

GLOW FOODS

LEARNING OBJECTIVES

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

- demonstrate a thorough understanding of the benefits of eating Glow foods of various colors in the right proportions.
- advocate for healthier eating habits within the community by encouraging others to eat different-colored Glow foods in the right proportions each day.

MATERIALS

Lesson 1

- pad paper (one sheet per student)
- video: **Module 2 Glow Foods**
- file: **GR10_MO2_Lesson 1 Powerpoint**

Lesson 2

- *cartolina* (one sheet per group)
- coloring materials

Lesson 3

- board paper
- scissors
- colored yarn, 12 inches each of these colors: orange, yellow, white, green, red

Lesson 4

- materials chosen by students

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 support the nutritional requirements of our rapidly developing bodies and our active lifestyles. The nutrients we get from Glow foods:
 - a. Help to keep our skin clear and our hair and nails healthy, so we can always look our best.
 - b. Keep our eyes healthy, to help us when we need to read and study hard.
 - c. Help prevent sickness, like colds and cough, so that we don't miss out on important events with family and friends.
 - d. Help us stay alert and focused, so that we can perform well in school.

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:
 - a. RED fruits and vegetables (e.g. apples, tomatoes, watermelons) contain Lycopene that is good for the heart.
 - b. YELLOW and ORANGE fruits (e.g. pineapples, oranges, mangoes) contain vitamin C that boosts one's resistance against sickness.
 - c. YELLOW and ORANGE vegetables (e.g. squash and carrots) contain beta-carotene that promotes healthy skin and good eyesight.
 - d. GREEN vegetables (e.g. *malunggay*, *pechay*, and *kangkong*) contain iron that is found in the blood which helps transport oxygen throughout the body.
 - e. PURPLE/BLUE fruits and vegetables (e.g. eggplant and grapes) contain anthocyanin, an antioxidant that helps reduce risk of cancer and heart disease.
 - f. WHITE fruits and vegetables (e.g. cauliflower, mushrooms, garlic) contain anthoxanthin, an antioxidant that helps reduce risk of some cancers and heart disease.

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: Iron is found in the 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. We should do our part to promote healthier eating habits among family members, friends and others in our community. Encourage others to eat different-colored fruits and vegetables in the right proportions each day.

Lesson 1



LET'S GET STARTED



20 mins

1. Start the class by allowing the remaining groups to present their findings using the visual aid they created in the previous session.
2. After all the groups have presented, ask your students to reflect on and share their thoughts about the following:
 - a. Based on the information gathered from people in our communities, would you say that the members of our communities are generally knowledgeable about nutrition? Why or why not?
 - b. Would you say that the members of our communities, in general, practice good nutrition habits? Why or why not?
 - c. How do our findings make you feel?

LET'S GLOW!



10 mins

1. Inform the class that for the remaining weeks of the program, you will review specific concepts related to the different food groups, starting with Glow foods. This review will help them to create meaningful content for their advocacy campaigns.
2. In this first review, students will be asked to recall what they already know about Glow foods from previous year's lessons. Inform them that their answers to this activity will not be graded and that this exercise is meant only to check what they can recall.
3. Instruct your students to take out a sheet of pad paper and to divide the paper into three columns with the following headings:
 - a. What I Know
 - b. What I Recalled
 - c. What I Learned
4. 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 fruits and vegetables for adolescent health and development.
5. 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**, instruct the students to do the following while they watch:
 - 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



15 mins

1. You will use the file **GR10_M02_Lesson 1 Powerpoint** for this part of the 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 derived from Glow foods, and why they are essential to the body.
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.
4. Collect each student's output and review each after class. You may use this as a way of assessing 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.

LET'S WRAP THIS UP

Call on some students to share what they wrote in column 3.

Lesson 2



LET'S GET STARTED



20 mins

1. Start the class by sharing some of your observations about the class's outputs from the previous lesson. For example, which Glow foods concepts were frequently listed in the "What I Know" and "What I Recalled" columns? Were there any concepts that students often listed under "What I Learned"?
2. Ask your students to reflect on why some concepts are easier to remember than others.

GLOW MAP



40 mins

1. Instruct the students to return to their groupings from the previous module. Distribute coloring materials and one sheet of *cartolina* per group. They will use these materials to make a mind map about Glow foods.
2. In the middle of the *cartolina*, have them write the word GLOW FOODS and encircle it. This will be the central topic for their mind map. Around the central topic, have the students draw five branches, each branch connected to an oval. In the five ovals, write these five nutrients: Vitamin A, Vitamin C, Vitamin E, Vitamin K, and Iron.
3. Around each oval, students are to create more branches containing the following information:
 - a. functions of each nutrient in the body
 - b. signs and symptoms of deficiency
 - c. sources of these nutrients
4. Students may refer to their notes from previous lectures to complete this task.



5. Once the groups are finished, ask the groups to post their Glow Maps on the board or on the wall where everyone can see. Allow the students to go around the room and compare the various mind maps.
6. Ask students to comment on whether each group was able to organize their concepts properly, or whether any groups had inaccurate entries.
7. At the end of the class session, make sure that each group has indicated the names of their group members at the back of the *cartolina*, before collecting each group's output.

LET'S WRAP THIS UP

Call on some students to complete this sentence:
"Today I realized that..."



Before dismissing the class, instruct your students to bring board paper, scissors and different colored yarn for the following class session. Each one should bring about 12 inches of the following colors:

- orange
- yellow
- white
- green
- red

Lesson 3



LET'S GET STARTED



10 mins

Before the class, select one exemplar mind map created in the previous session. Post the mind map on the board and do a quick review of the concepts.

GIFT TO GLOW



30 mins

1. Inform students that throughout the program they will design materials and merchandise to go with their advocacy campaign. Examples of campaign materials and merchandise are:
 - a. banners
 - b. posters
 - c. brochures
 - d. flyers
 - e. t-shirts and giveaways with slogans
2. Tell your students that they do not have to mass produce any of these materials and merchandise, they only have to create samples which will be showcased at the end of the program. They can choose what kind of materials and merchandise they will produce.
3. Remind the class that their campaign materials and merchandise should reflect their findings from their data gathering activities in Module 1. In other words, whatever materials and merchandise they create should be connected to what their community needs to learn about basic nutrition concepts. Their materials should also address nutrition habits that are of concern.
4. For this session, you will give them an example of one product: a Glow Bracelet. Tell the students to bring out their board paper, colored yarn and scissors. Write the colors represented by the nutrients for the bracelet on the board:
 - a. orange for vitamin A
 - b. yellow for vitamin C
 - c. white for vitamin E
 - d. green for vitamin K
 - e. red for iron
5. Using different combinations of colors, they will create bracelets that have a special meaning. For example:
 - a. Vitamin K and iron both contribute to healthy blood, while vitamin C contributes to wound healing. Iron also contributes to preventing fatigue and weakness. A bracelet made with the colors green (vitamin K) and red (iron) and yellow (vitamin C) can signify Healing and Vitality.
 - b. Vitamins A and C both contribute to strengthening immunity. A bracelet made with the colors orange (vitamin A) and yellow (vitamin C) can stand for Wellness.
6. To make these bracelets, students will simply tie together one end of the pieces of yarns, and make a braid until the desired length is achieved.
7. Each bracelet should come with a gift card, made from the board paper. The gift card indicates the name of the bracelet's giver and recipient. The giver should identify what the bracelet signifies, and in the message section, write a brief explanation of why they are giving the bracelet to the recipient. Here is one example:

<p>To: Susan From: Luisa</p> <p>This bracelet represents:</p> <p>Healing</p>	<p>Message:</p> <p>Dear Susan. This green, red, and yellow bracelet represents Vitamin K, Iron, and Vitamin C. I pray everyday for your healing, and that each day your strength will be renewed.</p> <p>Love, Luisa</p>
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CAMPAIGN FOR GLOW



20 mins

1. In the remaining 20 minutes of this session, tell your students to brainstorm other ideas for campaign materials and merchandise that they will produce.
2. They should refer back to the notes of their data gathering from Module 1, and look at their interviewees' responses that are related to Glow foods. Ask them the following questions, which may help them identify key messages for their campaign materials and merchandise:
 - a. What are the common / typical responses of your interviewees when asked what they know about Glow foods?
 - b. What concepts did your interviewees appear to lack knowledge about? What concepts do they need more information on?
 - c. Describe their eating habits when it comes to fruits and vegetables. Are they following proper nutrition guidelines?
 - d. What can we say to convince our community members to improve the quality and quantity of Glow foods in their diet?
3. Remind the class that they can come up with banners, posters, brochures, flyers, and giveaways containing campaign slogans. Their materials and merchandise must increase their community's knowledge on Glow foods while addressing misconceptions and nutrition habits that need to be changed.
4. Allow them to decide what supplies they will need, and who will be responsible for bringing those supplies in the next class session. Before dismissing the class, go around to each group to make sure that each member of the group is clear on his or her assigned supplies.

Lesson 4

The entire class session will be used for creating campaign materials and merchandise related to Glow foods. As each group works on their campaign materials, go around and ask each group how their materials and merchandise are connected to the information they gathered from their community.

Before dismissing the class, allow some groups to share what they have produced. At the end of the session, each group may place their finished products in their group's box. You may look through their boxes after class to assess each group's outputs.