Interactive Video Conferencing

CLEVELAND MUSEUM OF NATURAL HISTORY

TEACHER GUIDE

You Are What You Eat
60-Minute Health Lesson
Interactive Video Conferencing
Grades: 1 - 6

You Are What You Eat

Description

Get a taste of the "MyPlate" dietary guidelines while learning to create healthy meals based on the different food groups. Test what your body can do with a calorie of food energy, and look at some real human specimens that illustrate you really ARE what you eat! What does the information on a nutrition label tell you about the food inside? You'll be ready to thoroughly analyze your next meal after this highly palatable program.

Objectives

- Describe the Choose MyPlate dietary guidelines.
- Describe organs and systems of the body that benefit from each of the MyPlate categories
- Identify the information provided on a Nutrition Label and list specific health concerns that this information addresses *(grades 4 - 6)*

National Health Education Standards

Grade 1-6: Standard 1
- Students will comprehend concepts related to health promotion and disease prevention to enhance health.

Grade 1-6: Standard 3
- Students will demonstrate the ability to access valid information, products, and services to enhance health.

Grade 1-6: Standard 5
- Students will demonstrate the ability to use decision-making skills to enhance health.

Grade 1-6: Standard 6
- Students will demonstrate the ability to use goal-setting skills to enhance health.

Grade 1-6: Standard 7
- Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

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How You Can Help Make This Virtual Program A Success

- If your students are joining us from your classroom computer, please arrange your room and projection screen so everyone can see us clearly.
- If you and your students are joining us from your homes, we will have an educator monitoring the Chat feature for questions. We request that you or another staff person serve as a Co-Host to help monitor students for any inappropriate Chat or camera behavior.
- If you will have a hybrid class (some at school, some joining from home), our educator will monitor the Chat and camera behavior, and we reserve the right to temporarily move any disruptive students to our Waiting Room so we or school staff can correct the undesired behavior.
- If you prefer, we can turn off all cameras and interact solely via the Chat feature.

Vocabulary

BMR – Basal metabolic rate. The number of calories that a body uses while at rest.

calcium – white metallic element from the earth that is found in bones, chalk, shells, etc.

calorie – measure of the amount of heat energy that can be derived from food.

carbohydrate – a compound found in foods that is used by the body for energy—can also be called a complex sugar or starch.

cholesterol – a soft, fat-like, waxy substance found in the bloodstream and in all body cells. Used for producing cell membranes and some hormones. There are two types of cholesterol, LDL and HDL:

> **LDL** – Low-Density Lipoprotein. "Bad" cholesterol, it can slowly build up in the inner walls of the arteries that feed the heart and brain and eventually block blood flow completely.
>
> **HDL** – High-Density Lipoprotein. "Good" cholesterol, HDL tends to carry cholesterol away from the arteries and back to the liver, where it is passed from the body. Most doctors feel this provides some protection against heart attacks.

fiber – woody substance from plants (cellulose) that cannot be digested by humans. There are two forms: **insoluble** [in-saal-u-bill] fiber, which helps to hold water in the stools and to prevent constipation, and **soluble** [saal-u-bill] fiber, which turns to a gel during digestion and can bind to cholesterol in our blood, helping to keep our arteries healthy.

fruit – a juicy seed-containing part of a plant, good source of vitamins and water

glucose – scientific name for the sugar found in blood that fuels our cells

glycogen – substance in animal tissues that is converted to glucose when the muscles need energy

grain – carbohydrate-containing small, hard seed of a cereal plant

lipids – scientific term for fats

legume – plant that has seeds which grow in pods, like peas and beans

minerals – inorganic substances from the earth that are not animal or vegetable

protein – substance found in meats and beans that are used in the structure of body tissues and regulating body chemistry.

vegetable – edible part of a plant that does not contain seeds

vitamins – substances needed in small amounts for proper body chemistry and healthy organ functions, normally derived from food or made by the body.

Extension Activities

1) **KidsHealth.org Web Search Option.** Have the students work in groups or individually to search www.KidsHealth.org in their "Kids" – "Staying Healthy" section for information on foods and fitness. Ask them to try and locate information that is new to them, and write a brief summary to share with the class. If this activity is done at home, please encourage them to do this with their parents or guardians.
2) **What Are You Made Of?** Have students keep track of the foods that they eat for a 3-day period. Make sure they include beverages and snacks. Ask them to match all the foods on their list with the categories of the MyPlate, and identify what nutrients their bodiesgained from those foods.
3) **Eat A Rainbow!** Challenge students to get their families to try a new color of vegetable or fruit every day for a week. Give each participant a small bunch of crayons as examples. At the end of the week, tally up all the results and have students draw a mural using all the colors that match the foods they tried.
4) **How Does Your Snack Measure Up?** Have students work in small groups to analyze our Mystery Food items. Cut out the included nutrition labels so that each group receives one worksheet and one mystery nutrition label (we have included 4 to start with, but feel free to collect more that relate best to your class). Ask groups to look at the provided information to determine if it is a healthy snack, and why. Here are the secret identities of our mystery foods:
    - Food #1 – medium carrot
    - Food #2 – McDonald's hamburger
    - Food #3 – cooked whole wheat spaghetti
    - Food #4 – Kit Kat candy bar (4 wafers)

Online Resources for Teachers and Students

Click the link below to find additional online resources for teachers and students. These websites are recommended by our Museum Educators and provide additional content information and some fun, interactive activities to share with your class. CMNH Educators regularly review these links for quality. Web addresses often change so please notify us if any links have issues.

Cleveland Museum of Natural History https://cmnh.org/edlinks

How Does Your Snack Measure Up?

Directions: Analyze a nutrition label provided by your teacher in order to determine if you have a healthy or unhealthy snack.

Nutrition Label #: _____

Nutrition Information	1 Medium Apple (154 g/5.5 oz.)	Doritos (28 g/11 chips)	Your snack
Calories	***80***	***150***	
Total Fat	***0 g***	***8 g***	
Total Carbohydrates	***22 g***	***17 g***	
- Dietary Fiber	***5 g***	***1 g***	
- Sugars	***16 g***	***1 g***	
Protein	***0 g***	***2 g***	
Vitamins and Minerals	***Vitamin A-2% Vitamin C-8% Iron-2%***	***Vitamin A-2% Thiamin-2% Vitamin B6-2%***	

What is the *Serving Size* of your snack? _____

Does your Nutrition Label most resemble the “Apple” or “Doritos” nutritional information:

_____

After analyzing the Nutrition Label for your snack, would you conclude that it is a healthy snack or an unhealthy snack?

_____

Please explain why?

_____

_____

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Teacher Answer Sheet:

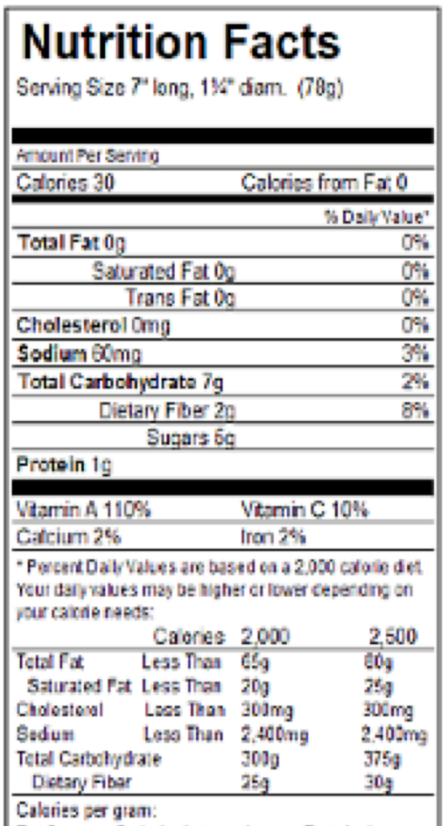
1 – 1 Medium Carrot

2 – McDonald's Hamburger

3 – Whole Wheat Spaghetti, Cooked

4 – Kit Kat Candy Bar (4 Wafers)

#1



Nutrition Facts

Serving Size 7" long, 1¼" diam. (78g)

Amount Per Serving	
Calories 30	Calories from Fat 0
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	0%
Cholesterol 0mg	0%
Sodium 60mg	3%
Total Carbohydrate 7g	2%
Dietary Fiber 2g	8%
Sugars 6g	
Protein 1g	

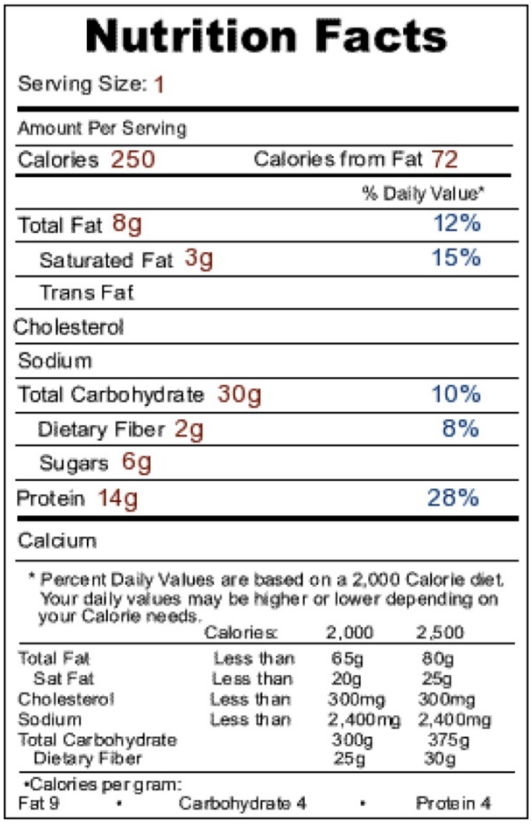
Vitamin A 110%	Vitamin C 10%
Calcium 2%	Iron 2%

* 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
Saturated Fat	Less Than	20g	25g
Cholesterol	Less Than	300mg	300mg
Sodium	Less Than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:

#2



Nutrition Facts

Serving Size: 1

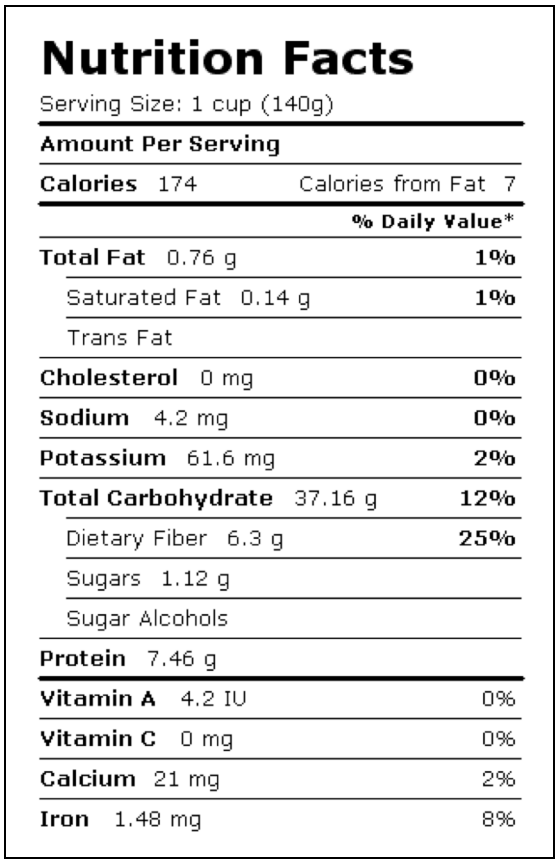
Amount Per Serving	
Calories 250	Calories from Fat 72
	% Daily Value*
Total Fat 8g	12%
Saturated Fat 3g	15%
Trans Fat	
Cholesterol	
Sodium	
Total Carbohydrate 30g	10%
Dietary Fiber 2g	8%
Sugars 6g	
Protein 14g	28%
Calcium	

* 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
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

•Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

#3



Nutrition Facts

Serving Size: 1 cup (140g)

Amount Per Serving	
Calories 174	Calories from Fat 7
	% Daily Value*
Total Fat 0.76 g	**1%**
Saturated Fat 0.14 g	**1%**
Trans Fat	
Cholesterol 0 mg	**0%**
Sodium 4.2 mg	**0%**
Potassium 61.6 mg	**2%**
Total Carbohydrate 37.16 g	**12%**
Dietary Fiber 6.3 g	**25%**
Sugars 1.12 g	
Sugar Alcohols	
Protein 7.46 g	
Vitamin A 4.2 IU	0%
Vitamin C 0 mg	0%
Calcium 21 mg	2%
Iron 1.48 mg	8%

#4

Nutrition Facts

Serving Size: 1 bar (2.8 oz) (78g)

Amount Per Serving	
Calories 404	Calories from Fat 182
	% Daily Value*
Total Fat 20.27 g	**31%**
Saturated Fat 14 g	**70%**
Trans Fat 0.08 g	
Cholesterol 8.58 mg	**3%**
Sodium 42.12 mg	**2%**
Potassium 180.18 mg	**5%**
Total Carbohydrate 50.38 g	**17%**
Dietary Fiber 0.78 g	**3%**
Sugars 37.97 g	
Sugar Alcohols	
Protein 5.08 g	
Vitamin A 63.18 IU	1%
Vitamin C 0 mg	0%
Calcium 97.5 mg	10%
Iron 0.78 mg	4%