

GLOW FOODS

LEARNING OBJECTIVES

By the end of this module, students should be able to:

- discuss the consequences of inadequate intake of Glow foods on adolescent health.
- recall specific portions of Glow foods that meet the nutritional requirements of adolescents.

MATERIALS

Lesson 1

- pad paper
- video: **Module 2 Glow Foods**
- file: **GR08_M02_Lesson 1 Powerpoint**

Lesson 2

- manila paper (one sheet per group)
- markers

Lesson 3 and 4

- art materials to form a scrapbook (per group)

REMINDERS

Letters to the Parents

Each module comes with a letter to parents explaining the key points that our students are learning in class. The letter also encourages parents to model healthy nutrition habits at home. We hope that through these circulars, parents will become involved in their child's learning process. Please remember to photocopy and distribute the corresponding parent circular at the start of each module. These letters can be found in the folder marked 'Letters to Parents.'

Rubrics

Many of the activities in these modules serve as formative assessments for you to gauge each student's progress. You may use the PDF file named 'Rubrics' as a guide for grading major outputs and performance tasks.



MODULE OVERVIEW

Dear Teacher,

This Module Overview is a summary of the key learning points that we want our students to understand and master by the end of this module. These key learning points are presented in the video presentation and powerpoint that accompany this module. The supplementary activities further reinforce these key points.

KEY POINTS

1. Glow foods contain many vitamins and minerals that our bodies need to make our skin, eyes and hair healthy. These vitamins and minerals also help our bodies to prevent sickness, like colds and cough.
2. Fruits and vegetables belong to this food group. According to the Pinggang Pinoy® guide, approximately half of our plate should consist of fruits and vegetables.
3. We should make our plate as colorful as possible by eating many different colors of fruits and vegetables. This is because specific colors provide specific health benefits, and by making our plate as colorful as possible, we are assured that our bodies are getting all the essential nutrients it needs.
4. Listed below are common micronutrient deficiencies among children and adolescents. Eating the right amount of Glow foods in each meal can help address these deficiencies:
 - a. Vitamin A
 - i. Function: maintains clear vision, keeps skin smooth, helps in development of bones and teeth, strengthens immunity
 - ii. Signs and symptoms of deficiency: night blindness (slow recovery of vision after flashes of bright light at night or inability to see in dim light), weak resistance to infectious diseases
 - iii. Significant plant sources of vitamin A: spinach, *malunggay*, *pechay* and other dark leafy greens; broccoli; yellow and deep orange fruits (papaya) and vegetables (squash and carrots)
 - b. Vitamin C
 - i. Function: supports wound healing and strengthens immunity, also an antioxidant (a substance that prevents or delays some types of cell damage)
 - ii. Signs and symptoms of deficiency: weak resistance to infectious diseases, poor wound healing, bleeding gums and loosened teeth
 - iii. Significant plant sources of vitamin C: citrus fruits, bell peppers, melon, tomatoes, papayas, mangoes

c. Vitamin E

- i. Function: antioxidant (a substance that prevents or delays some types of cell damage)
- ii. Signs and symptoms of deficiency: vitamin E deficiency is uncommon but deficiency can cause a type of anemia
- iii. Significant plant sources of vitamin E: leafy green vegetables

d. Vitamin K

- i. Function: aids in blood clotting
- ii. Signs and symptoms of deficiency: hemorrhage (excessive bleeding)
- iii. Significant plant sources of vitamin K: leafy green vegetables

e. Iron (iron deficiency anemia)

- i. Function: found in blood which helps transport oxygen. Low iron results in low hemoglobin concentration in the blood. Hemoglobin is the component in blood that carries oxygen throughout the body for energy metabolism.
- ii. Signs and symptoms of deficiency: fatigue, weakness, pale skin, poor cognitive performance, impaired work performance and weak resistance to infectious diseases
- iii. Significant plant sources of iron: leafy green vegetables

5. Fruits and vegetables also contain fiber that has even more health benefits. Fiber helps lower cholesterol, lowers blood sugar levels (beneficial for those who have diabetes) and regulates bowel movement.

6. The following can guide adolescents on the proper portion of Grow food to eat with each meal:

- a. Males: 1-2 cups of cooked vegetables; 1 medium sized fruit (banana, mango) or 1 slice of big fruit (papaya, pineapple, watermelon)
- b. Females: 1 - 1.5 cups of cooked vegetables; 1 medium sized fruit (banana, mango) or 1 slice of big fruit (papaya, pineapple, watermelon)

Lesson 1



LET'S GET STARTED



15 Mins.

Announce the top three groups from the previous lesson – if you have not done so – before proceeding with the lesson.

1. Ask the students to bring out a sheet of pad paper. Ask them to create three columns with the following headings:
 - a. What I Know
 - b. What I Recalled
 - c. What I Learned
2. In the first column, have them list down as many facts as they can about Glow foods. Ask them to also include what they know about the importance of Glow foods on adolescent health and development.
3. After giving them a few minutes to write items in the first column, tell them that they will watch a video and listen to a lecture, and their task is to compare what they already know (items in column 1) with the facts and concepts that they will encounter in the video and lecture.



WATCH & LEARN



15 Mins.

1. Before playing the video for this lesson, **Module 2 Glow Foods**, inform them that their task is the same as what they did in Lesson 1 of the previous module:
 - a. In column 2, list down facts and concepts that they **ALREADY KNEW** but remembered with the help of the video or the lecture. (These are facts and concepts that are not new to them, but forgot to include in column 1.)
 - b. In column 3, list down facts and concepts that they are **LEARNING FOR THE FIRST TIME**. (These are facts and concepts that they don't recall ever hearing about before.)
2. After watching the video, give students a few minutes to compare their answers with their seatmates' answers. They should look for facts and concepts in their seatmates' lists that they were not able to include in columns 2 and 3. They can add those facts and concepts to their own paper under columns 2 and 3.

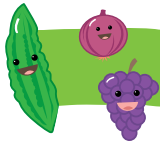


LISTEN & LEARN



25 Mins.

1. You will need the file **GR08_M02_Lesson 1 Powerpoint** for the remainder of this lesson. Open the PDF file, and at the top menu bar, select VIEW > Enter Full Screen. This places one page of the PDF file on the computer screen, and you can scroll up or scroll down to go through each page like a powerpoint slide.
2. This presentation is a review of some nutrients found in Glow foods, and teaches students about the signs and symptoms of deficiencies associated with these nutrients.
3. Similarly, have your students list down facts and concepts that they **ALREADY KNEW** in column 2, and those that they are **LEARNING FOR THE FIRST TIME** in column 3. Give them a few minutes to compare their answers with their seatmates' answers to identify more facts and concepts that can be added.



WHAT DO I KNOW?



15 Mins.

- Instruct your students to go back to the information that they were able to recall on their own, before they listened to the video and the lecture. Ask them the following questions and allow them to share their thoughts with their seatmate:
 - Were you able to recall all the important, basic principles?
 - Why do you think you were able to remember this information on your own?
 - Have you been able to apply this knowledge to your day-to-day eating habits?
- After giving students time to discuss, ask them to now reflect on the information that they were not able to recall on their own. Ask them the following questions and allow them to share their thoughts with their seatmate:
 - Which of this information is relevant to you, and will be easy for you to remember from this point onwards?
 - Which of this information can you start applying to your day-to-day eating habits?
 - Which of this information is important for other people to know about as well?
- Collect each student's output and review each after class. You may use this to assess which of your students have a thorough understanding of the concepts related to Glow foods and adolescent health, and which only have a surface understanding. You must return these papers in the following session.

LET'S WRAP THIS UP

Call on some students to share their thoughts to the questions you asked earlier (number 2) with the rest of the class.

Lesson 2



SYMPTOM TRACKER - PART 1

- Return each student's output from the previous lesson. Instruct them to take out any other notes they have from the previous lecture, then join their groupmates from the previous sessions. Distribute a sheet of manila paper, and instruct them to write their names on the back.
- Draw the following table on the board and ask your students to copy it on the manila paper:

		Nutrient Sources	
		Glow	Grow
Signs and Symptoms	Related Nutrient Deficiencies		

- Tell your students that by the end of the program, they will replicate this table on a sheet of *cartolina*, but in the meantime, they will use the manila paper to create a draft version.

4. Instruct the students to fill up the needed information using their notes from the previous session:
- In the first column, write down one sign or symptom of nutrient deficiency which was discussed.
 - In the second column, write down all the different nutrients that are associated with that sign or symptom.
 - Under the column marked Glow, they are to identify the plant sources that provide that vitamin or nutrient.
 - Write this example on the board for your students:

		Nutrient Sources	
		Glow	Grow
Signs and Symptoms	Related Nutrient Deficiencies		
Night blindness	Vitamin A	spinach, <i>malunggay</i> , <i>pechay</i> , broccoli	

- Point out that some signs and symptoms are associated with more than one vitamin or nutrient. For example, developing weak resistance to infectious diseases is associated with both vitamin A and vitamin C

		Nutrient Sources	
		Glow	Grow
Signs and Symptoms	Related Nutrient Deficiencies		
Night blindness	Vitamin A	spinach, <i>malunggay</i> , <i>pechay</i> , broccoli	
Weak resistance to infectious diseases	Vitamin A	spinach, <i>malunggay</i> , <i>pechay</i> , broccoli	
	Vitamin C	citrus fruits, bell peppers, melon, tomatoes, papayas, mangoes	
Pale skin	Iron	leafy green vegetables	

- Allow the students to continue working in groups as you go around to ensure they are filling up the table properly. Collect their manila papers at the end of the session, as these will be used again in Lesson 3 of the next module.

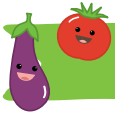
LET'S WRAP THIS UP

Ask some students to share one new thing they learned today.



Before dismissing the class, inform your students that in the next session, each group will work on their second scrapbook. Each group should again bring scissors, coloring materials, magazines, colored paper and other art materials.

Lesson 3



GLOW FOODS SCRAPBOOK – PART 1

1. Instruct the class to return to their groupings from the previous lesson and to bring their art materials with them.
2. Their task for the day is to design a scrapbook that summarizes all the facts and concepts discussed in the previous two sessions.
3. Their scrapbook can contain photos, drawings, symbols, stickers and other artistic elements. With these artistic elements, they should include essays, quotes, slogans, poems or song lyrics that deliver the messages they want to convey.
4. Their scrapbook must:
 - communicate the importance of eating a variety of colors of fruits and vegetables every day.
 - discuss the proper portions of Glow food that adolescents should eat with each meal, along with the consequences of inadequate intake on adolescent health.
 - present the information in such a way that it is easy to understand.
 - persuade its viewers to include a variety of fruits and vegetables in their diet.

Lesson 4



GLOW FOODS SCRAPBOOK – PART 2

Give each group more time to complete their scrapbook. Before the end of the session, have each group present their output.

After all the presentations, announce the top three outputs and their corresponding points. You may also announce the winners at the start of the next session if you need more time to decide on the top three outputs, or if you want to involve other teachers in selecting the best output.