

GROW FOODS

LEARNING OBJECTIVES

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

- explain the importance of Grow foods on adolescent health and development.
- describe specific proportions of Grow foods that meet the nutritional requirements of adolescents.

MATERIALS

Lesson 1

- video: **Module 3 Grow Foods**
- file: **GR07_M03_Lesson 1 Powerpoint**
- Meal Tracker

Lesson 2

- Meal Trackers (from previous sessions)
- S.M.A.R.T. Goals (from previous session)
- coloring materials

Lesson 3

- S.M.A.R.T. Goals (from previous session)

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. Grow foods provide our bodies with protein. Protein is made of different building blocks called amino acids. Our body needs amino acids, especially during this period when our bones and muscles are rapidly growing and developing. These amino acids also help wounds and injuries heal, which is particularly important for those who have active lifestyles, like athletes.
2. According to the Pinggang Pinoy® guide, approximately one-fourth of our plate should consist of proteins. There are many different sources of protein:
 - a. meat – pork, beef, chicken
 - b. seafood and fish
 - c. eggs
 - d. plant sources – *tokwa*, nuts, beans, legumes
 - e. milk and dairy products (e.g. yoghurt and cheese)
3. It is important that we get our protein from all of these different sources, and not just one or two, because different sources have different kinds of amino acids and additional nutrients such as vitamins and minerals. Eating different sources of protein raises your chances of getting all the amino acids that your body needs.
 - a. Complete proteins – contain all the amino acids needed by the body (e.g. egg, meat, fish, poultry, milk). These promote growth and development, and maintain life.
 - b. Partially complete proteins – contain some, but not all, amino acids needed by the body (e.g. legumes and nuts). These maintain life but not growth and development.
 - c. Incomplete proteins – contains very little amino acids needed by the body (e.g. gelatin). These cannot support neither life nor growth.

4. Listed below are other nutrients that can be found in Grow foods and why they are essential to the body:

a. 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. Significant animal sources of iron: red meats, liver, fish, poultry, shellfish, eggs, legumes

b. Zinc (zinc deficiency)

i. Function: normal taste, wound healing, sperm production, strengthens immunity and secondary sexual maturation

ii. Significant animal sources of zinc: seafood (e.g. oyster, crab), beef, milk and dairy products (e.g. yoghurt, cheese), whole grain

c. Iodine (iodine deficiency disorder)

i. Function: component in thyroid hormones which help regulate growth, development and metabolism

ii. Significant sources of iodine: iodized salt, seafood, dairy products

d. Vitamin A

i. Function: maintains clear vision, keeps skin smooth, helps in development of bones and teeth, strengthens immunity

ii. Significant animal sources of vitamin A: fortified milk, cheese, eggs, liver

e. Vitamin B (B1, B2, B3, B6 and B12)

i. Function: helps in energy metabolism

ii. Significant sources of vitamin B: milk products (e.g. yogurt, cheese), liver, eggs, meat, poultry, fish

f. Vitamin E

i. Function: antioxidant (a substance that prevents or delays some types of cell damage)

ii. Significant animal sources of vitamin E: liver, egg yolks

g. Vitamin K

i. Function: aids in blood clotting

ii. Significant animal sources of vitamin K: liver, milk

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

a. Males (any of the following):

- i. 2 pieces of medium variety of fish (e.g. *galunggong*)
- ii. 2 slices of large variety of fish (e.g. *bangus*)
- iii. 2 pieces of small chicken leg
- iv. 2 servings of lean meat (30g)
- v. 2 pieces of *tokwa*. 6x6x2 cm
- vi. 1 piece of small chicken egg and 1 piece of any food item mentioned above

b. Females (any of the following):

- i. 1 piece medium variety of fish (e.g. *galunggong*)
- ii. 1 slice of large variety of fish (e.g. *bangus*)
- iii. 1 piece chicken leg
- iv. 1 serving of lean meat. 30g (e.g. chicken, pork, beef)
- v. 1 piece of *tokwa*. 6x6x2 cm
- vi. 1 piece of small chicken egg

Lesson 1



LET'S GET STARTED

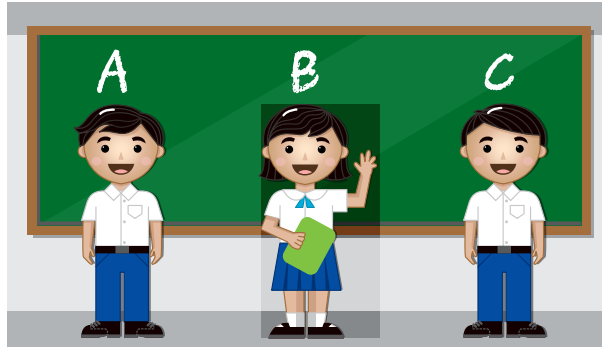


20 Mins.

Announce the top three groups from the previous lesson and review the class's tally of points - if you have not done so - before proceeding with the lesson.

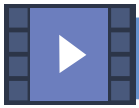
Use this warm-up game to check what your students recall from previous lessons about Grow foods.

1. Write the letters A, B, and C across the blackboard:



2. Ask the questions below one at a time, instructing the students to stand in front of the letter that they think represents the best answer. After everyone has made their decision, read the question once more and reveal the correct answer. Students who do not get the correct answer may sit down.

Questions	Answers
The term 'Grow foods' refer to food that ...	A - Helps you build strong bones, teeth and muscles (<i>correct answer</i>) B - Gives you energy to run, jump, and play C - Gives you healthy skin, bright eyes, and a healthy digestive system
Why is protein called the building block of growth?	A - It helps our bodies grow bigger and stronger B - It helps repair tissues and heal injuries C - Both A & B (<i>correct answer</i>)
Which of these is NOT a Grow food?	A - Gelatin B - <i>Suman</i> (<i>correct answer</i>) C - Chicken
Each time you eat a meal, about how much of your plate should consist of Grow foods?	A - One-half of your plate B - One-third of your plate C - Approximately one-fourth of your plate (<i>correct answer</i>)
Which of these is NOT an example of a complete protein?	A - Chicken B - Egg C - Legumes (<i>correct answer</i>)
Which of these IS an example of an incomplete protein?	A - Bread (<i>correct answer</i>) B - <i>Monggo</i> C - Pork



WATCH & LEARN



20 Mins.

1. You will need the video **Module 3 Grow Foods** for this lesson. Before playing the video, ask the students to think of the answers to the following questions as they watch. They may take note of their answers in their Health notebook:
 - a. Why do adolescents need Grow foods? (*possible answer: The period of adolescence is a period of rapid growth, particularly in height and body mass. Protein is needed to support that rapid growth.*)
 - b. What other nutrients do we get from Grow foods? (*answer: vitamin E, K, A, zinc, B vitamins and iodine*)
2. After watching the video, give students a few minutes to compare their notes with their seatmates' notes. While comparing notes, they should look for key points in their seatmates' notes that they were not able to include in their own notes. They can add the points that they missed to their own notes.
3. Call on some students to share some of the key points that they missed while watching the video, which they were able to get from their seatmate.

NOTE TO TEACHER

Some students may find it difficult to capture all the important points in a video just by watching it once. Each time your class watches a video, allow your students to compare notes to help each other identify points that they missed and add these points to their own notes.



LISTEN & LEARN



20 Mins.

1. Use the file **GR07_M03_Lesson 1 Powerpoint** for the remainder of this lesson.
2. This presentation talks about various types of protein sources. It also describes other vitamins and nutrients derived from Grow foods, and the right portions of Grow foods that adolescents should aim to eat with each meal.
3. Instruct your students to again take notes. After the lecture, give students a few minutes to compare their notes with their seatmates' notes to look for key points they may have missed.
4. Tell them to study their notes for the next few days. They will refer to these notes again in Lessons 3 and 4.

LET'S WRAP THIS UP

Call on some students to share one thing that they will remember from today's lesson.



Before dismissing the class, instruct the students to take out another Meal Tracker from their Health Portfolio. They should label this sheet Week 3 and resume tracking their meals throughout the week.

Lesson 2



LET'S GET STARTED



20 Mins.

1. Instruct your students to bring out their Meal Trackers for Weeks 1, 2 and 3. Have them exchange trackers with the person beside them.
2. Ask the students to evaluate the Glow foods eaten by the person whose Meal Trackers they are holding. Ask them, "Has there been a steady improvement in the quantity and variety of Glow foods this person consumed?" Through a show of hands, quickly survey whether more people answer "yes" to this question than "no".

3. Next, ask your students to evaluate the Grow foods eaten by the person whose Meal Tracker they are holding. Ask them to discuss the following among themselves:
 - a. Does each meal include the recommended portions of Grow foods, as stated in the powerpoint presentation shown in the last lesson?
 - b. Do the meals show a sufficient variety of protein sources?
3. After giving them time to share their thoughts with their seatmates, instruct the students to take out their Glow Goals from their Health Portfolio.



GROW GOALS



40 Mins.

1. They will again come up with a S.M.A.R.T. goal for improving their Grow food intake.
 - a. They can practice writing their goal on a scratch sheet of paper. Allow the students to help each other come up with Grow Goals.
 - b. Once they are sure their goal fits the S.M.A.R.T. criteria, they can write down that goal in the second quadrant of their bond paper and illustrate it.
2. Ask some students to share their goals with the rest of the class. As they share, invite the class to provide suggestions that will help the student achieve their goal.



Before dismissing the class, instruct the students to place their bond paper with the Glow & Grow Goals in their Health Portfolio. They must aim to achieve their goals throughout the week. Tell your students that, in the next session, they will be asked to report how well they achieved their goals.

Lesson 3



LET'S GET STARTED



15 Mins.

1. Instruct your students to bring out their Grow Goals from the previous session. Have them discuss the following with their seatmate:
 - a. Were you able to achieve your Grow Goal from last week?
 - b. If yes, how did you do it?
 - c. If no, what factors made it difficult for you to achieve your goals?
2. Give your students a few minutes to reflect on those questions. Again, challenge them to assess whether the factors that made it difficult for them to achieve their goals were within or outside their control.
3. After giving your students a few minutes to reflect on those questions, instruct your students to go back to their groupings from the previous session.



GROW ADS – PART 1



45 Mins.

1. Challenge your students to come up with ways to convince a fellow adolescent to improve their eating habits when it comes to eating protein. They can choose from any of these outputs:
 - a. a 10-minute skit with a script, costumes, and props
 - b. a 3- to 5-minute video documentary that they will create throughout the week and present in school
 - c. a scrapbook with pictures and illustrated short essays
2. Their output or presentation must:
 - a. provide information about the health benefits of Grow foods on adolescent growth and development.
 - b. provide information about the vitamins and minerals associated with meat, fish, seafood, nuts and legumes.
 - c. explain the importance of eating a wide variety of protein sources.
3. Explain to the class how you will grade their output (see Rubrics for group presentations). Allow each group to discuss and plan for this requirement for the remainder of the session.

LET'S WRAP THIS UP

Call on some students to share their thoughts on this question, "Are healthy eating habits easy to develop? Explain your answer."

Lesson 4



GROW ADS – PART 2

Each group will present their output during this session. After all the presentations, announce the top three outputs and review the class's tally of 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.