Smith Farm Elementary Lesson Plan

Teacher Name: Edwards	**Grade Level:** 4th Grade	**Subject:** Science
Date: October 24-28	**Standards:** **4.L.2.1** Classify substances as food or non-food items based on their ability to provide energy, and materials for survival, growth, and repair of the body. **4.L.2.2** Explain the role of vitamins, minerals, and exercise in maintaining a healthy body.	

We will alternate between Science and Social Studies this year. This is a science week.

	Monday, October 24	
Standards-aligned Materials and Resources: (Textbooks, websites)	• Science notebooks • "A Closer Look at Photosynthesis" reading and questions	
Clear Learning Goals (I Can statements):	I can describe how plants make their own food through the process of photosynthesis.	
Vocabulary	energy, photosynthesis, producer, chloroplast, chlorophyll, stomata	
Build Background	**Turn and talk:** What do plants need to grow and survive? What do humans need to grow and survive? Make a list with your shoulder partner and circle the similarities.	
Direct Instruction (Teacher led)	Start today's lesson by explaining to students that plants and animals (including humans) need energy in order to survive and grow, and they can get this energy from food. However, plants and animals go about getting their energy/food in different ways. Today, we are going to be focusing on how plants get the energy they need to survive. Our focus for today will be on the process of photosynthesis. I will start by teaching students what the word photosynthesis means, and then we will do an anchor chart showing the process of photosynthesis. As I am creating the anchor chart, students will follow along in their science notebooks. A sample anchor chart can be found below the plans.	**Time: 5 min.**
Student Practice	After completing the anchor chart together, we will read a short passage titled "A Closer Look at Photosynthesis." This reading will describe in more detail how plants get their energy and make their own food.	**Time: 25 min.**

	Students will read this short passage in a small group, focusing on how sunlight, water, and carbon dioxide play a role in the process of photosynthesis. After they have finished reading the passage in their groups, we will discuss what we have learned as a class. We will also go through the vocabulary used in the passage, such as carbon dioxide, oxygen, chloroplast, chlorophyll, and stomata.	
Check for Understanding	Students will answer the 6 passage questions on their own. I will walk around as students are working and assist them.	**Time: 5 min.**

	Tuesday, October 25	
Standards-aligned Materials and Resources	• Science notebooks • Paper for foldables • Chromebooks	
Clear Learning Goals (I Can statements):	I can explain the difference between food and non-food items based on the energy they provide us. I can describe the different nutrients needed to maintain a healthy body.	
Vocabulary	consumer, carnivore, herbivore, omnivore, nutrients, carbohydrates, protein, vitamins, fats, minerals	
Build Background	**Class Discussion:** What do humans need in order to have a healthy body? What should they eat, drink, and do in order to be healthy?	
Direct Instruction (Teacher led)	Yesterday we learned about the process of photosynthesis in which plants get their energy. Today, we are going to talk about how animals (including humans) get their energy, as well as what humans require in order to maintain healthy bodies. Before we begin, students will talk with their table groups and come up with a list of food and non-food items. Then they will talk about what is similar/different between the food and non-food items. We will discuss their lists and observations after they have had time to talk. I will explain to students that plants and animals get their food in different ways. Plants make their own food while humans have to consume food in order to get the energy they need. We will write down a few energy and nutrition terms before we begin talking about the different nutrients. • Animals are **consumers**, meaning they consume, or eat, their food. • **Carnivores** are animals that eat only meat. • **Herbivores** are animals that eat only plants. • **Omnivores** eat both plants and meat.	**Time: 5 min.**

	• **Nutrients** are substances that are needed for healthy growth, development, and functioning.	
Student Practice	I will explain to students that there are certain **nutrients** humans need in order to remain healthy. Today, we are going to research the six nutrients that humans need: carbohydrates, proteins, vitamins, fats, minerals, and water. As a class, we will make a 6-tab foldable. On each tab, students will write down the names of the six nutrients we will be researching: carbohydrates, proteins, vitamins, fats, minerals, and water. Using their Chromebooks, students will work in small groups to research the different nutrients. On the insides of their foldables, students will write how these nutrients help our bodies as well as give examples of foods that these nutrients can be found in. The following website is a good site for the kids to search for and research the nutrients: https://kidshealth.org/	**Time: 25 min.**
Check for Understanding	**Ticket Out the Door:** Why is it important for people to have a healthy diet? What are some of the effects of not having a healthy diet?	**Time: 5 min.**

	Wednesday, October 26	
Standards-aligned Materials and Resources	• Science notebooks • Vitamins and Minerals interactive notebook page • Chromebooks	
Clear Learning Goals (I Can statements):	I can explain the different vitamins and minerals needed to maintain a healthy body, as well as what foods they can be found in.	
Vocabulary	vitamin, mineral, oxygen, maintain, calcium, iron	
Build Background	**Turn and Talk:** Raise your hand if you take vitamins. Discuss with your table group what you think vitamins and minerals do for your body.	
Direct Instruction (Teacher led)	I will remind students that yesterday we discussed and researched the different nutrients our body needs in order to remain healthy, including vitamins and minerals. Today, we are going to take a closer look at the different types of vitamins and minerals that our bodies need.	**Time: 5 min.**

	Before we begin, I will remind students that **vitamins** and **minerals** are substances found in the foods we eat that our bodies use to work properly, grow, and stay healthy. We will be doing an interactive notebook page today to learn more about vitamins and minerals. I will model for students how to cut out the pieces and glue them into their notebooks before explaining their task to them.	
Student Practice	In their notebooks, students will be cutting and gluing 6 tabs as part of their interactive notebook. These tabs include Vitamin A, B, C, and D, as well as calcium and iron. On these tabs, they will be writing information that they research and find for each. Once the tabs are glued into their notebooks, students will work in small groups to research these vitamins and minerals. For each vitamin/ mineral, students will need to look for what they do for us and what foods they can be found in. They will write the function of each vitamin/ mineral on the top of each flap and the foods they can be found in under the flap. Here are a few websites for students to use to find information: ● https://kidshealth.org/en/kids/vitamin.html?ref=search ● https://kidshealth.org/en/kids/minerals.html?ref=search We will go over the information we found after everyone has had a chance to work.	**Time: 25 min.**
Check for Understanding	**Quick Write:** Why are vitamins and minerals important for our bodies? What are some of the things they do for us and what foods can we eat in order to get plenty of them?	**Time: 5 min.**

	Thursday, October 27
Standards-aligned Materials and Resources	● Science notebooks ● MyPlate (blank) ● Nutrition label example ● A Tale of Two Foods sheet ● Chromebooks
Clear Learning Goals (I Can statements):	I can explain how MyPlate helps people focus on nutrition and choose a variety of foods. I can read a nutrition label and use this information to describe whether a food is healthy or not.
Vocabulary	nutrition, saturated fat, sodium, serving size, calories, percent

Build Background	Students will create a food log of everything they ate yesterday. They will analyze the meals they wrote down and decide which foods they think were healthy or not healthy. **Turn and Talk:** What made some of your meals healthy? What made some of your meals unhealthy?	
Direct Instruction (Teacher led)	Today we are going to continue learning about nutrition by focusing on MyPlate and learning how to read food labels. I will explain to students that there are five categories, or groups, that foods can fall into: Fruits, Grains, Vegetables, Protein, and Dairy. In order to help people better understand nutrition, the U.S. Department of Agriculture created MyPlate. The goal of MyPlate is to help people focus on nutrition, choosing a variety of foods, choosing foods with less **saturated fat**, **sodium**, and added sugar, and support healthy eating for all people. Each student will be given a blank MyPlate sheet and I will model for them how to color it in. As we do this, I will explain which foods go in each food group, and how much of these foods should be eaten throughout the day.	**Time: 5 min.**
Student Practice	We will continue learning about nutrition by moving on to food labels. I will explain to students that foods come with a Nutrition Facts label, and the purpose of these labels is to give people an idea of how many calories and nutrients are in the foods they eat. I will place an example of a Nutrition Facts label on the board and explain the different parts to students. Then, I will give each student the A Tale of Two Foods sheet, and give each pair of students two nutrition label examples. With a partner, students will analyze the nutrition label examples and complete the Two Foods sheets.	**Time: 25 min.**
Check for Understanding	Students will answer the six questions on the bottom of the A Tale of Two Foods sheet. They need to analyze the labels and the information they found in order to decide which snack is the healthier choice. Nutrition Label #1 is a Twinkie Nutrition Label #2 is a Kind Kids Chewy Honey Oat Bar ***Don't tell the kids what the nutrition labels are until they are done with the activity.**	**Time: 5 min.**

	Friday, October 28

Standards-aligned Materials and Resources	• Chromebooks
	• 4.L.2 Post Assessment (SchoolNet)
	  ○ Test ID: **4634554**
	  ○ Student Passcode: **ME9JE9CE**	

Clear Learning Goals (I Can statements):	I can take a quiz to show what I have learned about molecular biology.	
Vocabulary	Review of Molecular Biology vocab.	
Build Background	**Brain Dump:** Students will have two minutes to write down everything they remember about vitamins, minerals, and how plants and animals get energy. Give them a chance to share what they wrote after the 2 minutes are up.	
Direct Instruction (Teacher led)	Today students will be taking a quiz to show what they have learned about molecular biology. Before they begin, I will take a few moments to review what we have learned over the past week in science.	**Time: 5 min.**
Student Practice	Students will be given a few minutes before the quiz to ask any questions they still have about vitamins, minerals, and how plants and animals get energy.	**Time: 5 min.**
Check for Understanding	Students will complete the Ecosystems and 4.L.2 Post Assessment on their own.	**Time: 15 min.**

Direct Instruction (Teacher led): ***Examples - Modeling, providing new vocabulary, questioning, anchor charts, scaffolding, chunking content, etc.***

Student Practice: ***Examples - Small group w/ teacher, pairs, individual; graphic organizers, writing prompts, think-pair-share, student-led discussions, student summaries, pictorial notes, mini-projects, etc.***

Check for Understanding: ***Examples - ticket out the door, kahoot, white boards, four corners, turn and talk, thumbs up/down, parking lot/Windshield, summative assessment, project, performance, Pear Deck slides, Flipgrid, Padlet, etc.***

Photosynthesis Anchor Chart

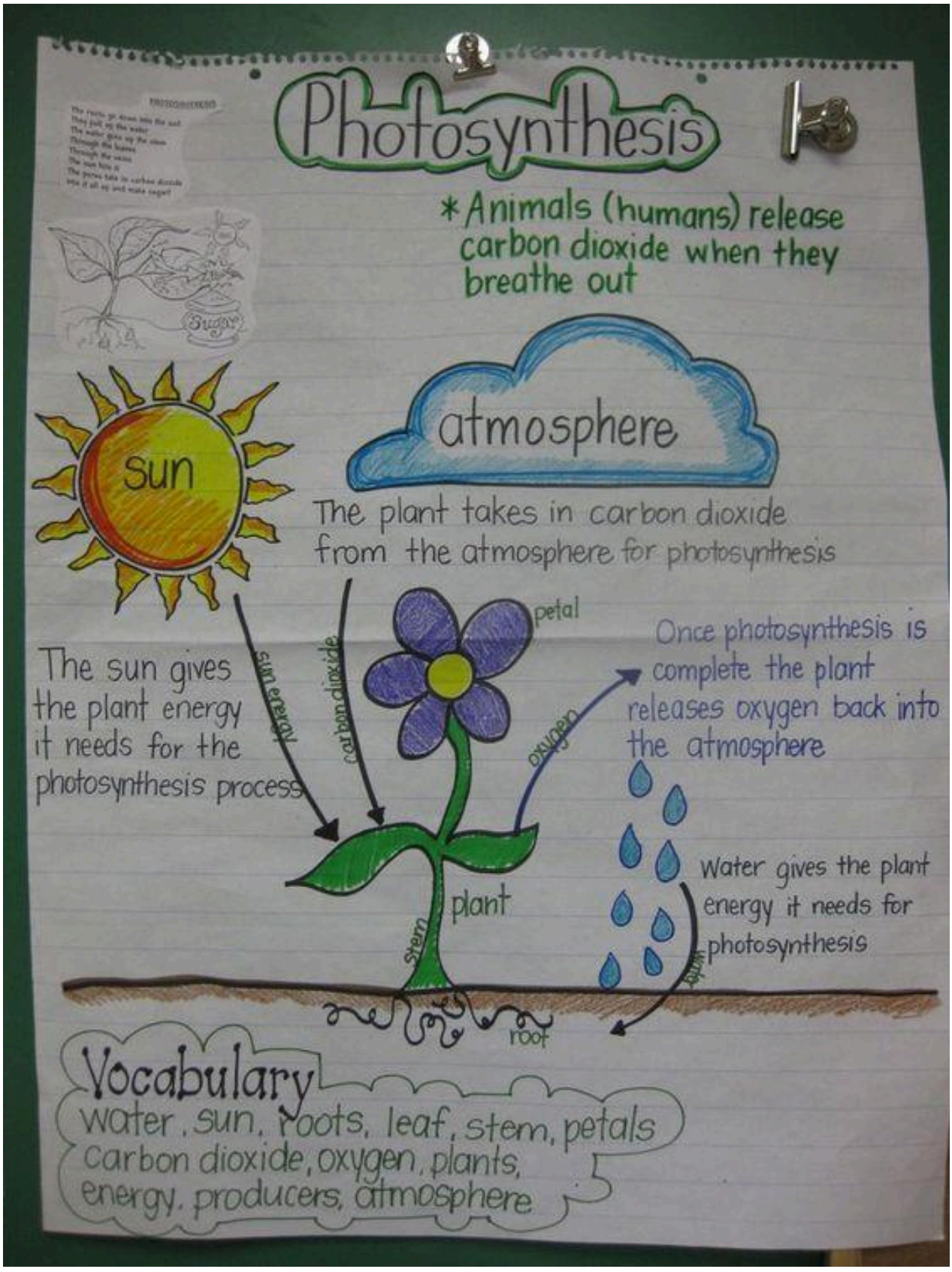

Table 8.1 Primary Functions of the Six Major Nutrients

Nutrient	Primary functions
Water	Dissolves and carries nutrients, removes waste, and regulates body temperature
Protein	Builds new tissues, antibodies, enzymes, hormones, and other compounds
Carbohydrate	Provides energy
Fat	Provides long-term energy, insulation, and protection
Vitamins	Facilitate use of other nutrients; involved in regulating growth and manufacturing hormones
Minerals	Help build bones and teeth; aid in muscle function and nervous system activity