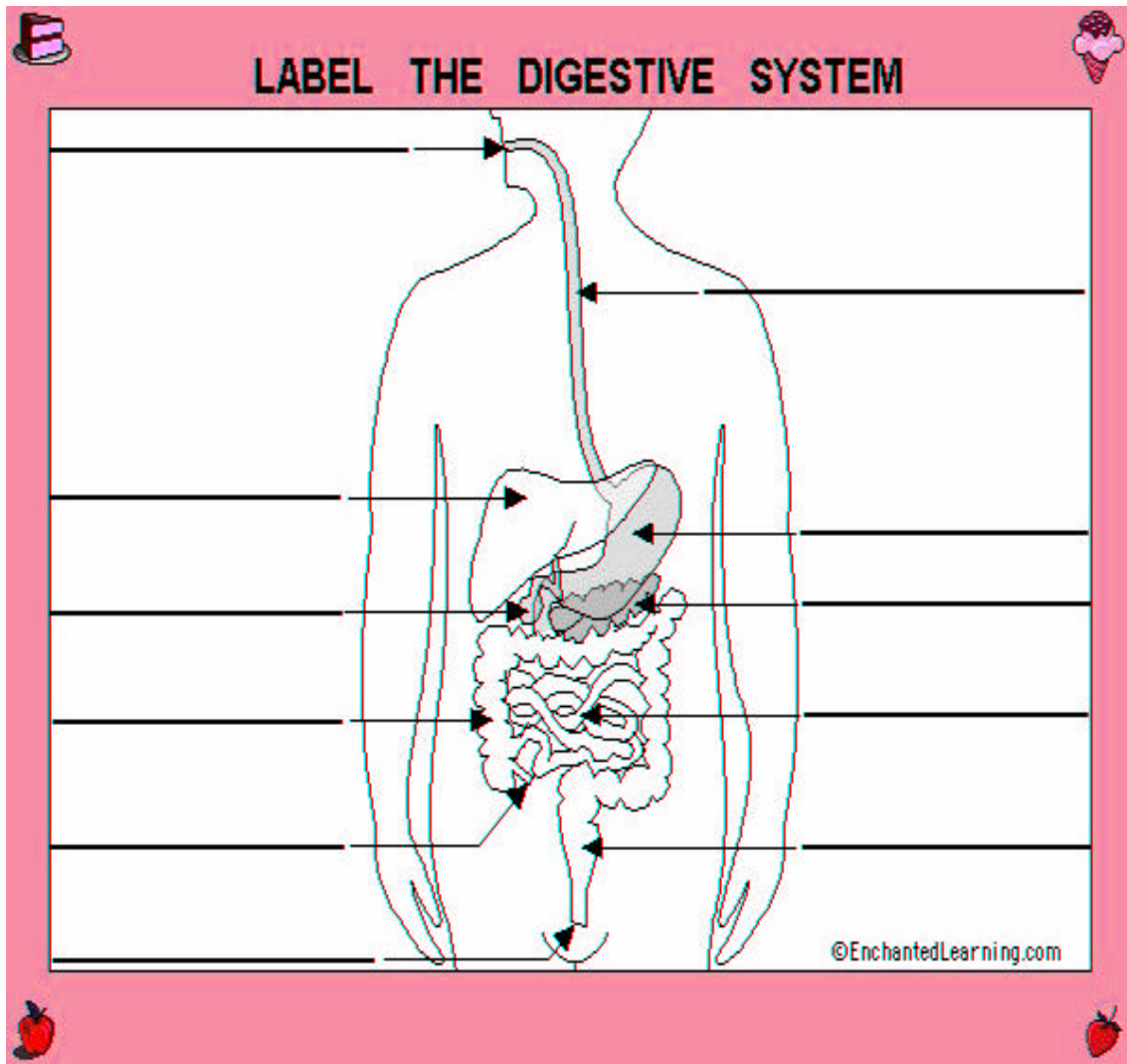
Illustrate a Bible verse used in this lesson or a mealtime prayer for publication in a church bulletin (Kid Pix and <http://www.pics4learning>)

Make a graph on Kid Pix using data collected for favorite students=foods

Construct a Venn Diagram using Kid Pix to compare the digestive organs of a human being and a chosen animal

Write a song or a poem about the digestion process

In researching for this project I found a wonderful culminating kinesthetic activity. Students actively act out an aspect of the digestive tract. Here is the reference:
http://www.accessexcellence.org/AE/AEC/AEF/1995/cave_digest.html



DOWN THE HATCH

T H E D T I H G N E S T I V E
 T R M E A C A O E C T I S L I
 K E E O A V I N W O L L A W S
 A T L M U T I O N G T U N N E
 H L O I S T W L D F Y V B W O
 C T W E S B H V A H P C B Q R
 S S G E X P W M X S R M E P T
 D I T S O H N X A Z M D K U G
 D N J K Z E J F M M J T P I R
 I P V D T Z D G N R F F O O D
 Q U V D B C J I J S C Q C V Y
 S H F G T O U R F K X X D U H
 S U G A H P O S E D M C W H Q
 Z W N X E U O O B S E U H K J
 S L M P V Q I A X P I U O E I

DIGESTION
 INTESTINE
 STOMACH

ESOPHAGUS
 MOUTH
 SWALLOW

FOOD
 SALIVA
 TEETH

