

Lesson Design Protocol Prepared by: Danielle Moeller

Age or Grade Intended: Third grade, 9-10 years old

Lesson Topic and Source: the food pyramid and the human body (science); myself

Rationale for teaching this lesson:

This is an important topic to teach young children because it will be the building block for learning more about their bodies. In this lesson I will be teaching them about the food pyramid and the parts of the body that digests the food we eat. It is very important for children to learn about this because they will understand why certain foods make them feel energized, how food affects our school work, and why we need to eat our vegetables and other “good for you” foods to stay healthy. This topic also addresses how things (the parts of the digestive system) work together to accomplish tasks (Standard 3.6.1 and 3.6.2). This is a fun topic to teach because they are able to do hands-on activities in order to enhance their learning experience.

This lesson addresses many of the different areas of the curriculum. Math skills are used to count the number of vegetables, etc. that are needed daily in each category of the food pyramid. Grouping skills are also used in the food pyramid activity. Vocabulary skills are enhanced with the learning of new words associated with the digestive system of the body. This activity fits into state standards because they require students to understand that eating a variety of healthful foods and getting enough exercise and rest help people stay healthy. Other standards for children of this grade level include participating in “different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis” (3.1.2) and recognizing and explaining “how an invention can be used in different ways, such as a radio being used to get information and for entertainment” (3.1.7)

(<http://ideanet.doe.state.in.us/standards/Docs-2004/English/Word/Grade03/3-Science.doc>).

State Standards:

State standards are put into effect in order to provide our students with the skills and knowledge needed to “succeed in school, at work, and in the community” of our ever changing world. They are also developed to guide teachers in what students should know and be able to do at each level of their education. A complete list of these standards can be found at <http://www.indianastandardsresources.org/>. This lesson is directed toward Standard 4- The Living Environment because “this standard offers recommendations on basic knowledge about how living things function.” In my lesson, the students will be learning about their bodies and how their digestive system functions. This lesson also deals more specifically with Standard 3.4.7

which states that the student should be able to “explain that eating a variety of healthful foods and getting enough exercise and rest help people stay healthy.” The children will learn about the food pyramid and making healthy choices in their every day eating. We will also discuss how a healthy eating and exercise affect us throughout our day.

Performance Objectives:

Professional Component:

Performance objectives are statements which contain three elements: the condition, behavior, and criterion of acceptable performance. These statements identify what the student should learn, what will or will not be available to them, what the students must do to display what they have learned, and tells them to what degree they must be successful in order to demonstrate that they have obtained the knowledge, skill, or ability the teacher wants them to acquire (Mager).

According to state standards, children at this grade level should be able to understand how living things function. With this lesson, I am introducing them to how our digestive system works and functions in our every day lives. They are also to be able to “explain that eating a variety of healthful foods and getting enough exercise and rest help people stay healthy (3.4.7).” As a part of this lesson, the class discusses why it is important to choose healthy foods over junk food and what that does for our bodies. This lesson can lead into another lesson about how our digestive systems are the same/differ from those of other living things. This fulfills Standard 4, which says that students will be able to use tools to identify how living things are similar and different.

After a class discussion and with the cut out pieces of food (**condition**), all of the students will be able to paste (**behavior**) the pieces of food in the correct section of their blank food pyramid 90% of the time (**criterion of acceptable performance**) (1.00, Bloom).

After a class discussion about making healthy eating choices and with access to the food pyramid (**condition**), all of the students will be able to put together (written list) (**behavior**) a healthy meal consisting of something from each category of the food pyramid (**criterion of acceptable performance**) (3.00/5.00, Bloom).

After completing the lesson (**condition**), all of the students will be able to explain (orally or written) (**behavior**) how the food we eat goes through the digestive system (**criterion of acceptable performance**) Responses will match the sequence of entering through the mouth, going down the esophagus, being stored and turned into nutrients by the stomach, the nutrients being absorbed by the small intestines, and then the water being absorbed from the waste in the large

intestines on its way out of the body. (2.00, Bloom).

Information for this section was based on the Behavioral Module, which was adapted from *Preparing Instructional Objectives* by Robert Mager.

Communication Component:

As an introduction, I will explain to the students that in this lesson we will be talking about the food pyramid, healthy eating, and the parts of our digestive system. With this sentence, I am communicating the professional components of the lesson in terms that they will understand.

Advanced Preparation:

Advanced preparation for this lesson will include:

- a worksheet containing a blank pyramid (divided into the sections)
- a separate piece of paper containing foods from the different parts of the pyramid
- a large detailed food pyramid for the front of the classroom
- a large blank food pyramid for the front of the classroom
- scissors and glue for each student
- crayons for the students so that they can color their pieces of food if there is time
- numerous pieces of plastic fruit (such as Play School) from each of the parts of the food pyramid
- a large diagram of the human digestive system
- a worksheet containing a diagram of the human digestive system and the names of the different parts (for the students to look at during our discussion)
- move the room around as necessary so that there is enough space at the front of the room for students to walk around while they are placing their pieces of food into the correct part of the food pyramid
- clear space on a desk/table to place the pieces of food
- clear space on the chalkboard to place the food pyramid and the digestive system papers

Teaching Sequence:

Anticipatory Set:

This lesson will start off with the teacher asking the students some general questions about eating and healthy foods to get them interested in the lesson. Sample questions include: “What foods are good for our bodies?” “Which ones are bad for our bodies?” “When are we supposed to eat desert?” “Why do your

parents tell you to eat your vegetables?” “Do your parents want you to drink more milk or pop?” Once we lay the foundation of what they already know and get them thinking about the topic, the lesson will build on that because they will be learning more about it. This lesson will then be introduced by explaining that we will be talking about the food pyramid, eating a balanced diet to be healthy, and the different parts of our digestive systems.

Step-by-Step Plan:

- I will begin by showing the students the food pyramid and discussing what the different parts of it mean. (The food pyramid, along with the diagram of the digestive system, will be taped/posted to the blackboard before the lesson.) We will discuss the characteristics of the different words such as fruit, vegetable, etc.
- I will then talk about the variety of foods found in each category and why they belong in that category (if applicable).
- Then I will ask a volunteer to come to the front of the room.
- The student will be asked to place a piece of plastic food into the correct part of the blank food pyramid taped on the board by putting the hand with the piece of food in it over the correct area.
- I will do this 5 or 6 times with different students.
- As soon as I feel that the children have a good grasp on the topic, I will have the children cut out the different pieces of food on their piece of paper. (May have been colored if there was time.)
- Once each child has gotten their food cut out, we will then work as a class to glue a few pieces of food into the correct spot on the pyramid.
- I will ask the children where one of the pieces of food that they cut out belongs on the pyramid.
 - Where does this apple belong on the food pyramid? (1.00, Bloom)
 - “It belongs in the fruit part.”
- Once the children correctly identify where it belongs, they will paste it into that box on their blank food pyramid sheet.
- This will be repeated as a class with one or two more pieces of the cut out food.
- I will then instruct the children to place the rest of the cutouts in their correct spots on the food pyramid on their own.
- I will walk around the classroom and check out each child’s work to make sure that they have understood the topic and are placing the cutouts into the correct section of the food pyramid.
- Once the student finishes their worksheet, they will take it up to my desk and place it into the tray.
- They will then return to their seats and wait for the rest of the class to finish
- While they are waiting, I will tell the students that they can either read

- their AR books or draw on a scrap piece of paper.
- Once all of the students are done with the worksheet, I will make sure that they have fully understood the information provided in the lesson by having a class discussion with questions such as:
 - Why is it important to know this food pyramid? (2.00, Bloom)
 - “So that we eat the right foods to be healthy and have energy to play and learn.” (works into objective about planning a meal)
 - How are the different parts of the food pyramid connected with each other? (4.00, Bloom)
 - “Together they form what we should eat each day to be healthy.”
 - Why do you think we used the plastic food and the cut out pieces of food in this activity? (5.00, Bloom)
 - “So that we could actually see what we were working with instead of just looking at it on the board or talking about it.”
 - What might you need the food pyramid for in the future (such as an occupation)? (6.00, Bloom)
 - “To be a nutritionist.” ““Being a teacher and teaching this to your students.” “Making sure my kids eat right as a parent.” “To be a professional body builder.” ☺
 - As a transition between sections of the lesson, I will say something along the lines of “Since we have just talked about eating, we are now going to talk about what happens to that food in our bodies.”
 - I will begin this next part of the lesson by asking some general questions about the digestive system to get them thinking about this new topic. These questions might include: “Where does our food go when we swallow?” “How many different places does it travel through?” “If I ate an apple for my snack, would it leave my body as an apple?”
 - Once the students have begun to think about what they already know about the digestive system, we will then talk about the names of the different parts of the digestive system. At this point, new vocabulary terms will be introduced as we discuss the different parts of the system.
 - Next, I will explain the process of digestion (in simple terms). We will talk about where the food enters the body (the mouth), how it gets down into the stomach through the esophagus, what happens to the food inside our stomachs (stored and turned into nutrients), and where the food is absorbed into our bodies (the small intestines), and how the large intestines absorb the water from the waste on its way out of our bodies (the large intestines).
 - Using the large poster at the front of the classroom and their diagrams in front of them, I will then do a quick assessment to make sure they

understood what we just talked about by asking them:

- Can you name a part of the digestive system? (1.00, Bloom)
 - “The mouth.” “The small and large intestines.” “The stomach.” etc.
- Can you explain how the food you eat goes through your body? (4.00, Bloom)
- We will do a discussion about the last question as a class to review what happens to food in our bodies. The question will start off the discussion and one student will answer about where it starts. I will then prompt them about what happens/where does it go next and have a different student answer that part of the question. I will continue the prompts about each section and have a different student answer each time for the rest of the system.
- I will then ask the students to write their responses to this question:
 - Explain the places that an apple would go through on its way through our body and what would happen at each place (3.00, Bloom).
 - Responses will match the sequence of entering through the mouth, going down the esophagus, being stored and turned into nutrients by the stomach, the nutrients being absorbed by the small intestines, and then the water being absorbed from the waste in the large intestines on its way out of the body.
- Once all of the students have finished writing, I will put them into partners, probably with the person sitting next to them.
- I will then have them read their answers to their partner. They will then discuss what parts of it they had different and figure out what the correct answer is together (4.00, Bloom).
- After this activity, I will have the students turn their papers in to me on my desk so that I can read their responses and evaluate what they as individuals have learned.
- Once they are all seated, I will ask the students questions about what we discussed such as:
 - What are the main parts of the digestive system? (1.00, Bloom)
 - “The esophagus.” “The mouth.” “The stomach.” “The intestines.”
 - Who can explain what the purpose is of one of those parts just mentioned? (2.00, Bloom)
 - “The mouth is where food enters the body.”
 - “The stomach mixes up all the food.”
 - “The end of the large intestine is where all the waste from the food comes out.”

- When I feel that the students have adequate knowledge about the information covered, I will move into the closure of the lesson (review of all that we talked about in the entire lesson).

Each of the questions that I asked throughout my lesson reflects the objectives that I stated at the beginning of this lesson plan. For my first objective, I said that I want the students to be able to place a piece of food into its place in the food pyramid. I accomplished this first by asking a few students to come to the front of the room and do it with the plastic fruit and then by asking them to do the same process by themselves with the cutouts. I classified these as a 1.00 on Bloom's Taxonomy because it requires them to remember previously learned information. The second objective I have for this lesson is for the children to be able to design a healthy meal using items from each group on the food pyramid. This covers 3.00 and 5.00 on Bloom's Taxonomy because it makes the students apply what they learned to an actual life situation. For my third objective, I want the students to be able to explain the basic structure of the digestive system. I classified this as 2.00 on Bloom's Taxonomy because it makes the students recall what they have learned and then rephrase it in their own words. The other two levels of Bloom's taxonomy are covered during the lesson through other questions. In Bloom's Taxonomy, 4.00 requires the students to break down ideas that they have learned into simpler parts. This was covered when I asked the students to name parts of the digestive system and explain how food gets digested. The other part of Bloom's Taxonomy, 6.00, is covered when I asked the students how they could use this information later in their future. This works because it requires the student to make a judgment based on internal evidence or external criteria (taking the knowledge of what we covered and applying it to certain occupations).

Gardner's Multiple Intelligences:

Logical-Mathematical Intelligence: This is the primary intelligence of this lesson because it is a science lesson. The logical-mathematical intelligence includes being able solve things scientifically and recognize patterns and relationships. The students are working with the body, which is part of science, and learning about the food pyramid and digestion. They are also looking at the relationship between a food and its position on the food pyramid.

Intrapersonal Intelligence: The intrapersonal intelligence includes the capacity to understand oneself including feelings and emotions. The intrapersonal intelligence also includes being able to work by yourself. In this lesson, the students are asked to work on their own when placing the cutout food into the correct spaces of the food pyramid and when explaining the digestive process.

Interpersonal Intelligence: The interpersonal intelligence includes understanding and interacting with others. In this lesson, the students are required to cooperate as a class while discussing the food pyramid and the digestive system and process.

They will have to work together to come up with a single answer when they do not all agree on the answer to a question posed to them by the teacher.

Gardner's Multiple Intelligences are important to consider with each lesson plan because of the great variety of learning styles that will be present in each classroom. Gardner's theory points out that "people can be intelligent in ways other than the traditional analytical, linguistic, and logical-mathematical modes." It is important to provide a variety of learning styles and to address other abilities besides just intellect to ensure that each student is getting the most out of every lesson. With these in mind, you can also work toward strengthening areas of weakness in the class. For example, if your class has particular trouble working in pairs, have them work in pairs every once in a while so that they can work on getting along and sharing the responsibilities of a group. Another point brought up by the book is that "Gardner's theory cautions us against focusing on the results of IQ tests to the exclusion of other worthwhile behaviors." This is saying that just because students show strength in a particular area that does not mean that they are interested in it and are going to consider it as a career choice.

Accommodation/Adaptation:

Accommodations are changes in a lesson plan, homework assignment, or test to assist students in the classroom with disabilities. One of these disabilities is mental retardation. Mental retardation is defined as a condition in which "learning proceeds at a significantly slow rate, is limited to concrete experiences, and is accompanied by difficulty functioning in social environments" (Psychology Applied to Teaching, 541). For these students, I may need to break up the different parts of the lesson because they need shorter lessons to learn best. A "free time" break could be placed between the two sections, and that would give them an opportunity to process what we learned and prepare to learn more. I should also give them positive feedback on their work to encourage self-esteem. These children often devalue themselves when they become aware that they are less capable than their peers (188-189). Another condition with which accommodation would occur is gifted and talented students. These individuals present high performance capabilities in one or more areas including intellectual, creative, artistic, leadership, or specific academic fields. They also need services not ordinarily done in order to fully develop these capabilities. With these students, I could give them the opportunity to help the other students with the first worksheet that deals with the food pyramid. Once they are finished with their own worksheet, I could assign them to help out another student. This gives them the opportunity to be a teacher/tutor and assist the student that is struggling. They will be able to expand on what they have learned by applying it toward teaching another student. If available, they could also be placed in a special classroom to learn more about the topics, such as more detailed parts of the digestive system and the actual process of breaking down food in more specifically (203-204).