

3. NATURE'S CANDY: SCIENCE, MATH, AND LANGUAGE ARTS

GRADE LEVEL – 3RD GRADE & 4TH GRADE

E: How can I use the Nutrition Facts to analyze sugar content in Fruits and Candy?

A: Show Nature's Candy Video: www.jumpwithjill.com/watch/natures-candy-music-video/



T: Discuss what students saw in the video:

- Why does Jill call fruit Nature's Candy?
- What makes fruit and candy different?
- What kind of Nature's Candy did you see?
- What is your favorite nature's candy?
- Did any other words in the song catch your ear?
- Discuss the difference between natural sugar in fruits and the added sugar in candy.
 - Fruits like watermelon have to be grown, pollinated, and picked and therefore contain a host of nutrients that our body needs because in addition to the natural sugars there is also a lot of fiber. Fruits are naturally sweet and colorful with the nutrients and fiber that are good for growing strong.
 - Candy, and most junk foods, are really just sugar and flavoring without any of the nutrients. Added sugar is any sugar that was added to the food at some point in processing. You might see it in on the ingredient label as sugar or brown sugar, corn sweeteners and high-fructose corn syrup or other "oses" like fructose, glucose, maltose, or dextrose; honey, molasses, malt or maple syrup. Most of the added sugars in the American diet come from sweetened drinks like sodas and energy drinks, sweet snacks, sweetened coffees and teas, and breakfast cereals and bars. Because of the links between added sugars and risk for cardiovascular disease, important scientists have updated the 2020-2025 Dietary Guidelines to use Americans to be on the lookout for added sugars in the foods and drinks they choose.

FRUIT UNIT LESSON PLANS FOR THE NATIONAL WATERMELON PROMOTION BOARD

- For students to gain appreciation of the work necessary for our food to grow (and those natural sugars to develop!), use Activity 1 *Becoming a Watermelon*. Read aloud the paragraph and ask students to write growth phase on the chart.
- Present the concept of a food label.
 - On the backs of everything you buy is a food label that tells you what's inside what you are eating. You might notice that many fruits and vegetables are not packaged in boxes or bags but rather are fresh in the store in their own 'packaging' and therefore don't appear to have nutrition labels. There is a lot of information on there and if you aren't an expert, it can be a lot to try to understand. Today we we will just look at just one ingredient - sugar - and see how that compares from fruit to candy. We'll also look at the total number of ingredients in a fruit that is grown compared to a food that is manufactured.
 - Using Activity 2 Nutrition Label Worksheet to chart compare the natural vs. added sugar and the number of ingredients in watermelon vs. watermelon candy.

S: Discuss as a group to share findings and review areas of misunderstanding.

3RD GRADE:

CCSS.ELA-LITERACY.RL.3.1

Use information gained from text features to demonstrate understanding of a text.

CCSS.MATH.CONTENT.3.MD.B.3

Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.

4TH GRADE:

CCSS.ELA-LITERACY.RL.4.1

Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text.

CCSS.MATH.CONTENT.4.MD.B.4

Translate information from one type of data and display to another.

YOU MAY ALSO FINDS STRONG MATCHES WITHIN YOUR STATE SCIENCE STANDARDS SUCH AS:

3RD GRADE PENNSYLVANIA SCIENCE STANDARD - 11.3.3.D

Classify foods by food group within the food guide pyramid including the serving size and nutrient function within the body.

4TH GRADE PENNSYLVANIA SCIENCE STANDARD - 3.1.4.A.8

Construct and interpret models and diagrams of various animal and plant life cycles.

ACTIVITY 1 BECOMING A WATERMELON

Name: _____

Read about how watermelons grow and write the phases of the watermelon growth cycle on the chart below.

Watermelons grow on long, rambling vines. Seeds are planted 1 inch deep and sprout with sunlight and sandy soil. The seedlings vines across the ground up to 20 feet in length. Wind, bees, and butterflies are attracted to the flowers, which start the growth of the fruit. It's the size and sweetness we enjoy at markets and stores after about 90 days.

WORD BANK

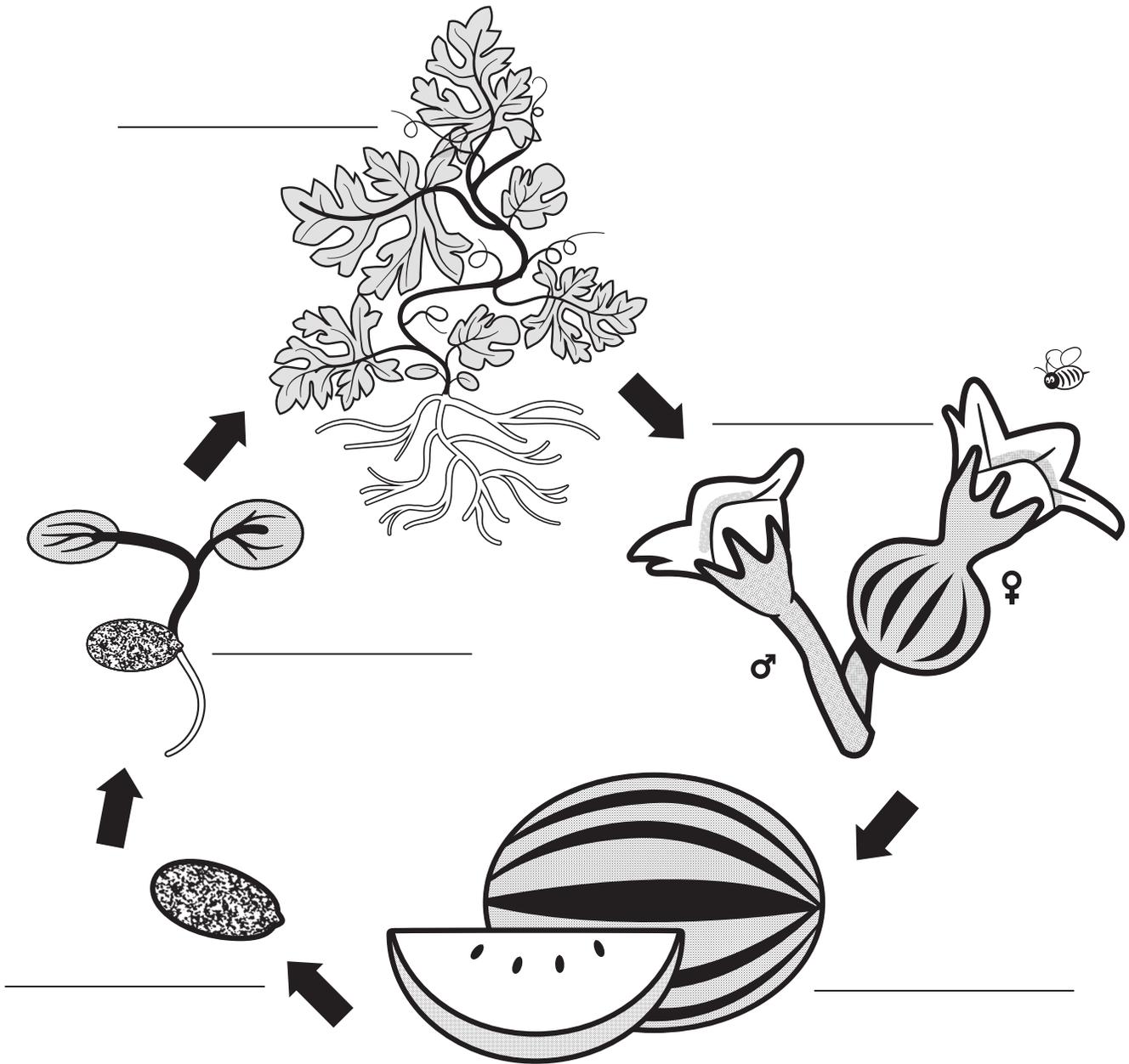
Seedling

Sprout

Flowers

Fruit

Seed

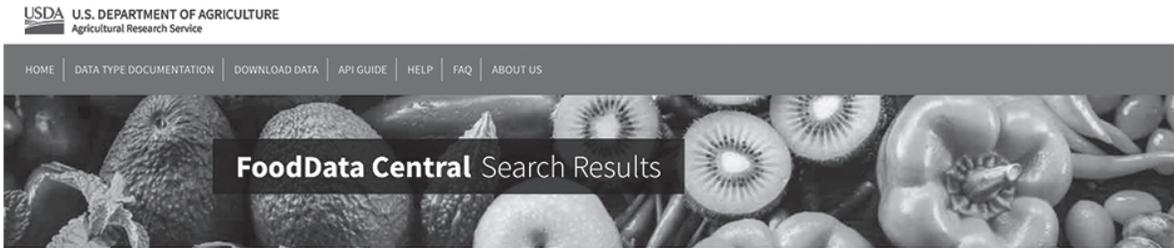


ACTIVITY 2 NUTRITION LABEL WORKSHEET

Name: _____

Use the provided labels to compare naturally sweet watermelon to watermelon candy.

- Circle how much sugar is in each food.
- Draw a triangle around the added sugar.
- Draw a rectangle around the ingredient list.



ARS HOME | FOODDATA CENTRAL | WATERMELON (BRANDED, 533221)

WATERMELON

Data Type: Branded **Food Category:** Pre-Packaged Fruit & Vegetables **Brand Owner:** Walgreens Co. **FDC ID:** 533221 **GTIN/UPC:** 049022854390
FDC Published: 4/1/2019 **Available Date:** 10/13/2017 **Modified Date:** 10/13/2017 **Market Country:** United States

Powered by Label Insight

Information provided by food brand owners is label data. Brand owners are responsible for descriptions, nutrient data and ingredient information. USDA calculates values per 100g or 100ml from values per serving, 1 calorie diet (21 CFR 101.9(c)).

Nutrients

Portion: 100g

Name	Amount	Unit	Deriv. By
Energy	31	kcal	Calculated from value per serving size measure
Protein	0.78	g	Calculated from value per serving size measure
Total lipid (fat)	0.25	g	Calculated from a daily value percentage per serving size measure
Carbohydrate, by difference	7.45	g	Calculated from value per serving size measure
Fiber, total dietary	0.4	g	Calculated from value per serving size measure
Sugars, total including NLEA	6.27	g	Calculated from value per serving size measure
Sodium, Na	0	mg	Calculated from a daily value percentage per serving size measure
Fatty acids, total saturated	0	g	Calculated from a daily value percentage per serving size measure
Fatty acids, total trans	0	g	Calculated from value per serving size measure
Cholesterol	0	mg	Calculated from a daily value percentage per serving size measure

Ingredients: WATERMELON

WATERMELON CANDY

Data Type: Branded **Food Category:** Candy **Brand Owner:** Perfetti Van Melle USA Inc. **FDC ID:** 671684 **GTIN/UPC:** 073390002039
FDC Published: 12/6/2019 **Available Date:** 7/27/2019 **Modified Date:** 7/27/2019 **Market Country:** United States

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Nutrients

Update Log

Portion: 100g

Name	Amount	Unit	Deriv. By
Energy	385	kcal	Calculated from value per serving size measure
Protein	0	g	Calculated from value per serving size measure
Total lipid (fat)	0	g	Calculated from a daily value percentage per serving size measure
Carbohydrate, by difference	96.15	g	Calculated from value per serving size measure
Sugars, total including NLEA	70.51	g	Calculated from value per serving size measure
Sugars, added	70.5	g	Calculated from value per serving size measure
Sodium, Na	0	mg	Calculated from a daily value percentage per serving size measure

Ingredients: SUGAR, CORN SYRUP, MALTODEXTRIN, DEXTROSE, MODIFIED FOOD STARCH (CORN), PALM OIL, CONTAINS LESS THAN 2% OF: CITRIC ACID, WATER, ARTIFICIAL FLAVORS, RED 40, BLUE 1, YELLOW 6, YELLOW 5.



Fill in the chart with the information you put shapes around from above.

	WATERMELON	WATERMELON CANDY
Total Sugar		
Added Sugar		
Number of ingredients		

1. How is sugar measured on a nutrition label? _____

2. Which food has the most grams of added sugar? _____

3. Which food has the most ingredients? _____

4. Compare and contrast the eating experience of watermelon the fruit compared to watermelon the candy. Write three things that make them the same and different when it comes to size, flavor, and enjoyment in your opinion.

SAME	DIFFERENT



ACTIVITY 1 BECOMING A WATERMELON ANSWER KEY

Name: _____

Read about how watermelons grow and write the phases of the watermelon growth cycle on the chart below.

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WORD BANK

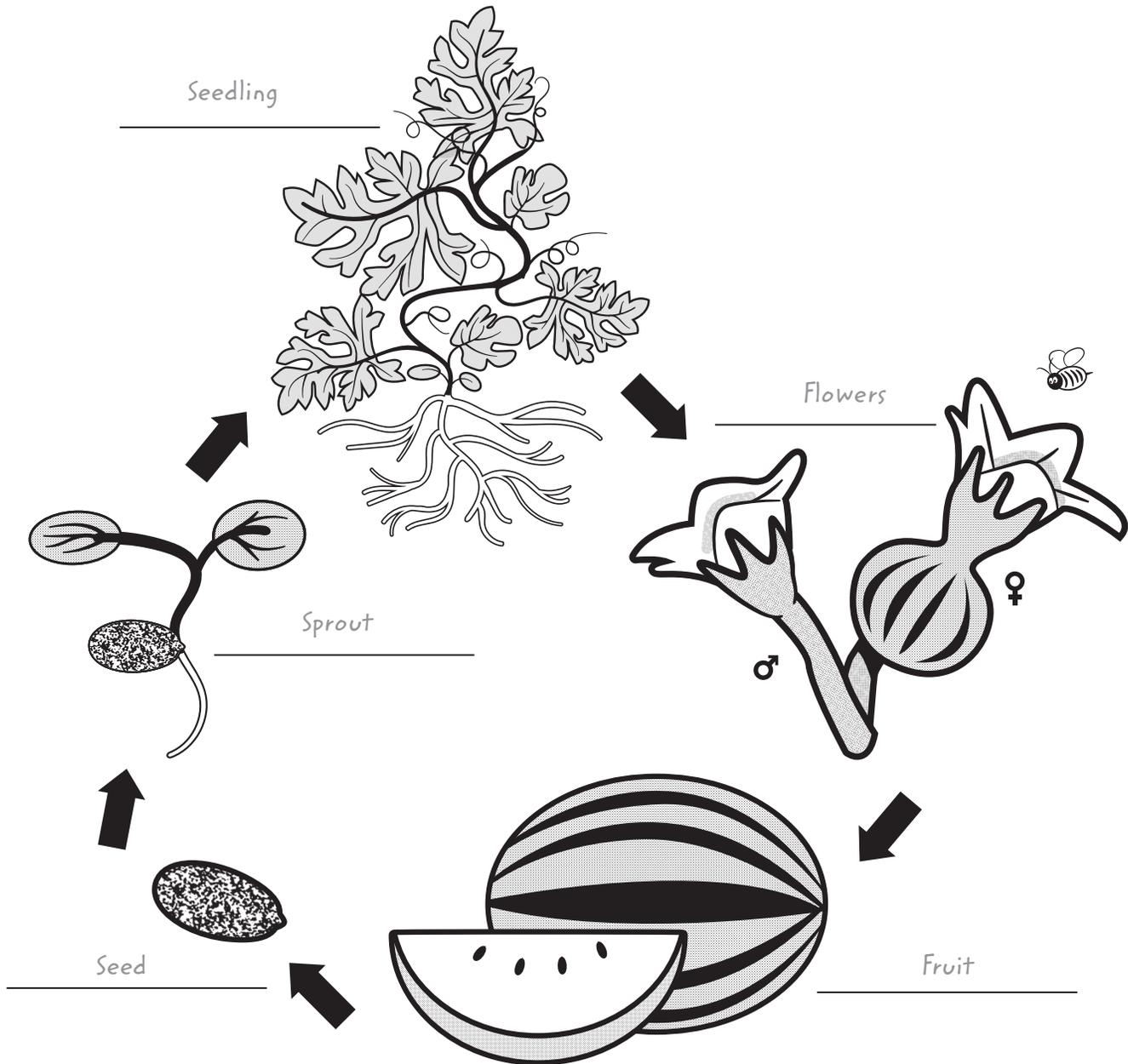
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Flowers

Fruit

Seed

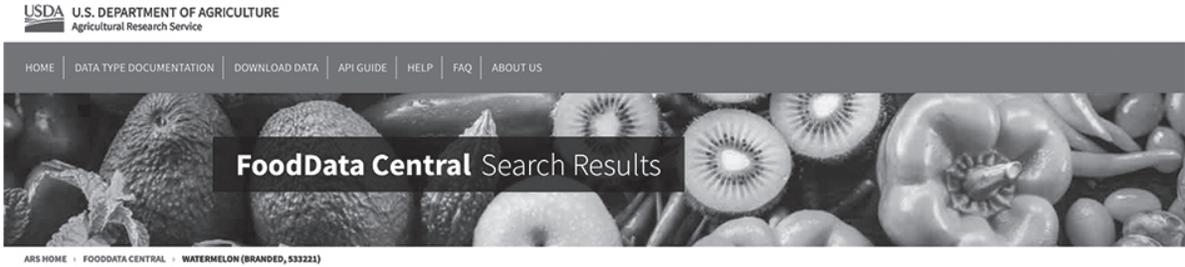


ACTIVITY 2 NUTRITION LABEL WORKSHEET ANSWER KEY

Name: _____

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ANSWER KEY

Fill in the chart with the information you put shapes around from above.

	WATERMELON	WATERMELON CANDY
Total Sugar	6.27g	70.51g
Added Sugar	—	70.5g
Number of ingredients	1	13

1. How is sugar measured on a nutrition label? Grams

2. Which food has the most grams of added sugar? Watermelon candy

3. Which food has the most ingredients? Watermelon candy

4. Compare and contrast the eating experience of watermelon the fruit compared to watermelon the candy. Write three things that make them the same and different when it comes to size, flavor, and enjoyment in your opinion.

SAME	DIFFERENT
<i>People like to eat both</i>	<i>Watermelon has fiber and nutrients, watermelon candy is just sugar</i>
<i>Both have sugar and are sweet</i>	<i>Watermelon has natural sugar, which gives it its sweetness, watermelon candy has added sugar</i>
<i>Both are pink</i>	<i>It's easier to unwrap a candy than it is to slice a watermelon, but the watermelon will give you good energy</i>