



Name _____

Hour _____

Video Worksheet

1. What are carbohydrates made of?
2. What do carbohydrates convert into?
3. What kind of carbohydrate is better for you?
4. Which carbohydrate is faster to digest?
5. What is the difference between simple and complex carbohydrates?
6. Four grams of sugar equals what?
7. What are the three types of sugar discussed in the video?
8. An apple and a candy bar both contain sugar. Why then is an apple a better choice nutritionally?
9. Which is better for you, a whole grain bagel or white bagel? Why?



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Answer Key

1. What are carbohydrates made of?
Carbon, hydrogen, and oxygen.
2. What do carbohydrates convert into?
energy
3. Which kind of carbohydrate is better for you?
Complex carbohydrates
4. Which carbohydrate is faster to digest?
Simple carbohydrates
5. What is the difference between simple and complex carbohydrates?
Simple = single or double sugars, easy to digest, energy is short-lived
Complex = three, four, or more, longer to digest but energy lasts a long time, natural sugar
6. Four grams of sugar equals what?
1 teaspoon of sugar
7. What are the three types of sugar discussed in the video?
Added (artificial), natural, and starches.
8. An apple and a candy bar both contain sugar. Why then is an apple a better choice nutritionally?
The sugar in the apple is natural whereas the sugar in the candy bar is added.
9. Which is better for you, a whole grain bagel or white bagel? Why?
Whole grain bagel - Foods that contain natural sugars are better for us than those with added sugar because they also contain many other nutrients that are important to our health.



The Facts about Carbohydrates

Fact 1: Carbohydrates are found in almost all foods in the diet with the exception of protein foods.

Fact 2: It is recommended that we get 55% of our diet from carbohydrates.

- For a teen girl who should consume about 2200 calories per day, 55% of her diet equals 1210 calories that should come from the carbohydrate group of foods.
- For a teen boy who consumes about 2800 calories per day, 55% would be 1540 calories that should come from the carbohydrate group.

Fact 3: Carbohydrates have 4 calories per gram.

- The Food Guide Pyramid suggests carbohydrates form the base of our diet and that means 6-11 servings from the grain group per day. That's where we get our best carbohydrates. The problem is many teens eat lots of calories from the "other" group at the top. The carbohydrates at the top of the pyramid are empty of nutrients and mostly add just calories. The Mayo Clinic Healthy Weight Pyramid suggests only 75 calories per day should come from the carbs at the top of the pyramid.

Fact 4: Carbohydrates are found in two forms: simple or complex.

- The top of the Food Guide Pyramid is primarily **simple carbohydrates**, known as sugars. They can be **added sugars** as are found in high-sugar foods like cakes, pies, pudding, candy and soda. These foods have sugar as a main ingredient in their preparation. Eating cake or drinking soda is like eating several teaspoons of granulated table sugar. These simple carbohydrate foods give us a quick jolt of energy that often leaves us hungrier and with less energy than we originally had because they burn quick in our bodies. Many times these foods are said to be "empty calories" meaning they have no nutritive value — only calories.
- Simple carbohydrates can also be found in foods that are good for us. They are natural sugars that are part of a food's basic makeup. Foods that contain natural sugars are better for us than those with added sugar because they also contain many other nutrients that are important to our health. Although these foods contain simple sugars, the additional nutrients such as fiber and fat also found naturally in them make them burn more slowly than sugary foods. They also provide needed vitamins, minerals and water for our body to use.
 - **Fruits** such as pears, grapes, apples, nectarines all contain natural sugar called fructose.
 - **Many vegetables** also contain natural fructose. Some examples are squash, beans, broccoli, carrots, lettuce, pea pods, tomatoes.
 - **Dairy foods** contain a natural sugar called lactose. Lactose can be found in cheese, milk, ice cream—most dairy products.

- The rest of the Food Guide Pyramid (with the exception of the meat/protein group), where we should make the majority of our choices, is made up of foods containing **complex carbohydrates**. Complex carbohydrates, also known as starches, are found in:
 - **Grain products** like crackers, rice, pasta, breads, and cereals such as oatmeal, Cheerios, Rice Krispies and Corn Flakes.
 - **Fruits and vegetables that contain fiber** along with their natural sugars. Some examples include strawberries, kiwifruit, oranges, bananas, apples, blueberries, potatoes, corn, peas, kidney beans and winter squash.

Fact 4: Fiber is often considered a carbohydrate.

- **Fiber** is the part of a grain kernel or a fruit or vegetable that is not digestible by our body. It can carry valuable nutrients but is not digested. Its value to our digestive system is its ability to clean us out! It leaves water, vitamins and minerals in our body and scrubs our digestive tract on the way through. It is recommended that we intake 25 grams of fiber per day. A high-fiber food contains 5 grams or more per serving.

Food	whole-wheat cereal	broccoli	raisins	pasta	apple	potato, boiled	white rice
Serving	1 cup	1 cup	1/2 cup	1 cup	medium	medium	1 cup
Fiber	5 g	5.4 g	5.4 g	4 g	3.2 g	1.4 g	0 g

Fact 5: The big fuss about low-carb diets is ongoing and probably never-ending.

- **Low-carb diets** were developed back in the 1800s. Experts debating the low-carb issue consider an idea called the glycemic index. It is a way of rating how quickly carbohydrates are digested and how quickly they get into the blood stream as sugar. Your body changes all carbohydrates, simple or complex, into sugar molecules that are either burned or stored. The slower this process, the better because the sugar enters the bloodstream more gradually. And that's better for your digestive system as a whole. Let's compare two carbohydrate foods:
 - The first is a chocolate bar. It is a **simple carbohydrate** that consists of almost 100 percent added sugar. It will give you a quick jolt of energy because it is digested quickly and gets into the bloodstream fast.
 - The second carbohydrate is a cup of spaghetti. Spaghetti will be digested much more slowly because it contains **complex carbohydrates**. They burn slowly and steadily.
- The jury is still out as to whether low-carb diets are really good for people who want to lose or maintain weight. Some proponents claim they result in rapid weight loss. Others claim they also can lead to feelings of low energy levels, constipation and, ultimately, kidney problems, heart disease, stroke, cancer and diverticulosis.
- What most do seem to agree on is that foods with natural sugar and carbs are better than foods with high amounts of added sugar. They also agree that calorie intake must be the same as calorie output or a person will gain weight. In other words, exercise!





Calculate the Sugars

Use the following equivalents table to calculate the amount of sugar in each item.

4 grams of sugar	=	1 teaspoon sugar
3 teaspoons	=	1 tablespoon
4 tablespoons	=	1/4 cup

5 tablespoons	=	1/3 cup
8 tablespoons	=	1/2 cup
16 tablespoons	=	1 cup

Nutrition Facts

Serving Size 1 pudding cup (99g)
Servings Per Carton 4

Amount Per Serving	
Calories	90
Calories from Fat	0
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Sodium 140mg	6%
Total Carbohydrate 20g	7%
Sugars 15g	
Protein 2g	
Calcium 4%	Iron 4%

Not a significant source of cholesterol, dietary fiber, vitamin A and vitamin C.
*Percent Daily Values are based on a 2,000 calorie diet.

INGREDIENTS: NON-FAT MILK, WATER, SUGAR, MODIFIED CORN STARCH, COCOA (PROCESSED WITH ALKALI), LESS THAN 2% OF: SALT, CARRAGEENAN, ARTIFICIAL FLAVORS, COLOR ADDED.
CONTAINS: MILK

1 snack-size pudding cup

_____ teaspoons sugar
or _____ Tbs + _____ tsp.

Nutrition Facts

Serving Size 1 can (12 oz)
Servings Per Carton 12

Amount Per Serving	
Calories	165
Calories from Fat	0
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Sodium 75mg	3%
Total Carbohydrate 46g	15%
Sugars 46g	
Protein 0g	

*Percent Daily Values are based on 2000 calorie diet.

INGREDIENTS: Carbonated water, high fructose corn syrup and/or sugar, concentrated orange juice and other natural flavors, citric acid, sodium benzoate (preserves freshness), caffeine, sodium citrate, gum arabic, erythorbic acid (preserves freshness), calcium disodium EDTA (to protect flavor) and brominated vegetable oil, yellow 5.

1 - 12 oz. can of soda

_____ teaspoons sugar
or _____ Tbs + _____ tsp.

Nutrition Facts

	Amount/serving	% DV*	Amount/serving	% DV*
Total Fat	13 g	20%	Total Carb.	25 g 8%
Sat. Fat	9 g	45%	Dietary Fiber	1 g 4%
Cholest.	10 mg	3%	Sugars	22 g
Sodium	40 mg	2%	Protein	3 g
Vitamin A 0% • Vitamin C 0% • Calcium 8% • Iron 2%				

INGREDIENTS: MILK CHOCOLATE (SUGAR; MILK; COCOA BUTTER; CHOCOLATE; SOY LECITHIN, AN EMULSIFIER; AND VANILLIN, AN ARTIFICIAL FLAVORING). © D

1 chocolate candy bar

_____ teaspoons sugar or _____ Tbs + _____ tsp.

1 pouch fruit snacks

_____ teaspoons sugar
or _____ Tbs
+ _____ tsp.

Nutrition Facts

Serving Size 1 pouch (0.9 oz)
Servings Per Container 24

Amount Per Serving	
Calories 100	Calories from Fat 10
% Daily Value*	
Total Fat 1.5g	2%
Saturated Fat 1.5g	6%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 30mg	1%
Potassium 10mg	1%
Total Carbohydrate 22g	7%
Dietary Fiber 0g	0%
Sugars 13g	
Protein 0g	

Vitamin C 100%

Not a significant source of vitamin A, calcium and iron.

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories: 2,000	2,500
Total Fat	Less than 65g	80g
Sat Fat	Less than 20g	25g
Cholesterol	Less than 300mg	300mg
Sodium	Less than 2,400mg	2,400mg
Potassium	3,500mg	3,500mg
Total Carbohydrate	300g	375g
Dietary Fiber	25g	30g

INGREDIENTS: FRUIT JUICE FROM CONCENTRATE (APPLE, GRAPE, STRAWBERRY, ORANGE, LEMON), CORN SYRUP, SUGAR, MODIFIED FOOD STARCH, PARTIALLY HYDROGENATED VEGETABLE OIL (COTTONSEED AND SOYBEAN), MALIC ACID, ASCORBIC ACID (VITAMIN C), NATURAL AND ARTIFICIAL FLAVORS, MINERAL OIL, BLUE 1, RED 40, YELLOW 5, YELLOW 6, BEESWAX.



Calculate the Sugars Answer Key

Use the following equivalents table to calculate the amount of sugar in each item.

4 grams of sugar	=	1 teaspoon sugar
3 teaspoons	=	1 tablespoon
4 tablespoons	=	1/4 cup

5 tablespoons	=	1/3 cup
8 tablespoons	=	1/2 cup
16 tablespoons	=	1 cup

Nutrition Facts
Serving Size 1 pudding cup (99g)
Servings Per Carton 4

Amount Per Serving	
Calories	90
Calories from Fat	0
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Sodium 140mg	6%
Total Carbohydrate 20g	7%
Sugars 15g	
Protein 2g	
Calcium 4%	Iron 4%

Not a significant source of cholesterol, dietary fiber, vitamin A and vitamin C.
*Percent Daily Values are based on a 2,000 calorie diet.

Nutrition Facts
Serving Size 1 can (12 oz)
Servings Per Carton 12

Amount Per Serving	
Calories	165
Calories from Fat	0
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Sodium 75mg	3%
Total Carbohydrate 46g	15%
Sugars 46g	
Protein 0g	

*Percent Daily Values are based on 2000 calorie diet.

Nutrition Facts
Serving Size 1 pouch (0.9 oz)
Servings Per Container 24

Amount Per Serving	
Calories 100	Calories from Fat 10
	% Daily Value*
Total Fat 1.5g	2%
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Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 30mg	1%
Potassium 10mg	1%
Total Carbohydrate 22g	7%
Dietary Fiber 0g	0%
Sugars 13g	
Protein 0g	

Vitamin C 100%

Not a significant source of vitamin A, calcium and iron.
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

INGREDIENTS: NON-FAT MILK, WATER, SUGAR, MODIFIED CORN STARCH, COCOA (PROCESSED WITH ALKALI), LESS THAN 2% OF: SALT, CARRAGEENAN, ARTIFICIAL FLAVORS, COLOR ADDED.
CONTAINS: MILK

INGREDIENTS: Carbonated water, high fructose corn syrup and/or sugar, concentrated orange juice and other natural flavors, citric acid, sodium benzoate (preserves freshness), caffeine, sodium citrate, gum arabic, erythorbic acid (preserves freshness), calcium disodium EDTA (to protect flavor) and brominated vegetable oil, yellow 5.

	Calories: 2,000	2,500
Total Fat	Less than 65g	80g
Sat Fat	Less than 20g	25g
Cholesterol	Less than 300mg	300mg
Sodium	Less than 2,400mg	2,400mg
Potassium	3,500mg	3,500mg
Total Carbohydrate	300g	375g
Dietary Fiber	25g	30g

INGREDIENTS: FRUIT JUICE FROM CONCENTRATE (APPLE, GRAPE, STRAWBERRY, ORANGE, LEMON), CORN SYRUP, SUGAR, MODIFIED FOOD STARCH, PARTIALLY HYDROGENATED VEGETABLE OIL (COTTONSEED AND SOYBEAN), MALIC ACID, ASCORBIC ACID (VITAMIN C), NATURAL AND ARTIFICIAL FLAVORS, MINERAL OIL, BLUE 1, RED 40, YELLOW 5, YELLOW 6, BEESWAX.

1 snack-size pudding cup
3-3/4 teaspoons sugar
or **1** Tbs + **3/4** tsp.

1 – 12 oz. can of soda
11-1/2 teaspoons sugar
or **3** Tbs + **2-1/2** tsp.

Nutrition Facts	Amount/serving %DV*		Amount/serving %DV*	
	Serving Size 1 Bar (43g) Calories 230 Fat Cal. 120	Total Fat 13g	20%	Total Carb. 25g
	Sat. Fat 9g	45%	Dietary Fiber 1g	4%
	Cholest. 10mg	3%	Sugars 22g	
	Sodium 40mg	2%	Protein 3g	
Vitamin A 0% • Vitamin C 0% • Calcium 8% • Iron 2%				

*Percent Daily Values (DV) are based on a 2,000 calorie diet.

1 pouch fruit snacks
3-1/4 teaspoons sugar
or **1** Tbs + **1/4** tsp.

INGREDIENTS: MILK CHOCOLATE (SUGAR; MILK; COCOA BUTTER; CHOCOLATE; SOY LECITHIN, AN EMULSIFIER; AND VANILLIN, AN ARTIFICIAL FLAVORING). © D

1 chocolate candy bar
5-1/2 teaspoons sugar or **1** Tbs + **2-1/2** tsp.



Name _____

Hour _____

Video Worksheet 2

1. Carbohydrates are found in many of foods. Name three.

2. Dietary Guidelines suggest we make most of our food choices from the _____ group.
3. The only food group on the Food Guide Pyramid that does not contain any foods with carbohydrate in them is the _____ group.
4. Low-carb diets were outlined as long ago as the 1880s in the _____.
5. Carbohydrates = _____ + _____ + _____ which leads to energy!
6. Proteins in the diet help build _____ and keep your body in shape.
7. Carbohydrates give you _____ and help you perform.
8. High-protein diets can be hard on the _____.
9. Normally, teens take in around _____ calories per day. It's better for your body to _____ exercise than to _____ calories.
10. Digestion = food → _____ in carbohydrates → glucose → _____ that powers cells.
11. _____ carbohydrates contain 1-2 sugars and give quick, short-lived energy.
_____ contain 3-4 sugars and take longer to digest giving steady, longer-lasting energy.

12. There is also a third type of carbohydrate called _____.
13. Simple carbs like “sweet goodies” have _____ sugar and give us a _____ of energy.
14. Healthier carbs like an apple would contain are made up of _____ sugars.
15. Although fiber is considered a carbohydrate, it has no _____ and gives no _____.
16. When considering the amount of added sugar in a food, remember that 4 grams of sugar is equal to _____.
17. One can of soda could contain _____ teaspoons of sugar.
18. The problem with eating lots of snacks with added sugar is that they really _____ your energy because they give you a quick jolt and then run out. If you fill up on sugary carbs, you get lots of _____ calories and you have no room for healthier carbs.
19. What does research say about the healthiness of low-carb diets?
20. Instead of eliminating one entire food group from your diet, you should aim for _____, choose _____ foods and think about _____ when planning your diet.
21. Complex carbohydrates from _____ foods are better than foods like white bread or a white flour bagel.
22. Reading _____ is important in determining how much added sugar is in a food.
23. Food labels don't distinguish between natural and added sugars but looking at the first three ingredients and checking for words ending in _____ can give you a clue about the sugar content.
24. A great option for staying healthy is to get plenty of _____.





Video Worksheet 2 Answer Key

- Carbohydrates are found in many of foods. Name three.
Grains
Fruits and some vegetables
Sugary foods and some dairy foods
- Dietary Guidelines suggest we make most of our food choices from the grain group.
- The only food group on the Food Guide Pyramid that does not contain any foods with carbohydrate in them is the protein/meat group.
- Low-carb diets were outlined as long ago as the 1880s in the Letter on Corpulence.
- Carbohydrates = carbon + hydrogen + oxygen which leads to energy!
- Proteins in the diet help build muscles and keep your body in shape.
- Carbohydrates give you energy and help you perform.
- High-protein diets can be hard on the kidneys.
- Normally, teens take in around 2000 calories per day.
It's better for your body to increase exercise than to decrease calories.
- Digestion = food → sugar in carbohydrates → glucose → energy that powers cells.
- Simple carbohydrates contain 1-2 sugars and give quick, short-lived energy.
Complex contain 3-4 sugars and take longer to digest giving steady, longer-lasting energy.

12. There is also a third type of carbohydrate called **fiber**.
13. Simple carbs like “sweet goodies” have **added** sugar and give us a **jolt** of energy.
14. Healthier carbs like an apple would contain are made up of **natural** sugars.
15. Although fiber is considered a carbohydrate, it has no **nutrients** and gives no **energy**.
16. When considering the amount of added sugar in a food, remember that 4 grams of sugar is equal to **1 teaspoon**.
17. One can of soda could contain **10** teaspoons of sugar.
18. The problem with eating lots of snacks with added sugar is that they really **drain** your energy because they give you a quick jolt and then run out. If you fill up on sugary carbs, you get lots of **empty** calories and you have no room for healthier carbs.
19. What does research say about the healthiness of low-carb diets?
Studies are inconclusive—we really don't know.
20. Instead of eliminating one entire food group from your diet, you should aim for **variety**, choose **healthy** foods and think about **serving size** when planning your diet.
21. Complex carbohydrates from **whole grain** foods are better than foods like white bread or a white flour bagel.
22. Reading **food labels** is important in determining how much added sugar is in a food.
23. Food labels don't distinguish between natural and added sugars but looking at the first three ingredients and checking for words ending in **ose** can give you a clue about the sugar content.
24. A great option for staying healthy is to get plenty of **exercise**.