Teacher: Ms. Lee

October 8. 2012

Subject area/course/grade: level: Digestive System/Science/5th grade

Materials: Pencil, Paper, Power Point, Computer, Power Point, Digestive System Worksheets, Yarn, CD

Standards:

(3)(c)4.(iv) Ability to facilitate students’ individual and collaborative use of technology, including classroom resources as well as distance and on-line learning opportunities when available and appropriate.

(4)(d)2. (iii) Ability to develop and implement a classroom management plan to ensure equitable and effective student access to available technology resources.

(4)(d)2.(vii) Ability to facilitate students’ individual and collaborative use of technologies ( including but not limited to spreadsheets, webpage development, digital video, the internet, and email; to locate, collect, create, produce, communicate, and present information.

Objectives:

Students will learn the major parts and functions of the digestive system.

Students will work collaboratively to create a Power Point based off what they learned during the lesson on the digestive system.

Differentiated Strategies:

Students will be divided off into four groups in which each group will be responsible for creating Power Points on different parts of the digestive system that will be assigned by the teacher. (This will be good for kinesthetic and visual leaners).

Students will listen to an audio tape in which someone will sing a song about the digestive system. (This will be good for Auditory learners).

Students who have trouble seeing will be seated in the front of the class in order to see the Power Point presentations that are shown by their classmates.

Engagement:

How many of you have wondered about how the digestive system works and where it begins? How many major parts of the digestive system do you think there are? What helps us to tear food in our mouths to aide in digestion?

Assessment: Students did not know the major parts of the digestive system began in the mouth.

Exploration:

The students will be given a worksheet on the digestive system. I will ask the students if they recognize any of the parts of the digestive system on the worksheet and if they do I will ask them to tell me about the functions of the parts they recognize.

Assessment: The students were not able to identify the mouth, stomach, and rectum, but were able to identify the gallbladder. Most students confused the large and small intestines.

Explanation:

We will view a PowerPoint together on the digestive system the PowerPoint will consist of the major parts and the functions of the digestive system.

Mouth- The beginning of the digestive tract. When we chew, it helps us to break down food into pieces that can be easily digested. Saliva which is in the mouth mixes with the food that we eat to begin the process of breaking it down into an absorbable form that the body can use.

Esophagus- The esophagus is also known as the “windpipe” and it is the location of where food goes when you swallow.

Stomach- The stomach is responsible for holding food while it is mixed with enzymes (protein that initiates change, which is produced by a living organism and brings about a specific chemical reaction) that break down food into a usable form. Cells that line the wall of the stomach put out an acid and enzymes that are responsible for the breakdown process. When the contents of the stomach are done breaking down, they leave the stomach and go into the small intestine.

Small Intestine: The small intestine is a 22-foot long muscular tube (I will use a piece of yarn that is 22 feet long to show the students how long the intestine is) that breaks down food. The food is broken down by enzymes that are released by the pancreas (a large gland behind the stomach that secretes digestive enzymes into the duodenum and bile (a bitter green fluid that helps with digestion) from the liver. Peristalsis, which is the involuntary constriction and relaxation of the muscles that create movement to push contents forward works in the small intestine to move food through and to mix it with digestive secretions from the pancreas and liver (a large lobed glandular organ in the stomach). The duodenum has the responsibility of the continuous break down of food.

Gallbladder: The gallbladder stores bile and releases it into the duodenum to reabsorb and digest fats.

Colon (large intestine): The colon is a 6-foot long muscular tube (I will use a 6 foot piece of yarn to show the students how long the large intestine is) that connects the small intestine to the rectum. Stool, or waste left over from the digestive process is passed through the colon by peristalsis, first in a liquid state and then in a solid form. When a stool passes through the colon, water is removed. Stool is stored in an S-shaped colon until a movement empties it into the rectum.

Rectum- The rectum receives stool from the colon and holds it until it is ready to be released. When gas or a stool comes into the rectum, sensors send a message to the brain. The brain decides if the rectal contents can be released or not.

Anus- uses muscles to control stool and lets us know whether contents are a solid, liquid, or gas.

* The students will listen to a song called Down, Down, Down that is about the digestive system.

The students will be told at the beginning of the lesson to pay close attention to the order in which the digestive system takes place so that they will be able to complete their worksheets.

Assessment- The students were able to answer questions, such as “what are the functions of the major parts of the digestive system?”

Elaboration

I will divide the students into groups of four. I will do a tutorial on how to use Power Point and then tell the students that they will have to create a Power Point to present to the class based on what they learned from the digestive system lesson. The students will also be able to use the internet to locate information on the parts of the digestive system that they are assigned. The students will only be allowed to use google as a search engine to find information.

* There will be four different groups with four students in each group. Each group will be assigned two parts of the digestive system (two slides with information, two slides with pictures, and a reference page) to prepare a Power Point on using the internet to locate accurate information based on what they learned during the lesson. Each one of the four groups will have a name; Group 1(Doctors), Group 2(Nurses), Group 3(Therapists) and Group 4(EMTS). On Monday, Group 1(Doctors) will use computer time to research the two digestive system parts that they were assigned (Mouth and Esophagus) and another time during the school day for research and working on their Power Point. Group 1 will begin work the same day that the lesson is taught. On Tuesday Group 2(Nurses) will research on the stomach and small intestine and work on their Power Point. Group 3(Therapists) will be assigned the gallbladder and colon(large intestine) to do research on and work on their Power Point and their day will be Wednesday. Thursday will be for Group 4(EMTS) to do research and to work on their Power Point and they will report on the rectum and anus. On Friday, a time will be set aside for each group to present their Power Point to the class.

Assessment- Most of the students had experience using Power Point from other classes so they did not encounter any trouble creating their Power Point. The students were excited about using the computer to research information that would help them create their Power Point.

Evaluation

The students had to complete a worksheet with questions pertaining to the digestive system on it.