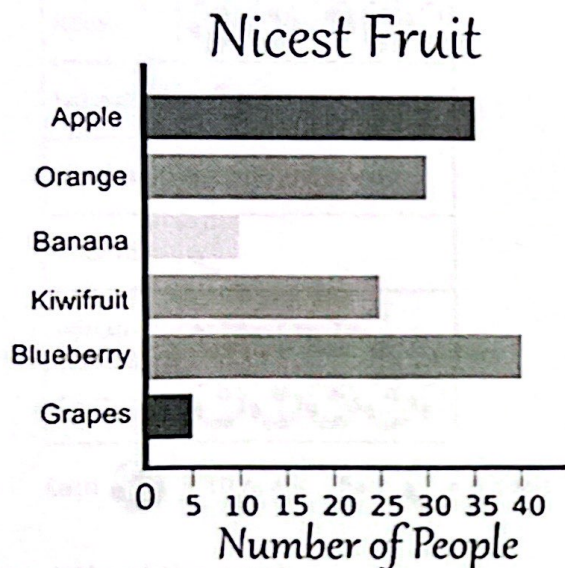


Name _____

MONDAY

Part I: Parts of a bar graph

Directions: label the parts of a bar graph on the graph shown below. Be sure to use arrows to indicate what you are labeling.



Part II: Analyzing a bar graph.

- 1) Analyze means to _____.
- 2) This bar graph is: horizontal or vertical
- 3) What survey question could have been asked to generate this data?

- 4) What is the scale counting by? _____
- 5) How many people liked blueberry more than banana? _____
- 6) Which two fruits combined were nicest?
banana/kiwifruit or blueberry/grapes
- 7) Which two fruits combined total fifteen? _____ and _____

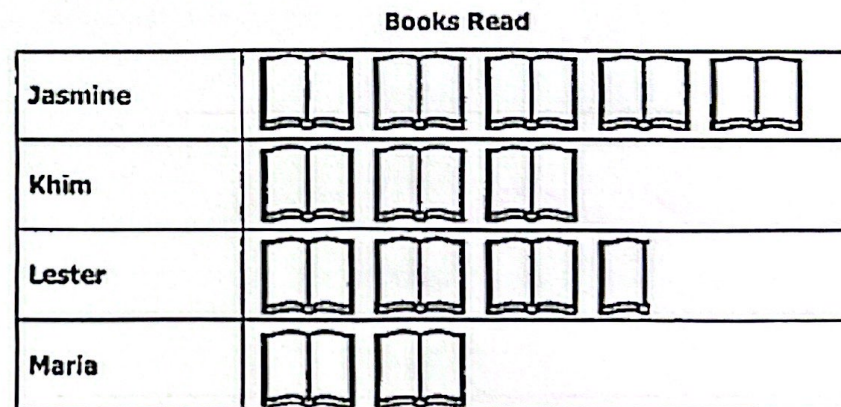
TUESDAY

Part I: Vocabulary

horizontally vertically data survey key picture graph

- 1) The _____ lets you know what each picture equals (what you are counting by).
- 2) A _____ displays data using pictures.
- 3) You can collect data to display in a graph by conducting a _____
- 4) Information collected in a survey and then displayed in a graph is called _____
- 5) Data in a graph can be displayed _____ or across.
- 6) Data in a graph can be displayed _____ or up and down

Part II: Analyzing (understanding) a picture graph.

























Each means 2 books read.

1. How many books did Jasmine and Khim read together? _____
2. How many more books did Jasmine and Khim read than Lester and Maria combined? _____
3. How many books were read by all four of these students? _____

WEDNESDAY

Part I: Parts of a picture graph

Soccer goals	
Kiley	    
Sebastian	 
Vanessa	
George	
Adrian	    
Cecilia	     

Each  = 10 goals Each  = 5 goals

- 1) Circle the **title** of the graph
- 2) Put a box around the **key**
- 3) Shade in the **data**
- 4) What does half of a soccer ball mean? _____

Part II: Analyzing (understanding) a picture graph


Directions: Using the graph above, answer the following questions using true (T) or false (F).

- 5) Each soccer ball picture equals one goal _____
- 6) Sebastian scored six goals _____
- 7) Vanessa and George scored ten goals each _____
- 8) Cecilia scored the most goals _____
- 9) Adrian scored 35 goals _____
- 10) Sebastian scored ten more goals than George _____

THURSDAY

Part I: Creating a picture graph

Directions: Using the information from the table, create a picture graph to show the data collected. Be sure to include the following parts of a picture graph: title, labels, pictures (data), key, and categories.

Food	Votes
Pizza	  
Burger	    
Pasta	    
Hot Dog	    

Use a heart to show the data

Each _____ means _____

Name: _____

Class: _____

The Cold Hard Science Behind Ice Cream

By Tracy Vonder Brink
2022

Science is the study of the world around us. In this informational article, Tracy Vonder Brink explains the science of how ice cream is made. As you read, take notes on how ice cream is made.

- [1] People in the United States love ice cream. Each American eats about 20 pounds (9kg) of it every year! Even George Washington served it to his guests. Ice cream has three main ingredients:¹ Milk, cream, and sugar. How do three simple things become a tasty frozen treat?

It all starts with atoms. Atoms are the tiny building blocks that form everything around us. When two or more atoms are stuck together it is called a molecule. An object's atoms and molecules are always moving. (Atoms are much too small to see, so we don't notice the movement.) The hotter something is, the faster its molecules jiggle² around. Take water, for example. When water molecules move their fastest, they make steam. Water molecules with less energy³ form the liquid we call water. Take away more energy, and the water molecules freeze into a solid. That's where ice cream begins.



"Untitled" by La Albuquerque is licensed under CC0.

Milk and cream both contain water. The water inside them is what freezes to make ice cream. How? Ice cream factories⁴ put the ingredients into a big machine and surround⁵ them with cold. The cold slows down the molecules in the mixture's water. Ice crystals⁶ form.

1. parts something is made of
2. **Jiggle (verb)** to shake back and forth
3. power something has
4. **Factory (noun)** a building or buildings where things are made
5. **Surround (verb)** to make a circle around

Fats in the milk and cream keep the ice crystals from sticking together. The sugar in ice cream thickens some of the water to slow down the freezing process.⁷ That's partly why it's ice cream and not an ice cube. But freezing ice cream as it sits makes large, rough ice crystals. Making smooth ice cream takes both mixing and air.

- [5] An ice cream machine turns and mixes the ice cream as it freezes. Moving water doesn't have time to form large ice crystals as it freezes, so it makes small ones. Mixing also adds air. The air makes the mixture light and fluffy.⁸ Together, small ice crystals and air create smooth, creamy ice cream. (Ice cream makers add other thickeners to help the ice cream stay smooth. And of course they also add plenty of flavors.)⁹

Ice cream doesn't refreeze well because of its ice crystals. They lose the air that was frozen into them as they melt. Unless new air is mixed in, ice cream refreezes with larger crystals. That's why the melted ice cream you put back into the freezer comes out grainy and rough.

So, what's the difference between ice cream, soft serve, and frozen custard? In the United States, ice cream is required¹⁰ to have at least 10% milk fat. (Ice milk only has to have 2.5% milk fat. It's often sold as low-fat ice cream.) Soft serve is made with more air and less fat than regular ice cream. It's also served at a warmer temperature to keep it soft. Frozen custard has egg yolks in it as well as less air. Together they make frozen custard thicker than ice cream.

Whether you love ice cream, soft serve, or frozen custard, they all start the same way — with some yummy ingredients and a lot of science. What's your favorite kind?

"The Cold Hard Science Behind Ice Cream" by Tracy Vonder Brink. Copyright © 2022 by CommonLit, Inc. This text is licensed under CC BY-NC-SA 4.0.

Unless otherwise noted, this content is licensed under the [CC BY-NC-SA 4.0 license](https://creativecommons.org/licenses/by-nc-sa/4.0/)

6. a special shape that is made when water freezes into ice
7. steps that make something
8. **Fluffy** (*adjective*) soft and light
9. **Flavor** (*noun*) the way something tastes
10. needed or must have

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. Which sentence best summarizes the passage?
 - A. There are many different ways to make ice cream, but using a machine is the best way.
 - B. Ice cream has only three simple ingredients, but it takes a special process to make.
 - C. It is very difficult to get the ingredients for ice cream, and it is hard to make.
 - D. Frozen custard and soft serve are more difficult to make than ice cream.

2. Which detail best explains how ice cream becomes smooth?
 - A. "Milk and cream both contain water." (Paragraph 3)
 - B. "But freezing ice cream as it sits makes large, rough ice crystals." (Paragraph 4)
 - C. "An ice cream machine turns and mixes the ice cream as it freezes." (Paragraph 5)
 - D. "They lose the air that was frozen into them as they melt." (Paragraph 6)

3. How does paragraph 2 help readers understand the text?
 - A. It helps readers understand how ice cream can make steam.
 - B. It helps readers understand how atoms are made of molecules.
 - C. It helps readers understand how milk and cream come together to make water.
 - D. It helps readers understand how liquid ingredients in ice cream can become solid.

4. What is the meaning of "contain" as it is used in paragraph 3?
 - A. freeze
 - B. have
 - C. make
 - D. stir

Hysterical Handwriting

Name: _____

Page 13

Look! There is a hippo in a
tutu playing at the park!



»»» Quick Check «««

☐

Finger Spaces

☐

Capital Letters

☐

Punctuation

☐

My Best Work

Hysterical Handwriting

Name: _____

Page 14

I chewed on my bone while

my dog went to school.

»»» Quick Check «««

☐

Finger Spaces

☐

Capital Letters

☐

Punctuation

☐

My Best Work

