

Chocolate Graphing

Grade levels: K-3

Standards: Pennsylvania Academic Standards for Reading, Writing, Speaking, and Listening
1.1.3 F, 1.2.3 A, 1.6.3 D, 1.6.3 E Pennsylvania Academic Standards for Mathematics
2.6.3 A, 2.6.3 B

Common Core: 3.MD.4, SL.3.6

Materials: tape

- graph labels
- index cards
- chocolate graphing sheet – 1 per student

Teacher Background:

This lesson is intended as a follow up to participating in The Art of Chocolate at The Hershey Story. During The Art of Chocolate, students were introduced to the three types of chocolate: milk, white, and dark. They were given samples of each and were able to create abstract art using the liquid form of all three. This lesson combines their experience at The Hershey Story with mathematics and has the students create a bar graph based on their chocolate preference. Which type of chocolate did they like best? What did their classmates like the best? The class will create a floor bar graph to compare their tastes and draw conclusions based on their findings.

Lesson Plan

Essential Question: What type of chocolate do I like best?

Vocabulary:

1. Dark Chocolate -chocolate that contains more than 50% cocoa content. Besides chocolate liquor, it often contains added cocoa butter, sugar, and vanilla.
2. Milk chocolate -chocolate liquor to which dairy, sugar, and vanilla have been added. Quality milk chocolate should contain a minimum of 30% chocolate liquor.
3. White Chocolate -made from cocoa butter, dairy, sugar and vanilla. It does not contain chocolate liquor, but must contain at least 33% cocoa butter to be considered of good quality.
4. Chocolate Liquor – the finely ground nib, or meat of the cacao bean.
5. Bar Graph – a chart with rectangular bars used for comparing two or more values

Activating Strategies:

Step 1 – Review with students the experience they had during The Art of Chocolate at The Hershey Story.

Step 2 – Read the essential question to the class and have a few students share their favorite type of chocolate. Have each student record their favorite kind of chocolate on their graphing sheet in the space provided.

Step 3 – Review with students what a bar graph is and that it is used to compare two or more things. Go over the parts of a bar graph if necessary.

Step 4 – Have students predict which type of chocolate will be most popular in the class and have them record it in the space provided on their graphing sheet.

Teaching Strategies:

Step 1 – Create a Y and X axis in the shape of an L on the floor using tape. Using the labels provided (or ones you or the students create) name the graph, the X axis, and the Y axis. Also put out the labels for the different types of chocolate.

Step 2 – Give each student a blank index card and have them place it in the graph above the type of chocolate they like best. Be sure to have the index cards placed in the shape of a bar to create the bar graph.

Step 3 – Have students copy the bar graph onto their own graphing sheet. Have students color the dark chocolate bar black, the milk chocolate bar brown, and to just outline the white chocolate bar so that it remains white.

Step 4 - Based on the finished graph, have students draw conclusions about the results. What type of chocolate was most popular in the class? Did more people like milk or dark chocolate better? etc... Have students record their findings on their sheet and discuss as a class.

Summarizing Strategies:

Students will make predictions and conclusions about the different types of chocolate. Teachers can collect the finished bar graphs and use for a grade and/or a display.

Bibliography

<http://www.burdickchocolate.com>

<http://www.dictionary.com>

<http://www.nces.ed.gov/nceskids/createagraph/default.aspx>

Chocolate Graphing
Bar Graph Labels

CHOCOLATE GRAPHING

Number of Students

Types of Chocolate

Chocolate Graphing
Bar Graph Labels Continued

Dark Chocolate

Milk Chocolate

White Chocolate

Name: _____

CHOCOLATE GRAPHING

Calling all CHOCOLATIERS! Here's your chance to decide which chocolate is the best! Is it milk chocolate? White chocolate? Or dark chocolate? Create a bar graph with your classmates and answer the questions below. Have fun!

1. Circle your favorite type of chocolate:

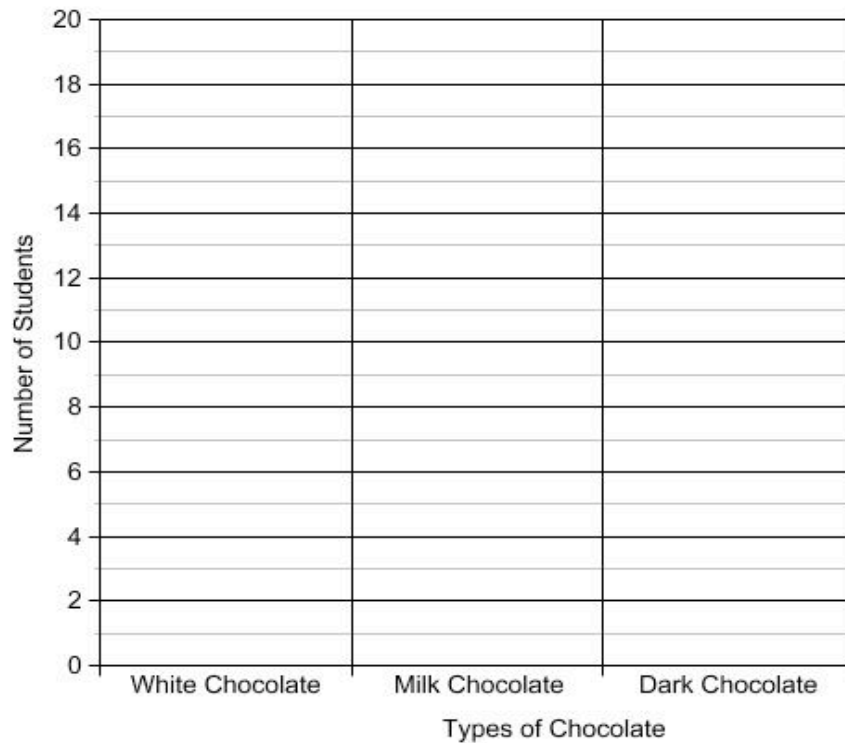
Milk Chocolate

Dark Chocolate

White Chocolate

2. What type of chocolate do you think will be the most popular in your class?

3. Fill in the bar graph below based on your classmates' responses...



4. Which chocolate type was the favorite? _____

5. Was your prediction correct? _____

6. Was white or dark chocolate more popular and by how many people?

7. Was dark or milk chocolate more popular and by how many people?
