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High School Nutrition Education Modules for Homeschooling

Miranda J. Baker
Georgia State University

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Instructors Guide
Modules 1 – 16

Each module is complete with learning objectives, lesson plans, hands-on activities, and assignments. This nutrition curriculum for the homeschool setting allows for the high school student to learn through hands-on activities with foods they consume daily. The curriculum is designed for the student to identify gaps in their diet and learn how to make life-long changes. A multi-component approach involving dietary modification and advocacy for a healthy lifestyle, such as regular physical activity, minimizing screen time, and behavioral interventions, have been found beneficial in preventing obesity. Immediate consequences of being overweight and obese during high school age include poor body image and self-esteem, and long-term consequences include risk factors of weight-related diseases as an adult. Improving eating habits and physical activity during this transitional stage of life can positively impact schools and surrounding communities.

1. Kitchen safety

The introductory lesson is about kitchen safety to educate the students on the potential kitchen hazards to prevent injury and illness in this course. The students are to watch demonstration videos on basic knife skills and complete a worksheet on proper food temperatures.

Note: *Students must understand the basis of kitchen safety before getting started with this course. Being aware of the potential kitchen hazards can prevent injury and illness.*

Learning objectives:

- Demonstrate how to properly handle a knife.
- Demonstrate the different types of cuts.
- Verbalize the safe ways to defrost foods.
- Describe the appropriate internal temperature of foods when cooked.

Lesson:
Students will learn how to safely hold a knife and basic knife cuts. Students will learn the proper storage temperatures of foods and when they are safe to eat. Finally, the student will practice their knife skills and cook the chicken to 165°F with a chicken and stir-fry recipe.

- Watch this video for an introduction: https://www.youtube.com/watch?v=G-Fg7l7G1zw
- This video for more detail and information: https://www.youtube.com/watch?v=YrHpeEwk_-U
- Follow along with the first video and practice your knife skills.
- Review the "*Food Temperature*" handout and complete the worksheet.

Recipe: Chicken & Vegetable Stir-Fry

Food Safety Information

Foods are safe while frozen. However, when they begin to thaw and reach 40°F – 140°F, bacteria that may be present can start to grow. (The Danger Zone)

Note: It is safe to cook foods from frozen!

- The cooking will take approximately 50% longer.

Three Safe Ways to Defrost Food:

Perishable foods should never be thawed on the counter, or in hot water!

1. It's best to plan and thaw in the **refrigerator.**
2. **Cold water –** Faster than the refrigerator but requires more attention.
   a. The food must be in a leak-proof package or plastic bag.
   b. Submerge in cold tap water.
   c. Change the water every 30 minutes until it is completely thawed.
   d. Foods should be cooked before refreezing.
3. **Microwave** – plan to cook immediately after.

To ensure food is safe to eat, you must check the **internal temperature**. The best way is to insert the thermometer into the thickest part of the meat.

Safe Temperatures:

Beef, Pork, Veal, Fish, and Shellfish:

- 145°F

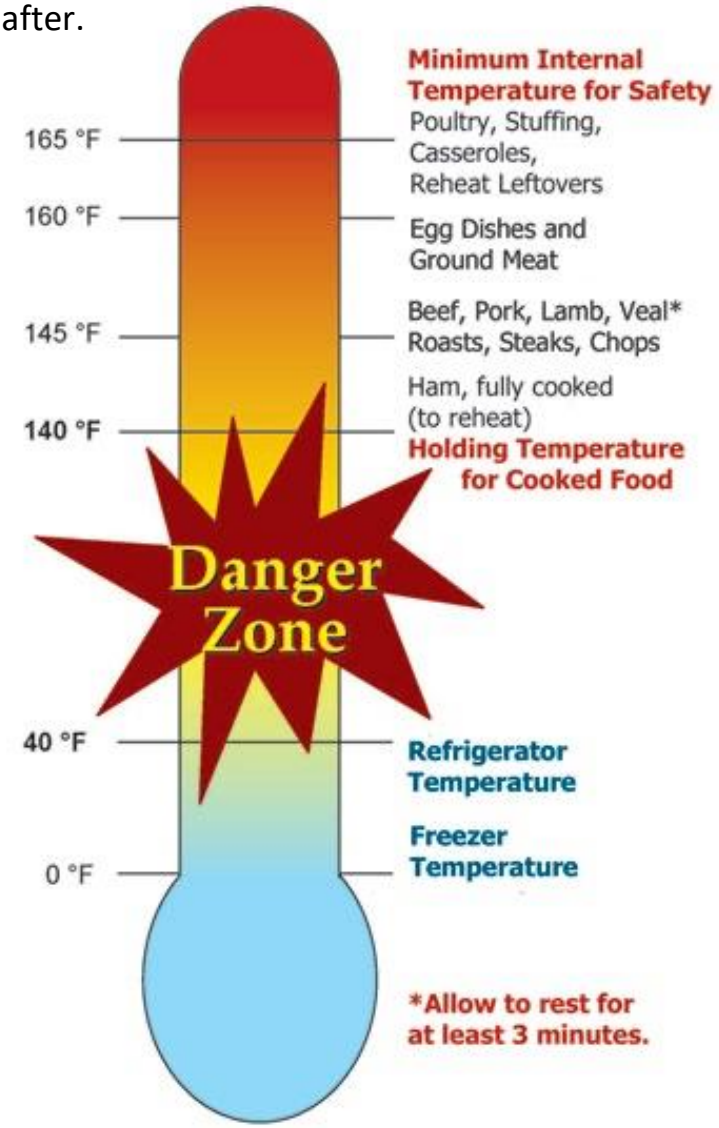
Ground Meats and Eggs:

- 160°F

All Poultry and Leftovers:

- 165°F

Do not leave food at room temperature for more than two hours.



Adapted from: https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/food-safety-basics/bigthaw-safe-defrosting-methods
https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/food-safety-basics/safe-temperature-chart

Test your Knowledge!

Knife Skills and Food Safety Worksheet

1. How can you stabilize a cutting board?

2. What form should the hand not holding the knife take while cutting?

3. Name three different types of cuts.

4. What is the temperature range in food where bacteria is most likely to grow?

5. Name the three ways to defrost food.

6. It safe to cook from frozen. True or False.

7. List the internal temperatures for chicken, beef, pork, and seafood when you know they are safe and ready to eat.

8. What is the maximum amount of time that food can be left out at room temperature?

Knife Skills and Food Safety Worksheet Answer Key

1. How can you stabilize a cutting board? A cutting board can be stabilized by placing a damp paper towel or kitchen towel underneath the cutting board.

2. What form should the hand not holding the knife take while cutting? The claw or the bridge. The hand should be shaped as a claw with the fingertips tucked in to protect them. Form a bridge over the ingredient with your hand, making sure there's plenty of room for the knife to fit underneath. Hold the item securely with your fingers on one side and your thumb on the other.

3. Name three different types of cuts. Slice, julienne/French, dice, mince, chop, cube, chiffonade.

4. What is the temperature range in food where bacteria is most likely to grow? 40 - 140°F

5. Name the three ways to defrost food.

- It's best to plan and thaw in the refrigerator.
- Cold water – Faster than the refrigerator but requires more attention.
    a. The food must be in a leak-proof package or plastic bag.
    b. Submerge in cold tap water.
    c. Change the water every 30 minutes until it is completely thawed.
    d. Foods should be cooked before refreezing.
- Microwave – plan to cook immediately after.

6. It safe to cook from frozen. True or False. True

7. List the internal temperatures for chicken, beef, pork, and seafood when you know they are safe and ready to eat.
   Beef, Pork, Veal, Fish, and Shellfish: 145°F
   Ground Meats and Eggs: 160°F
   All Poultry and Leftovers: 165°F

8. What is the maximum amount of time that food can be left out at room temperature? 2 hours.

2. Building a Plate

MyPlate offers a framework to demonstrate and explain the importance of consuming nutrient-rich foods and beverages. Students will complete a two-part activity. The first is to review the components of MyPlate and identify at least three examples from each category fruits, vegetables, protein, grains, and dairy. The second is to use the template provided to draw the sections of each food group and list the foods they typically eat in the correct section. If a food group is empty, the students are to brainstorm foods that meet the missing category. Students should select foods they would like to try and then research a recipe for that ingredient.

Learning objectives:

- Describe the components of MyPlate.
- Provide examples of foods in each food group.
- Demonstrate building a plate that models MyPlate.
- Identify an item from a food group and a recipe to try something new.

Lesson:

- Review the Components of MyPlate
- Look around your kitchen and identify examples of food in each category (fruits, vegetables, protein, grains, and dairy)
- Fill out your "MyPlate"
    - Draw the sections of each food group
    - Fill in those sections of the foods you typically eat.
    - If one space is empty, brainstorm foods to fill in that you would like to try or eat more of.
    - Choose one of the foods you identified that you would like to try.
    - Look up a recipe of interest and try it!

3. Protein

Foods considered a protein include seafood, meat, poultry, eggs, beans, peas, lentils, nuts, seeds, and soy products. Protein provides the body with nutrients to maintain health. Many Americans get enough protein from meat, poultry, and eggs. However, many do not meet the recommendations for seafood or nuts, seeds, and soy products, which can provide the body with unsaturated fats, dietary fiber, and vitamin D. Red meats and processed meats are typically high in sodium and saturated fats that should be limited. This lesson will educate the students on different sources of protein, the importance of understanding the difference, and how much is needed for their age.

Learning objectives:

- Identify different sources of protein.
- Explain how much protein is needed each day.
- Explain why protein is necessary.
- Verbalize strategies to vary protein intake.

Lesson:

- Teens and protein
- Vary your protein
- Protein handout, activity, and worksheet

Citrus Salmon Fillets Recipe

Sources of Protein:

- Protein Foods include seafood, meat, poultry, and eggs; beans, peas, lentils; and nuts, seeds, and soy products. Beans, peas, and lentils are also part of the Vegetable Group.
- The amount of protein foods you need depends on your age, sex, height, weight, and physical activity.
    - Many Americans get the right amount of protein needed from meat, poultry, and eggs but do not meet the recommendations for seafood or nuts, seeds, and soy products.
    - Meeting this can help increase the amount of important nutrients your body needs, like unsaturated fats, dietary fiber, and vitamin D. It also helps limit the amount of sodium and saturated fats you get from processed meat and poultry.

- Meat and poultry choices should be lean or low-fat, like 93% lean ground beef, pork loin, and skinless chicken breasts.
- Choose seafood options higher in healthy fatty acids (omega-3s), such as salmon, anchovies, and trout.

Daily Recommendation* in Ounce-Equivalents (oz-equiv)		
Toddlers	12 to 23 months	2 oz-equiv
Children	2-4 yrs	2 to 5 oz-equiv
	5-8 yrs	3 to 5½ oz-equiv
Girls	9-13 yrs	4 to 6 oz-equiv
	14-18 yrs	5 to 6½ oz-equiv
Boys	9-13 yrs	5 to 6½ oz-equiv
	14-18 yrs	5½ to 7 oz-equiv
Women	19-30 yrs	5 to 6½ oz-equiv
	31-59 yrs	5 to 6 oz-equiv
	60+ yrs	5 to 6 oz-equiv
Men	19-30 yrs	6½ to 7 oz-equiv
	31-59 yrs	6 to 7 oz-equiv
	60+ yrs	5½ to 6½ oz-equiv

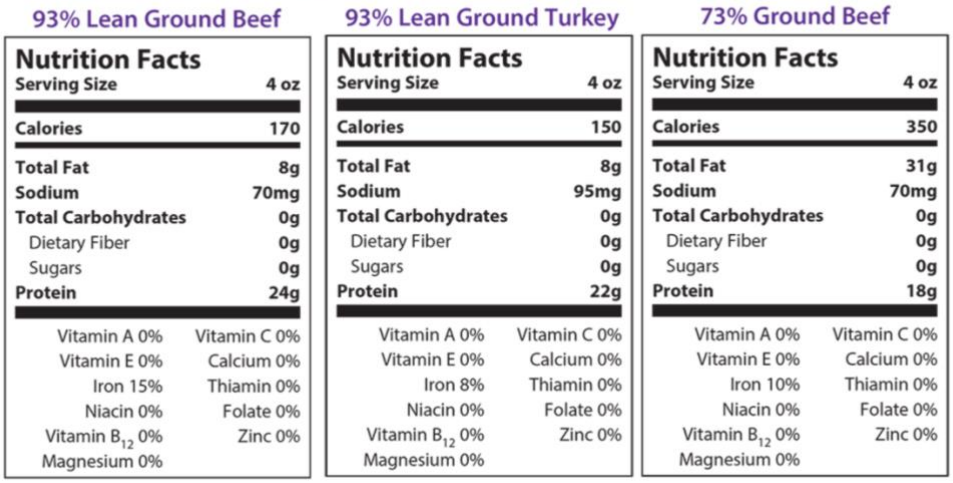
The following examples count as 1 ounce-equivalent from the Protein Foods Group:

- 1 ounce of meat, poultry, or fish
- ¼ cup cooked beans
- 1 egg
- 1 tablespoon of peanut butter
- ½ ounce of nuts or seeds

Adapted from: https://www.myplate.gov/eat-healthy/protein-foods
https://agclassroom.org/matrix/lesson/575/

Protein Activity

Protein Food Labels



93% Lean Ground Beef

Nutrition Facts	
Serving Size	4 oz
Calories	170
Total Fat	8g
Sodium	70mg
Total Carbohydrates	0g
Dietary Fiber	0g
Sugars	0g
Protein	24g

Vitamin A 0%	Vitamin C 0%
Vitamin E 0%	Calcium 0%
Iron 15%	Thiamin 0%
Niacin 0%	Folate 0%
Vitamin B_{12} 0%	Zinc 0%
Magnesium 0%	

93% Lean Ground Turkey

Nutrition Facts	
Serving Size	4 oz
Calories	150
Total Fat	8g
Sodium	95mg
Total Carbohydrates	0g
Dietary Fiber	0g
Sugars	0g
Protein	22g

Vitamin A 0%	Vitamin C 0%
Vitamin E 0%	Calcium 0%
Iron 8%	Thiamin 0%
Niacin 0%	Folate 0%
Vitamin B_{12} 0%	Zinc 0%
Magnesium 0%	

73% Ground Beef

Nutrition Facts	
Serving Size	4 oz
Calories	350
Total Fat	31g
Sodium	70mg
Total Carbohydrates	0g
Dietary Fiber	0g
Sugars	0g
Protein	18g

Vitamin A 0%	Vitamin C 0%
Vitamin E 0%	Calcium 0%
Iron 10%	Thiamin 0%
Niacin 0%	Folate 0%
Vitamin B_{12} 0%	Zinc 0%
Magnesium 0%	

1. Compare the Nutrition Facts Labels of the **93% Lean Ground Beef** and the **93% Lean Ground Turkey label**. What is similar? What is different?

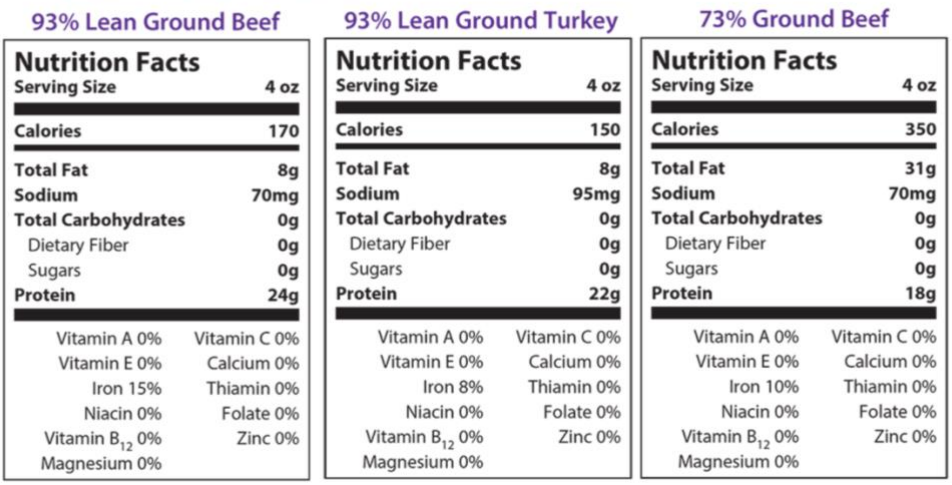
2. Compare the Nutrition Facts Label for the **93% Lean Ground Beef** to the **73% Ground Beef label.** What is similar? What is different?

3. Compare the three Nutrition Facts Labels. Which protein source is a healthier option? Why?

Adapted from: https://www.myplate.gov/eat-healthy/protein-foods
https://agclassroom.org/matrix/lesson/575/

Protein Activity Answer Key

Protein Food Labels



93% Lean Ground Beef

Nutrition Facts	
Serving Size	4 oz
Calories	170
Total Fat	8g
Sodium	70mg
Total Carbohydrates	0g
Dietary Fiber	0g
Sugars	0g
Protein	24g

Vitamin A 0%	Vitamin C 0%
Vitamin E 0%	Calcium 0%
Iron 15%	Thiamin 0%
Niacin 0%	Folate 0%
Vitamin B_{12} 0%	Zinc 0%
Magnesium 0%	

93% Lean Ground Turkey

Nutrition Facts	
Serving Size	4 oz
Calories	150
Total Fat	8g
Sodium	95mg
Total Carbohydrates	0g
Dietary Fiber	0g
Sugars	0g
Protein	22g

Vitamin A 0%	Vitamin C 0%
Vitamin E 0%	Calcium 0%
Iron 8%	Thiamin 0%
Niacin 0%	Folate 0%
Vitamin B_{12} 0%	Zinc 0%
Magnesium 0%	

73% Ground Beef

Nutrition Facts	
Serving Size	4 oz
Calories	350
Total Fat	31g
Sodium	70mg
Total Carbohydrates	0g
Dietary Fiber	0g
Sugars	0g
Protein	18g

Vitamin A 0%	Vitamin C 0%
Vitamin E 0%	Calcium 0%
Iron 10%	Thiamin 0%
Niacin 0%	Folate 0%
Vitamin B_{12} 0%	Zinc 0%
Magnesium 0%	

- 93% Lean Ground Beef:
  - Greatest amount of protein
  - Greatest amount of iron
  - 70 mg sodium
- 93% Lean Ground Turkey:
  - Least amount of calories
  - Least amount of iron
  - 95 mg sodium
- 73% ground beef:
  - Greatest amount of calories
  - Least amount of protein
  - 70 mg sodium

- All three have the same serving size, total carbohydrates, fiber, and sugar.
- The 93% ground beef and lean ground turkey have the same amount of total fat.
- Both of the ground kinds of beef have the same amount of sodium.
- All have 0% listed vitamins and minerals except for iron.

Which protein source is a healthier option? Why?

The 93% ground beef because it has the least amount of sodium compared to the 93% Lean Ground Turkey. Both are a better choice than the 73% ground beef because it has less fat. The 93% ground beef also has the greatest amount of iron.

Test Your Protein Knowledge

1. What are common sources of protein?

2. What are non-meat sources of protein?

3. Based on your age, how much protein should you consume each day?

4. What two food groups are beans, peas, and lentils counted in?

5. All adults need the same amount of food from the Protein Foods Group. True or False.

6. Most Americans get enough protein in their diets. True or False.

7. Protein Foods can contribute to sodium intake. True or False.

Adapted from: https://www.myplate.gov/eat-healthy/protein-foods
https://agclassroom.org/matrix/lesson/575/

Test Your Protein Knowledge!

1. What are common sources of protein? Seafood, meat, poultry, and eggs.
2. What are non-meat sources of protein? Beans, peas, lentils; and nuts, seeds, and soy products.
3. Based on your age, how much protein should you consume each day?

Daily Recommendation* in Ounce-Equivalents (oz-equiv)		
Toddlers	12 to 23 months	2 oz-equiv
Children	2-4 yrs	2 to 5 oz-equiv
	5-8 yrs	3 to 5½ oz-equiv
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Women	19-30 yrs	5 to 6½ oz-equiv
	31-59 yrs	5 to 6 oz-equiv
	60+ yrs	5 to 6 oz-equiv
Men	19-30 yrs	6½ to 7 oz-equiv
	31-59 yrs	6 to 7 oz-equiv
	60+ yrs	5½ to 6½ oz-equiv

4. What two food groups are beans, peas, and lentils counted in? Protein and vegetable.
5. All adults need the same amount of food from the Protein Foods Group. False.
6. Most Americans get enough protein in their diets. True.
7. Protein Foods can contribute to sodium intake. True.

4. Fat

Not all fat intake results in poor health. Consuming saturated fat in excess can increase the risk of heart disease and stroke. Unsaturated fats can improve blood cholesterol and decrease inflammation. As mentioned in the protein lesson, many Americans do not meet the recommendations for seafood or nuts, seeds, and soy products, which provide the body with unsaturated fats, dietary fiber, and vitamin D. This lesson will teach the students about the different sources of fat and how to increase the consumption of unsaturated fats and limit saturated fats.

Learning objectives:

- Verbalize the difference between unsaturated, saturated, and trans-fat.
- Identify sources of each type of fat
- Explain which fats should be consumed more often and which to be limited.

Lesson:

- Answer the pretest questions on the "*Fat Activity and Worksheet*," then watch the following video.
    - https://www.youtube.com/watch?v=QhUrc4BnPgg&t=257s

- Answer the post-video questions and use the PowerPoint to review if needed (see PowerPoint document).
- Rethink Fats
- Complete the "test your knowledge" on the fat activity and worksheet.

Mozz Totz Recipe

Before watching the video, mark the "pre-video" column with "true" or "false." After watching the video, try again in the post-video column

Pre-video	Statements	Post-video
	Olive oil is a better fat for you than pancakes.	
	The amount of fat we eat impacts our weight & health more than the type(s) of fats we eat.	
	Fat is made up of molecules called triglycerides.	
	Triglycerides are all alike.	
	Fatty acid chains determine if fats are solid or liquid, if they go rancid quickly or how good or bad it is for you.	
	Most unsaturated fats are good for you while saturated fats are bad if eaten in excess.	
	Trans-fats don't go rancid and are more stable than ___ fats and can change texture in foods and are terrible for your health.	
	Saturated fats are worse for you than trans- fats.	
	The only way you know if trans-fats are in your foods is if you see the words "partially hydrogenated" in the ingredient list.	
	The FDA allows manufacturers to say a food has 0 grams of trans-fats even if it has .5 grams.	
	Olive oil has trans-fats while pancake mix does not.	

Adapted from: https://www.familyconsumersciences.com/2016/10/types-of-fat-the-good-the-bad-the-ugly/

THE THREE TYPES OF FATS

Adapted from: https://www.familyconsumersciences.com/2016/10/types-of-fat-the-good-the-bad-the-ugly/

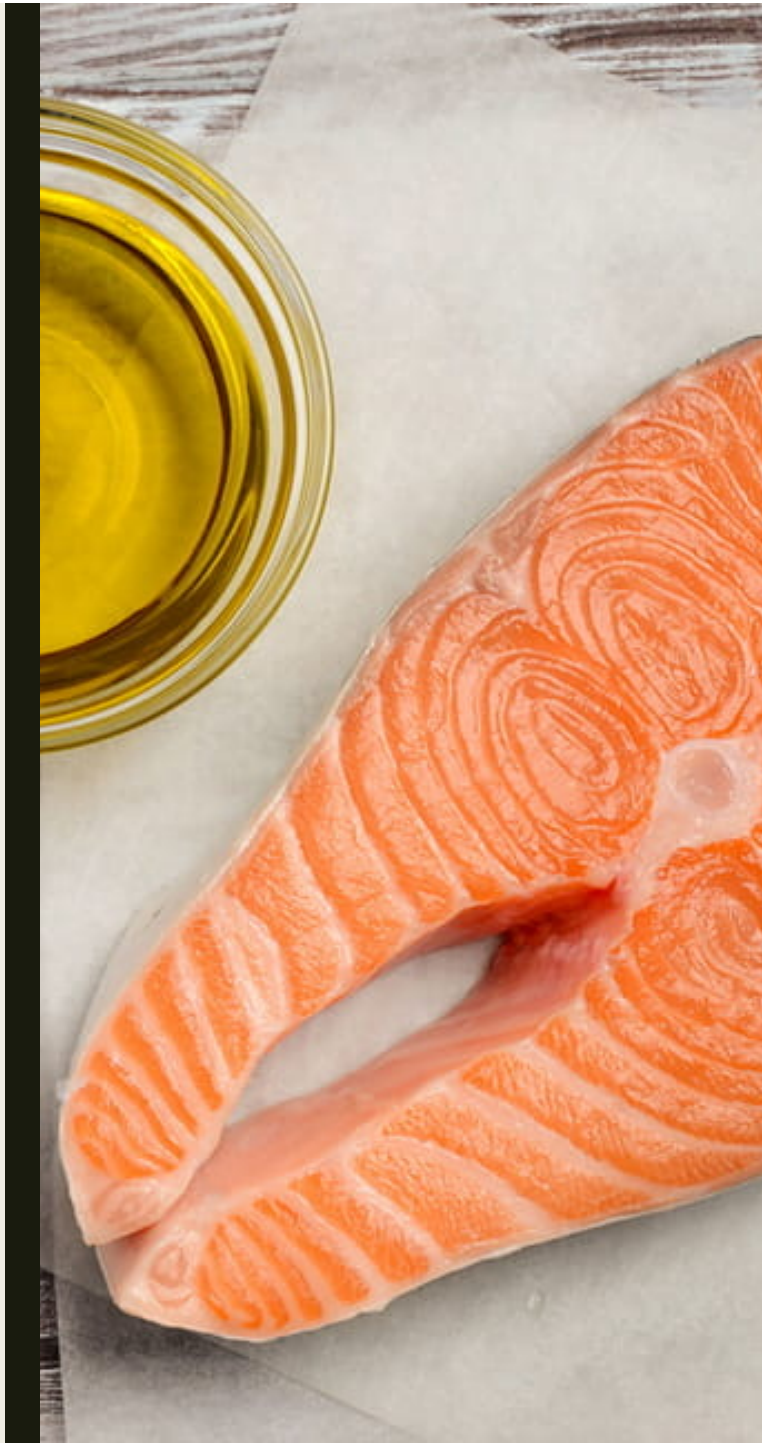
Unsaturated Fats

COME FROM PLANTS

LIQUID AT ROOM TEMPERATURE.

POSITIVE IMPACT ON HEALTH IF EATEN IN MODERATION.

INCREASES GOOD CHOLESTEROL (HDL) LEVELS AND DECREASES BAD CHOLESTEROL (LDL) LEVELS.

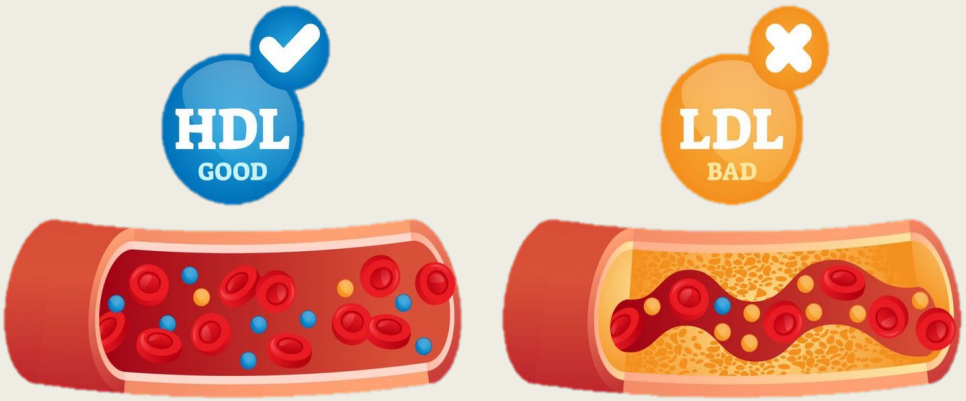


Saturated Fats

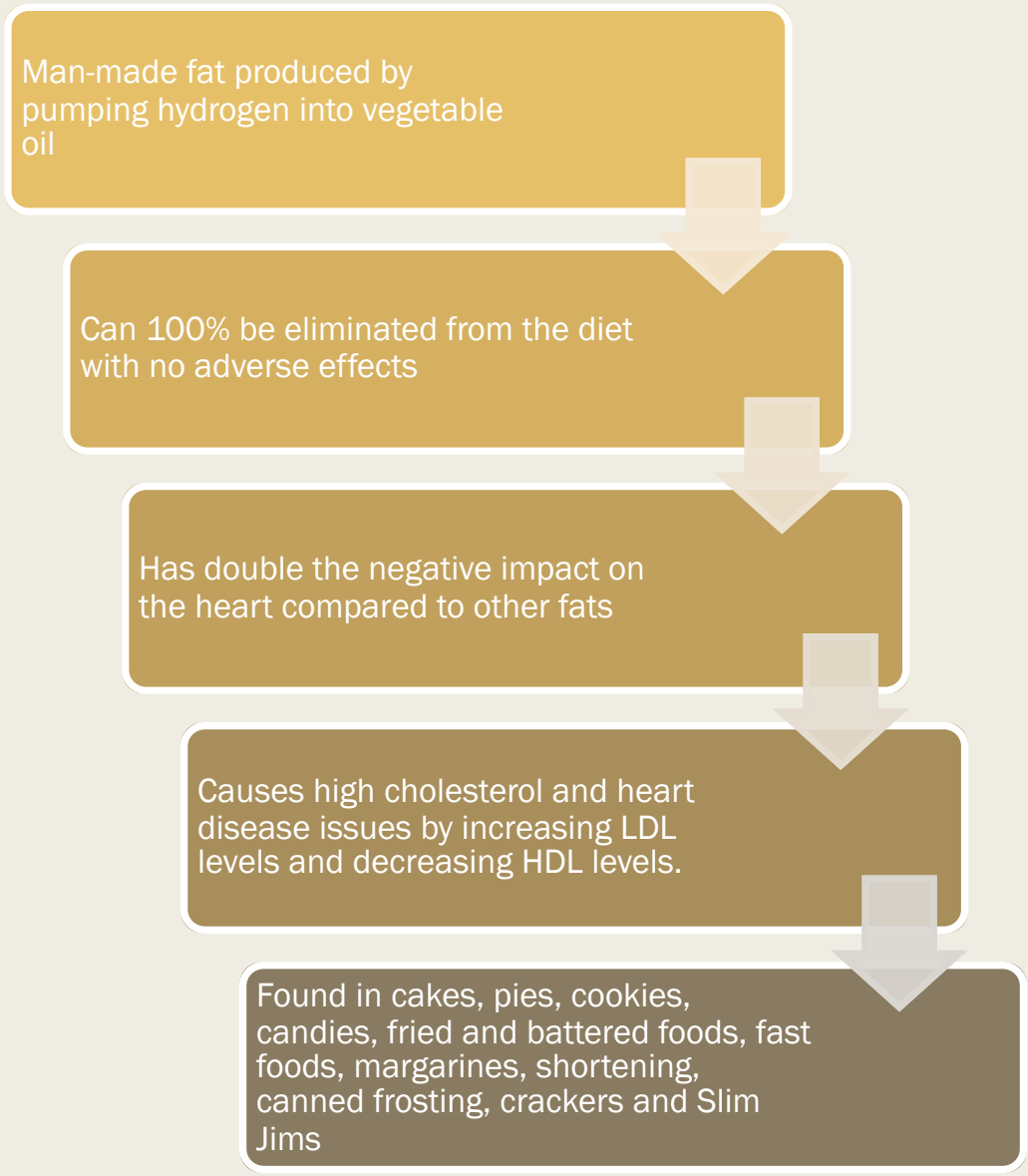
- Come from animal sources
- Solid at room temperature.
- Some plant sources are good fats like palm & coconut oil
- Examples include various fatty meats, butter, cheese, eggs, dairy products.

Saturated Fats Continued

- Negative impact on the diet because most American's get too much
- Increases LDL levels in the blood.



Trans-fats


Man-made fat produced by pumping hydrogen into vegetable oil
Can 100% be eliminated from the diet with no adverse effects
Has double the negative impact on the heart compared to other fats
Causes high cholesterol and heart disease issues by increasing LDL levels and decreasing HDL levels.
Found in cakes, pies, cookies, candies, fried and battered foods, fast foods, margarines, shortening, canned frosting, crackers and Slim Jims

Answer Key:

Pre video	Statements (Key)	Post video
	Olive oil is a better fat for you than pancakes.	True
	The amount of fat we eat impacts our weight & health more than the type(s) of fats we eat.	False
	Fat is made up of molecules called triglycerides.	True
	Triglycerides are all alike.	False
	Fatty acid chains determine if fats are solid or liquid, if they go rancid quickly or how good or bad it is for you.	True
	Most unsaturated fats are good for you while saturated fats are bad if eaten in excess.	True
	Trans-fats don't go rancid and are more stable than ___ fats and can change texture in foods and are terrible for your health.	True
	Saturated fats are worse for you than trans- fats.	False
	The only way you know if trans-fats are in your foods is if you see the words "partially hydrogenated" in the ingredient list.	True
	The FDA allows manufacturers to say a food has 0 grams of trans-fats even if it has .5 grams.	True
	Olive oil has trans-fats while pancake mix does not.	False

Fats: Test your Knowledge

1. Does the body need fat? Explain why.

2. What are the three major dietary fats?

3. What sources of protein contain high amounts of saturated fat, and which contain unsaturated fats?

4. Which fats increase bad cholesterol (LDL) in the blood and the risk of heart disease?

5. What type of fat is man-made, and its technical name?

Adapted from: https://www.familyconsumersciences.com/2016/10/types-of-fat-the-good-the-bad-the-ugly/

Fats: Test your Knowledge Answer Key

1. Does the body need fat? Explain why. Yes, the body cannot make fat on its own. Unsaturated fat increases good cholesterol (HDL) levels and decreases bad cholesterol (LDL) levels. Saturated and trans-fat does the opposite. Fat helps the body absorb fat-soluble vitamins such as vitamins A, D E, and K.

2. What are the three major dietary fats? Unsaturated fat, saturated fat, and trans-fat.

3. What sources of protein contain high amounts of saturated fat, and which contain unsaturated fats? Red meats, butter, cheese, eggs, and dairy products contain high amounts of saturated fat. Seafood, beans, peas, lentils; and nuts, seeds, and soy products contain unsaturated fats.

4. Which fats increase bad cholesterol (LDL) in the blood and the risk of heart disease? Saturated and trans fats.

5. What type of fat is man-made, and its technical name? trans fats, also known as partially hydrogenated oil.

5. Simple Carbohydrates

The term “carbohydrates” is often synonymous with sugar. Carbohydrates are essential for energy. There are two types of carbohydrates, simple and complex. This week will focus on simple carbohydrates. Simple carbohydrates are easy to digest, great for quick energy, and can be found in fruit and milk. However, simple carbohydrates can also include foods such as processed foods and foods with added sugar. Added sugars provide calories but lack vitamins, minerals, and fiber, which can lead to weight gain. During this lesson, students will learn about type 2 diabetes and the effects of added sugar on the body.

Learning objectives:

- Understand the difference between added sugar and naturally occurring sugar.
- Describe the health consequences of increased added sugar consumption.
    - Type 2 Diabetes
    - Cardiovascular disease (CVD)
    - Obesity
- Identify major sources of added sugar.

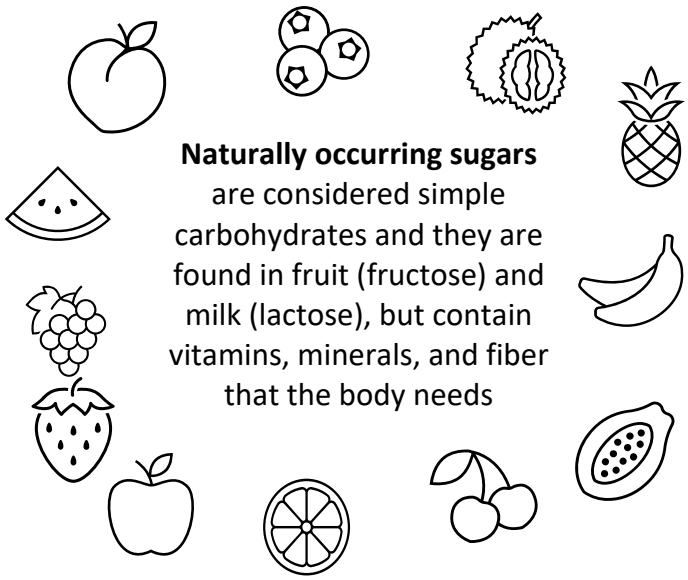
Lesson:

- Too Much Added Sugar
- Watch the following videos:
    - https://www.youtube.com/watch?v=4SZGM_E5cLI
    - https://www.youtube.com/watch?v=X9ivR4y03DE
- Complete the simple carbohydrates handout and worksheet
- Cut Down on Added Sugars

Angel Food Pastry with Fresh Berries and Whipped Cream Recipe

Simple Carbohydrate Handout

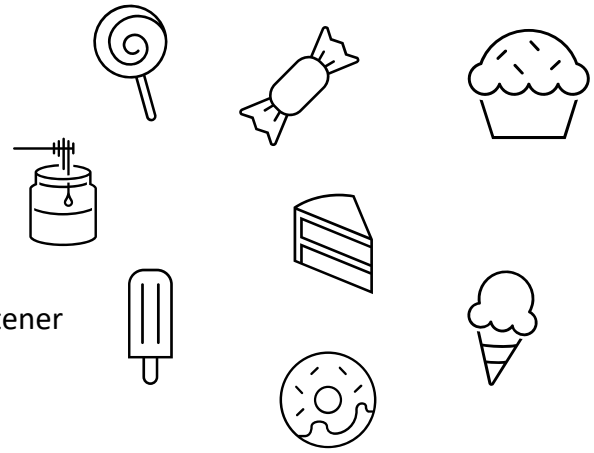
Carbohydrates are found in almost everything we eat and are an essential part of any diet and necessary to live. Carbohydrates are broken down into glucose, the body's preferred source of energy.



Another form of simple carbohydrates is **Added sugars**, which include any sugar or caloric sweetener that are *added* to foods or beverages during processing or preparation. Added sugars provide calories, but lack vitamins, minerals, and fiber, which can lead to weight gain.

Examples:

- **Regular (non-diet) soda**
- **Sweetened coffee or tea**
- White and brown sugar
- Honey
- Molasses
- High-fructose corn syrup
- Concentrated fruit juice sweetener
- **Desserts**
- **Candy**
- **Sweet snacks**



Simple carbohydrates are often labeled as "bad" foods. There are no good or bad foods, we just need to **limit** added sugars.

Why Limit Added Sugar?

1. Added sugars contribute additional calories and zero nutrients to food.
2. Increase the risk of unwanted weight gain and increase the risk of Type 2 diabetes or cardiovascular disease.

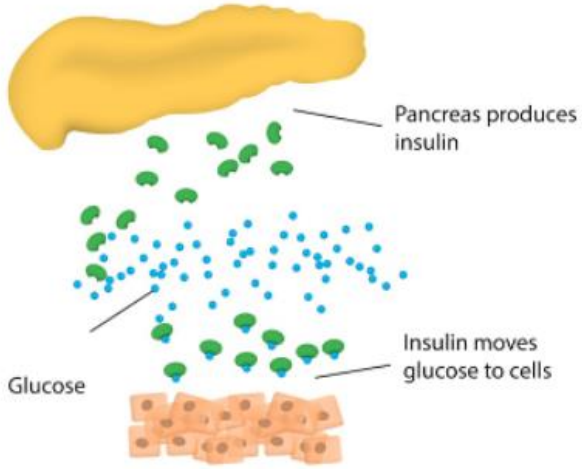
Adapted from: https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/sugar/sugar-101 and https://www.cdc.gov/diabetes/basics/type2.html

Type 2 Diabetes:

1. Insulin is a hormone made by the pancreas that acts as a key to let blood sugar (glucose) into the cells of the body for energy.
2. In type 2 diabetes, cells do not respond normally to insulin, which is called insulin resistance.
3. The pancreas makes more insulin to try to get cells to respond.
4. Eventually the pancreas can't keep up → blood glucose levels rise → prediabetes → type 2 diabetes.
5. High blood sugar is damaging to the body and can cause other serious health problems, such as heart disease, vision loss, and kidney disease

Type 2 Diabetes

Person without Diabetes



Person with Diabetes

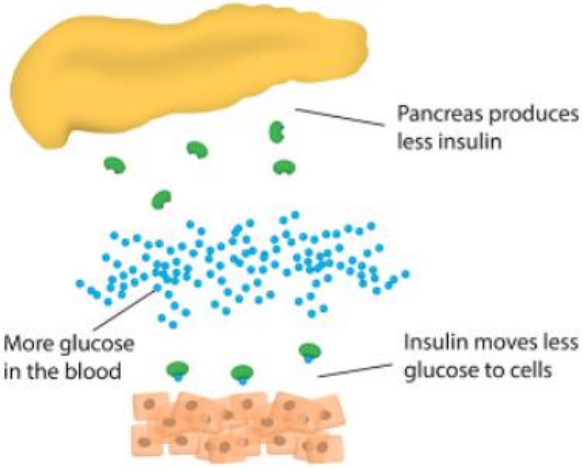


Figure 1 Diabetic News Journal

Adapted from: https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/sugar/sugar-101 and https://www.cdc.gov/diabetes/basics/type2.html

Simple Carbohydrates: Test your knowledge:

1. What is the body's primary source of energy?

2. What is the difference between naturally occurring sugar and added sugars? Which one should be limited?

3. What are common sources of added sugar?

4. What are common sources of natural sugars?

5. What is the American Heart Association's recommended daily limit of added sugar, and how much does the average American consume?

6. What causes type 2 diabetes?

7. Too much-added sugar can increase the risk of type 2 diabetes. Name three other things that increase your risk.

Adapted from: https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/sugar/sugar-101 and https://www.cdc.gov/diabetes/basics/type2.html

Simple Carbohydrates: Test your Knowledge Answer Key

1. What is the body's primary source of energy? Glucose, also known as sugar.

2. What is the difference between naturally occurring sugar and added sugars? Which one should be limited? Naturally occurring sugars are found in fruit (fructose) and milk (lactose); they contain vitamins, minerals, and fiber. Added sugars provide calories, but lack vitamins, minerals, and fiber, which can lead to weight gain. Added sugars should be limited.
3. What are common sources of added sugar?

- Regular (non-diet) soda
- Sweetened coffee or tea
- White and brown sugar
- Honey
- Molasses
- High-fructose corn syrup
- Concentrated fruit juice sweetener
- Desserts
- Candy
- Sweet snacks

4. What are common sources of natural sugars? Fruit and Milk
5. What is the American Heart Association's recommended daily limit of added sugar, and how much does the average American consume? The American Heart Association recommends limiting added sugar to 9 teaspoons (36 grams) per day for most men and 6 teaspoons (25 grams) per day for most women and children over 2. The average adult gets about 17 teaspoons of sugar each day.
6. What causes type 2 diabetes? Insulin is a hormone made by the pancreas that allows glucose/sugar in the blood sugar to enter cells of the body for energy. In type 2 diabetes, cells do not respond normally to insulin, which is called insulin resistance. The pancreas makes more insulin to try to get cells to respond. Eventually the pancreas can't keep up →blood glucose levels rise → prediabetes → type 2 diabetes.

Type 2 diabetes happens because the body does not regulate and uses glucose/sugar as fuel. This results in too much sugar circulating in the blood. In type 2 diabetes, the pancreas does not produce enough insulin and cells respond poorly to insulin, so it takes in less sugar.

7. Too much-added sugar can increase the risk of type 2 diabetes. Name three other things that increase your risk.

- Cardiovascular disease
- Cognitive problems, including dementia and Alzheimer's
- Colon cancer
- Diabetes
- High blood pressure, cholesterol and triglyceride levels
- Kidney disease
- Liver disease
- Obesity
- Pancreatic cancer
- Retina, muscle and nerve damage

6. Complex Carbohydrates

Last week we learned about simple carbohydrates. This week is about complex carbohydrates. Unlike simple, complex carbohydrates contain fiber and other nutrients. Fiber is found in whole grains, nuts, seeds, fruit, and vegetables. Fiber is important for feeling full faster and for longer periods of time; it aids digestion and can improve blood cholesterol. During this lesson, students will identify sources of complex carbohydrates and be able to demonstrate how to incorporate more fiber into their diet and why it is important for health.

Learning objectives:

- Identify sources of complex carbohydrates
- Explain the difference between whole grains and refined grains.
- Identify the sources and explain the benefits of fiber.
- Describe enrichment.

Lesson:

- Review the following videos:
  - https://youtu.be/wxzc_2c6GMg
  - https://www.youtube.com/watch?v=_qo5Bllt1_M
- Make half your grains whole grains handout and activity
- Complete the "Complex Carbohydrates Handout & Worksheet"

Spinach-Strawberry Salad with Feta & Walnuts Recipe

Complex Carbohydrates Handout

Complex carbohydrates are broken down into glucose just like simple carbohydrates. However complex carbohydrates are broken down more slowly to provide a lower steadier release of glucose into the blood stream thanks to the fiber and nutrients that it contains unlike simple carbohydrates.

Sources of Complex Carbohydrates:

- Legumes
- Starchy vegetables
- Whole grains

Refined Grains	Whole Grains
Refined grains no longer contain B-vitamins, iron, and fiber due to processing, which removes the bran and germ of the grain. Can be **enriched**, which adds some of the nutrients back after processing. Sources: • White flour • White pasta • White rice	Unrefined whole grains retain many vital nutrients and are rich in fiber. Sources: • Oats • Brown and wild rice • Popcorn • Quinoa • Whole wheat pasta • Whole grain bread and cereals • Legumes • Starchy vegetables • Fruit

Benefits of Fiber:

1. Fiber helps the digestive system work well.
2. Feel full for longer amounts of time.
3. Dietary fiber can help improve blood cholesterol levels and lower your risk of heart disease, stroke, obesity, and even type 2 diabetes.

Adapted from: https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/nutrition-basics/carbohydrates and https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/nutrition-basics/whole-grains-refined-grains-and-dietary-fiber

Complex Carbohydrates: Test your knowledge

1. Name three sources of fiber.

2. Name three benefits of fiber.

3. Explain the difference between refined and whole grains.

4. Which part of the grain contains B vitamins, iron, and dietary fiber?

5. What does “enrichment” mean?

Complex Carbohydrates: Test your knowledge Answer Key

1. Name three sources of fiber.

   - Oats
   - Brown and wild rice
   - Popcorn
   - Quinoa
   - Whole wheat pasta
   - Whole grain bread and cereals
   - Legumes
   - Starchy vegetables
   - Fruit

2. Name three benefits of fiber.

   - Fiber helps the digestive system work well.
   - Feel full for longer amounts of time.
   - Dietary fiber can help improve blood cholesterol levels and lower your risk of heart disease, stroke, obesity, and even type 2 diabetes.

3. Explain the difference between refined and whole grains.

   Refined grains no longer contain B-vitamins, iron, and fiber due to processing, which removes the bran and germ of the grain. Unrefined whole grains retain many vital nutrients and are rich in fiber.

4. Which part of the grain contains B vitamins, iron, and dietary fiber?

   The bran.

5. What does “enrichment” mean?

   The process of adding nutrients back into refined grains after processing.

7. Portion and serving sizes

A “portion” size is the amount of food that an individual decides to eat. A “serving” size is a measured amount of food or drink. American food and beverage sizes have increased throughout the decades, leading to greater consumption, obesity, and comorbidities. This lesson will teach the students the difference between portion and serving sizes and the recommended intake of each food group.

Learning objectives:

- Explain the difference between a portion and serving size.
- Understand the recommended daily servings of each food group.
- Demonstrate how to estimate a serving size.

Lesson:

- Watch the following video:
  - https://www.youtube.com/watch?v=SxF6hAceU1g
- Handy guide to serving sizes
- Test your knowledge

Easy Stuffed Pasta Shells Recipe

8. Reading a label

Food labels are required for most prepared foods. Students must learn the importance of reading a food label and how making informed decisions contributes to their health. During this lesson, students will learn how to effectively read a nutrition label and identify nutrients of interest, such as saturated fat, trans fat, sodium, added sugar, and fiber. The recipe for this week will be the student's choice. After the student chooses a recipe, they are to complete the activity of creating a nutrition fact label for the recipe and analyzing the nutrient content.

Learning objectives:

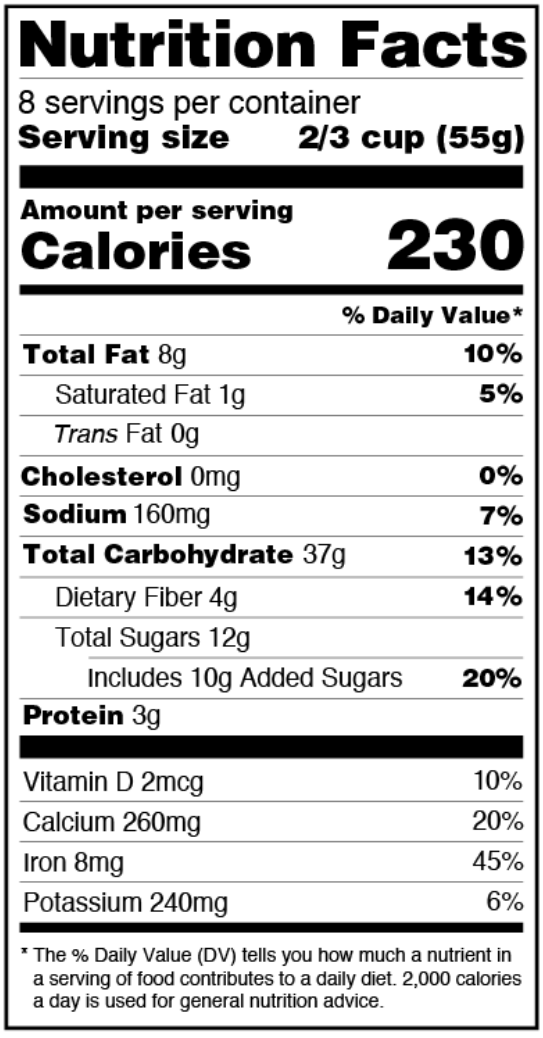
- Demonstrate how to read a nutrition label.
- Identify components of the label
- Verbalize the difference between a portion and a serving size.

Lesson:

- Watch the following video:
    - https://www.youtube.com/watch?v=OWMSJqnYFMY
- Understanding and Using the Nutrition Facts Label
- Label Reading Worksheet and Activity

Label Reading Worksheet

Look at the food label to answer questions 1 – 9.



Nutrition Facts

8 servings per container

Serving size **2/3 cup (55g)**

Amount per serving

Calories **230**

	% Daily Value*
Total Fat 8g	**10%**
Saturated Fat 1g	**5%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 160mg	**7%**
Total Carbohydrate 37g	**13%**
Dietary Fiber 4g	**14%**
Total Sugars 12g	
Includes 10g Added Sugars	**20%**
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 240mg	6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

1. How many cups are in a serving?
2. How many servings are in a package?
3. How many total cups are in a package?
4. How many grams of saturated fat are in five servings?
5. How many milligrams of sodium are in a serving?
6. How many grams of added sugar are in two servings?
7. How many calories are in three servings?
8. Are there any vitamins or minerals in this food? How do you know?
9. Do you think this food item is a good choice? Why or why not?
10. What daily value percentage is considered low, and what is considered high?
11. Which nutrients should we try to keep “low”?
12. Which nutrients should we try to keep “high”?
13. What is the difference between a portion and a serving size?

Label Reading Worksheet Answer Key

Look at the food label to answer questions 1 – 9.

1. How many cups are in a serving? 2/3 cup
2. How many servings are in a package? 8
3. How many total cups are in a package? 5 1/3 cups
4. How many grams of saturated fat are in five servings? 5 g
5. How many milligrams of sodium are in a serving? 160 mg
6. How many grams of added sugar are in two servings? 20 g
7. How many calories are in three servings? 690 calories
8. Are there any vitamins or minerals in this food? How do you know? There is vitamin D, calcium, iron, and potassium. There are certain vitamins and nutrients that are listed on the lower portion of the food label.
9. Do you think this food item is a good choice? Why or why not? This food item has low amounts of saturated fat, a fair enough of sodium (7% DV and low is considered 5% or less), and a decent amount of fiber. However, this has a high amount of added sugar (20% DV).
10. What daily value percentage is considered low, and what is considered high? 5% or less means that the product has a low amount of the given nutrient. 20% or higher means that the product has a high amount of the nutrient.
11. Which nutrients should we try to keep “low”? Sodium, saturated fat, trans fat, added sugar.
12. Which nutrients should we try to keep “high”? Unsaturated fat (total fat minus saturated and trans fat on the label) and fiber.
13. What is the difference between a portion and a serving size? A serving size is listed on the food label. A portion size is what you consume or put on your plate.

Label Reading Online Activity

Choose a recipe and calculate the nutrition information using the Recipe Nutrition Calculator. The website will create a nutrition label. You then need to analyze it and answer the questions below. Make sure to enter the number of servings and the servings size given by the recipe into the calculator.

1. What is the serving size?

2. How many servings does the recipe make?

3. How many grams of saturated fat are in a serving?

4. How many milligrams of sodium are in a serving?

5. How many grams of added sugar are in a serving?

6. How many calories are in a serving?

7. Are there any vitamins or minerals in this food based on the label?

8. Do you think this food item is a good choice? Why or why not?

9. If the recipe provided its own nutrition facts, how do they compare?

9. Food package claims

There are many claims on packaging, such as “low-fat” or “sugar-free,” to entice consumers to purchase those products. There are guidelines that allow manufacturers to make these claims. However, it is important for the consumer to be an informed consumer, especially high school students, as soon this population may be moving out of their parent’s house and living on their own. This lesson will enable students to critically identify nutrition claims on packages. The student will watch videos, take notes, and complete an assignment analyzing a product with at least one nutrient claim on it. This lesson also includes a field trip to the grocery store. The student will “hunt” for five food items with a different nutrition claim and verbalize what each means to their instructor. There is a challenge to cook pasta, but it must be 100% whole grain pasta.

Learning objectives:

- Identify common food package claims and describe their meaning.
- Demonstrate proper nutrition label reading skills.
- Display critical thinking when choosing food items.

Lesson:

- Misleading food labels
- Misleading food labels 2
- Food claims Handout & Assignment

Field trip:

- Go to the grocery store, the student is responsible for finding five food items with a different nutrition claim and verbalize what each means to their instructor.

Recipe: Make your favorite pasta dish, BUT it must be made with a whole wheat pasta.

Food Claims Handout

Be aware that not all nutrition claims are 100% accurate. Watch the following videos and review the information below.
https://www.consumerreports.org/cro/news/2014/09/5-misleading-food-label-claims/index.htm

https://www.youtube.com/watch?v=qQ7-uotOd90

Definitions:

Sugar: Remember that added sugar can add calories and may lead to weight gain. Look for foods lower in sugar…but remember that if they remove one thing (sugar) they may add another (fat)!

- Sugar-Free – less than 0.5 g of sugar per serving or contains no sugar.
    - Look at the nutrition label, it may contain the same number of calories and the traditional version.
- Reduced Sugar or Less Sugar – at least 25% less sugar per serving compared to a serving of the traditional variety.
- No Added Sugars or Without Added Sugars – no sugars or sugar-containing ingredient is added during processing.
- Low Sugar – not defined or allowed as a claim on food labels.

Sodium: much of the sodium in our diet comes from processed foods. Reading food labels can help reduce our sodium intake.

- Sodium free – contains less than 5 mg of sodium per serving.
- Very low sodium – contains 35 milligrams or less of sodium per serving size.
- Low sodium – contains 140 milligrams or less of sodium per serving size.
- Reduce sodium – contains at least 25% less sodium per serving size.
- No added salt no salt is added during processing.

Fat: Lower fat options may decrease total fat or saturated fat

- Fat-free and skim milk – contains less than 0.5 g of fat per serving.
- Reduced fat – must have at least 25% less fat than regular versions of those foods.
- Zero trans-fat – if less than 0.5 can claim as “zero” on the food label – must read the ingredients list!
- Light foods – must either have 1/3 fewer calories or 50% less fat.

Food Claims: Test your Knowledge

1. "Low sodium" contains _____ milligrams or less of sodium per serving size. Reduced sodium contains at least 25% less sodium per serving size.
2. Light foods must either have 1/3 fewer calories or 50% less fat. Low fat contains ____ grams or less of total fat per serving.
3. No Added Sugars is defined as "no sugars were added during _____.
4. Hydrogenated or partially hydrogenated oils are _____ for the heart.
5. Multiple grains or made with whole grains is made with _____ amounts of _____. Choose _____ more often.
6. _____ implies that no man-made ingredients, organic, and non-GMO, but it really means _____.
7. There are _____ for sugar.

Food Claims: Test your Knowledge Answer Key

1. "Low sodium" contains __140_____ milligrams or less of sodium per serving size. Reduced sodium contains at least 25% less sodium per serving size.
2. Light foods must either have 1/3 fewer calories or 50% less fat. Low fat contains _3___ grams or less of total fat per serving.
3. No Added Sugars is defined as "no sugars were added during _____processing____.
4. Hydrogenated or partially hydrogenated oils are ___both unhealthy_____ for the heart.
5. "Multi-grain" or "made with whole grains" is made with ___some___ amounts of __whole grains_. Choose ____100% whole wheat or 100 % whole grain___ more often.
6. ____100% natural_____ implies that no man-made ingredients, organic, and non-GMO, but it really means ____nothing_____.
7. There are ___many substitutes _____ for sugar.

Food Package Claims Assignment

What you will need:

- This worksheet
- A food package that includes a nutrient claim.

Food item:

_____

1. How many servings are in this package? _____
2. What is the measurement used for one serving? _____
3. Do you think that this is an amount that most people would eat at one sitting? Why or why not?
4. How many calories are provided in one serving of this food? _____
5. What nutrient or health claim(s) are listed on this food package?
6. List the criteria for each of these claims.
7. How much total fat is in one serving of this product? _____

8. How much saturated fat is in one serving of this product? _____
9. What percentage daily value of saturated fat is in this product?

   _____

10. Is it closer to be considered high or low? _____

11. How much trans-fat is listed on the Nutrition Facts label? _____

12. If none, read the ingredient list carefully. Do you still believe this product contains zero trans-fat fat? Why?

13. How many grams of added sugar is provided in one serving? _____

14. Reading the ingredient list carefully, list the ingredients that provide sugar.

15. How much fiber is in each serving of this food? _____

16. How much sodium does one serving of this food contain? _____

17. Is this product higher or lower in sodium, why?

18. By weight, which three ingredients does this food provide the most?

19. Do you think that this is a healthful food choice? Explain your answer below:

10. Sodium

Many Americans consume too much sodium, which has negative health consequences such as hypertension, heart disease, and stroke. The major source of sodium in the American diet comes from processed foods. This lesson will teach students to identify sources of sodium, the recommended dietary intake of sodium, how to reduce sodium intake, and the consequences of a diet high in sodium.

Learning objectives:

- Define the recommended daily allowance of sodium.
- Verbalize the consequences of excess sodium in the diet.
- Describe methods of reducing sodium in the diet.

Lesson:

- Discuss the sources of sodium. Inform students that most of the sodium in the diet comes from packaged and processed foods.
- Discuss the consequences of added sodium in the diet, such as hypertension, heart disease, and stroke.

Watch the following video:

- https://www.fda.gov/consumers/consumer-updates/eating-too-much-salt-ways-cut-backgradually

Sodium handouts:

- Cut down on Sodium
- Excess Sodium
- Sneaky Sodium
- Sodium Worksheet

Lemon-Garlic Shrimp over Orzo with Zucchini Recipe

Sodium in Foods you Eat Activity

Objective: Identify foods that you typically eat for meals or snacks and fill out the chart below. If the food item is not in the house, you can look it up online. You do not have to fill out each category if you do not have three meals and two snacks daily. Just fill your day of eating in where you see fit. Answer the questions on the next page.

Food	Amount of Food Eaten	Amount of Sodium eaten
Example:	Thomas Everything Bagel 2 TBL Chive & Onion Cream Cheese	410 mg 150 mg
Breakfast:		
Snack:		
Lunch:		
Snack:		
Dinner:		
Total for the day:		

Activity Questions

1. Which foods were highest, and which were the lowest in sodium?

2. Was the total of sodium below or above the daily recommendation?

3. If it was above, how can you reduce the amount of sodium in the day?

4. Is this a typical day of eating for you or was there an occasion?

Sodium: Test your Knowledge

1. What is the recommended daily allowance for sodium?

2. What is the major source of sodium in the American diet?

3. Name the three major health consequences of excess sodium in the diet.

4. List four ways to reduce sodium in the diet.

Sodium: Test your Knowledge Answer Key

1. What is the recommended daily allowance for sodium?

2,300 mg per day or less

2. What is the average American intake of sodium?

Americans eat on average about 3,400 mg of sodium per day.

3. What is the major source of sodium in the American diet?

Processed and takeout/restaurant foods

4. Name the three major health consequences of excess sodium in the diet.

High blood pressure, heart attack, and stroke.

5. List four ways to reduce sodium in the diet.

Check the nutrition fact label

Identify foods high in sodium

Make healthy shifts

Cook more at home

Consider the DASH diet

11. Grocery shopping

Most people obtain their food from grocery stores. This lesson will be a field trip so the students can apply what they have learned about label reading and packaging claims. This lesson will also teach students how to grocery shop effectively by planning meals, creating a list, and sticking to a budget. Students will look at their local grocery store's sales flyer, create a meal plan for the week, take inventory of what is already in the kitchen, and create a grocery shopping list. The instructor should provide a maximum amount the student can spend on their shopping trip. Furthermore, if the grocery store has an app, the students can browse the app for digital coupons for items on their list.

While in the grocery store, the student must compare food products' nutrition labels, for example, reduced sodium, versus the traditional version. The student will use critical thinking skills from what they have learned so far in the course and choose the healthier options.

Learning objectives:

- Demonstrate how to create an effective meal plan and grocery list.
- Verbalize how to grocery shop on a budget.

Lesson:

- Grocery shopping handout
- Meal planner
- Grocery list

12. Probiotics

During this lesson, students will identify foods that are rich in probiotics and define the difference between pre-and probiotics. Students will also explain why probiotics are important in the diet. Probiotics are beneficial bacteria that helps maintain the body's health such as, fighting off bad bacteria, aid in digestion, and create vitamins. Prebiotics promote the growth of probiotics and provide energy for them.

Learning objectives:

- Explain fermentation.
- Define the difference between a prebiotic and a probiotic.
- Identify food sources of probiotics.

Lesson:

- Watch the following video.
    - https://www.youtube.com/watch?v=HuWCMYVGKUM

- Pre-and probiotic handout
- Fermentation handout
- Complete Probiotic/Fermentation knowledge check

Sourdough Recipe

Prebiotics & Probiotics

To Promote Gut Health

Prebiotics and probiotics are vital components in some foods and beverages and are now being added to many others. They play an important role in our health, including helping us to maintain a healthy digestive system. Here's what you should know about them!

Prebiotics

Substances in food that humans can't digest, which probiotics use for energy. Many types of dietary fiber are prebiotic.

Probiotics

Living microorganisms that benefit health when consumed in sufficient amounts.

Prebiotic Foods

fruits vegetables grains

Probiotic Foods

yogurt kefir fermented foods

Prebiotic Labeling

You can also find prebiotics in foods like granola bars and cereals. Inulin and oligosaccharides are prebiotics that you might find in a food ingredients list.

Probiotic Labeling

Not every kind of yogurt and fermented food contains probiotics. Look for the phrase 'contains live and active cultures' and specific bacteria strains in the ingredients list.

The Journey

Fermentation

Fermentation: the chemical breakdown of a substance by bacteria, yeasts, or other microorganisms. It is usually a carbohydrate such as starches or sugars that are converted to acids, which we call fermentation. This breakdown creates food items such as kimchi, fermented sauces, tempeh, kombucha, kefir, sauerkraut, yogurt, and sourdough bread or other foods.

Probiotics are live microbes that have beneficial effects when consumed. They can play a role in the fermentation process as they are the bacteria that convert the sugars and the starches to alcohol or other acids. However, few fermented foods contain sufficient microbes to be called probiotics. (Not ALL fermented foods are considered probiotics, though some such as yogurt and kefir DO have sufficient live microbes to be considered good sources of probiotics).

Sourdough bread is a good example of a fermented food that has probiotics in the starter, but they are burned off in the baking process. However, Sourdough bread is a good source of prebiotics.

A sourdough starter is made by mixing flour and water together. After a few days, a symbiotic microbial community develops, which helps create sourdough bread products. A sourdough starter must be maintained with regular feedings of flour and water to keep it alive and active. Otherwise, the microorganisms in the starter will die off and fermentation of the bread won't occur. A sourdough starter can be used indefinitely if maintained!

Sourdough starters can be obtained from a friend or family member, purchased from a fermentation store, bakery, or online.

Health Benefits or Sourdough bread:

- The presence of prebiotics
- Easier to digest than bread made with baker's yeast alone and contains less gluten.
- Benefits blood sugar levels: The fermentation process lowers the availability of starch, decreasing the rate it raises blood sugar compared to white bread.
- One slice of sourdough bread (depending on its size) is equivalent to about one serving of grains for the day.

Try sourdough made with whole grains, for additional fiber and increased levels of naturally occurring nutrients!

Probiotics and Fermentation: Test your Knowledge

1. Explain the difference between pre- and probiotics.

2. Describe how fermented foods are made.

3. Name three examples of fermented foods.

4. All fermented foods contain probiotics. True or false.

Probiotics and Fermentation: Test your Knowledge Answer Key

1. Explain the difference between pre- and probiotics. Where are each found?

Probiotics contain live microorganisms intended to maintain or improve the "good" bacteria in the body. Prebiotics act as food for probiotics. Probiotics are found in fermented foods and prebiotics are found in high fiber foods.

2. Describe how fermented foods are made.

Through controlled microbial growth. A chemical breakdown occurs typically on a carbohydrate by bacteria, yeasts, or other microorganisms that create acids.

3. Name three examples of fermented foods.

- kefir.
- tempeh.
- natto.
- kombucha.
- miso.
- kimchi.
- sauerkraut.
- probiotic yogurt.

4. All fermented foods contain probiotics. False.

13. Physical activity

Physical activity is just as important as proper nutrition. This week students will learn the benefits of being active and the recommended amount of physical activity. Students will explore different ways to increase activity and choose a new activity or something that they currently enjoy. The student will keep track of the time spent being physically active during the week and, at the end of the week, assess if they met recommendations of at least 60 minutes per day for teens. If the student did not meet recommendations, brainstorm ways to increase physical activity.

Learning Objectives:

- Describe the benefits of physical activity
- Understand the recommended amount of daily physical activity
- Engage in a physical activity

Lesson:

- Watch the following video:
    - https://www.youtube.com/watch?v=dAaB8XDUi4I&t=26s
- 60 a Day
- Health Benefits of Physical Activity
- Choose at least one physical activity - something new or something that they currently enjoy.
    - Explore this website to get ideas if needed. Activity Planner
    - Complete Physical Activity Worksheet (track your week of physical activity).

MOVE YOUR WAY®

How much physical activity do kids and teens need?

At least 60 minutes every day.

60 minutes a day

Most of that time can be **moderate-intensity aerobic activity** — anything that gets their heart beating faster counts.

And at least 3 days a week, encourage them to step it up to **vigorous-intensity aerobic activity**, so they're breathing fast and their heart is pounding.

As part of their daily 60 minutes, kids and teens also need:

Muscle-strengthening activity

at least 3 days a week

Anything that makes their muscles work harder counts — like climbing or swinging on the monkey bars.

AND

Bone-strengthening activity

at least 3 days a week

Bones need pressure to get stronger. Running, jumping, and other weight-bearing activities all count.

Walk. Run. Dance. Play. **What's your move?**

Physical Activity Tracker For the week of:

Weekly Goal:	Activity
Monday Notes to Myself	
Tuesday Notes to Myself	
Wednesday Notes to Myself	
Thursday Notes to Myself	
Friday Notes to Myself	
Saturday Notes to Myself	
Sunday Notes to Myself	

14. Fad Diets

Diet trends, or fad diets, are ever-emerging. Young adults should be able to identify diet trends that can be harmful. This week students will review videos about fad diets and then write an article on a fad diet of their choice. The article will include the definition of the diet, benefits, consequences, example meals and their nutrition content, as well as their opinion.

Learning objectives:

- Verbalize what a fad diet is.
- Identify fad diets.
- Explain the consequences of fad dieting.

Lesson:

- Review the following videos:
    - https://newsnetwork.mayoclinic.org/discussion/mayo-clinic-minute-figuring-out-fad-diets/
    - https://ed.ted.com/lessons/do-fad-diets-work-mia-nacamulli

- Complete the fad diet assignment

Fad Diet Article

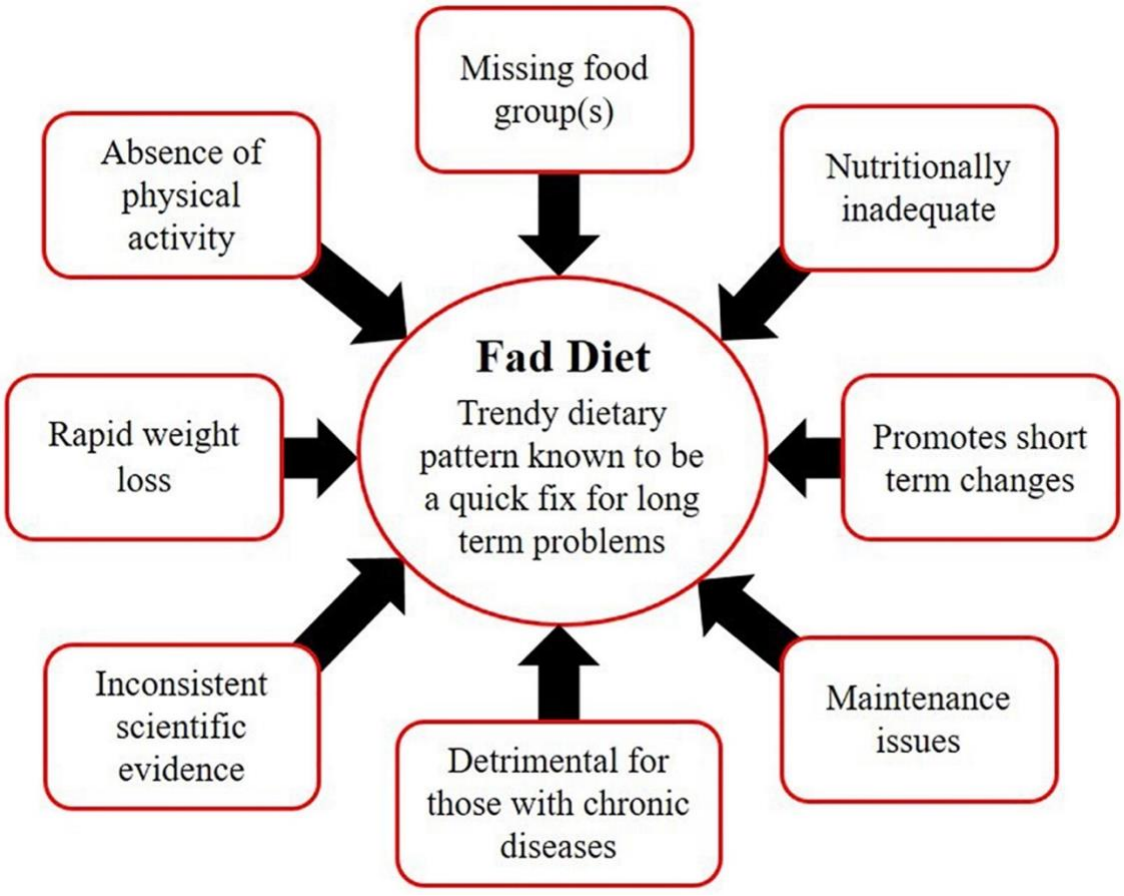
It seems like every few months a new diet is proposed that is supposed to "really work," *unlike those other diets.* Write a magazine article defining the fad diet. In the article, list the pros & cons of the diet, describe a typical week of meals (with pictures), list the nutritional values of at least three each meal, and describe the consequences of being on the diet long term. You can use one from the list below or another one that you are interested in learning more about!

Fad Diet List:

- South Beach
- Fat Flush
- Juicing or Detox Diet
- Atkins
- Grapefruit
- Paleo
- Ketogenic
- Raw Food
- Nutrisystem

Magazine Article Components

- Definition
- Pros & Cons of diet
- Typical Week Meals
- Nutritional Values of Meals
  - https://www.verywellfit.com
    - Tools
    - Recipe nutrition calculator
- Consequences of the diet over the long term
- Personal Opinion



Adapted from: https://www.familyconsumersciences.com/2012/03/fad-diet-project/

15. Moderation

This lesson is fun for the students to investigate cooking at home rather than going out. As they move out of their parent's house, the average young adult will consume more convenience foods. This lesson will focus on "making over their plate" and comparing nutrition facts from a fast-food meal of their choice and the one made at home. The students will choose their favorite fast food and look up the food's nutrition facts. The students will then find a substitute recipe and create a food label. After enjoying the meal, students will compare the nutrition facts of the fast food and homemade "fast food."

Learning objectives:

- Verbalize the importance of eating at home.
- Compare the nutrition of the fast food and homemade version.

Lesson:

- Fast Food Activity

Fast Food Activity

Choose your favorite fast-food meal or food item and look up the food's nutrition facts. Find a recipe to substitute the selected food and create a nutrition label for it. Enjoy the meal, then compare the nutrition facts of the fast food and homemade "fast food." For example, McDonald's Chicken Nuggets and homemade chicken nuggets.

1. Identify and state your favorite fast-food meal or item. Find the nutrition facts and insert a picture or list them below.

2. After finding a substitute recipe, insert a picture or list the nutrition facts below.

After trying the recipe, answer the following questions.

1. Which food contained the most calories? Fast food or homemade.

2. Which food contained the most saturated fat? Fast food or homemade.

3. Did either food contain trans-fat?

4. Which food contained the most sodium? Fast food or homemade.

5. Which food contained the most fiber? Fast food or homemade.

6. Which food contained the most added sugar? Fast food or homemade.

16. Mindfulness Eating

This lesson is to explain the importance of balance and moderation. The students will learn the importance of not restricting their favorite foods while they improve their dietary intake of fruits, vegetables, lean meats, and whole grains. The students will create the following dessert or one of their choice. The student will consume the food with no distractions and practice mindful eating. The student will reflect on the importance of eating mindfully and not over-restricting themselves.

Learning Objectives:

- Define mindful eating.
- Explain the importance of eating in moderation.

Lesson:

- Mindful eating handout
- Create a dessert of your choice or Chocolate Raspberry Truffles
    - Practice mindful eating while enjoying the dessert.
- Complete the reflection assignment.

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Final Reflection

Using what you have learned in this course write a one page minimum answering the following questions.

- Define mindful eating.
- Discuss the benefits of eating mindfully and in moderation.
- What does eating mindfully look like to you?
- What are at least three things you've learned that will help you eat more mindfully.