Name _____

Pick a Project

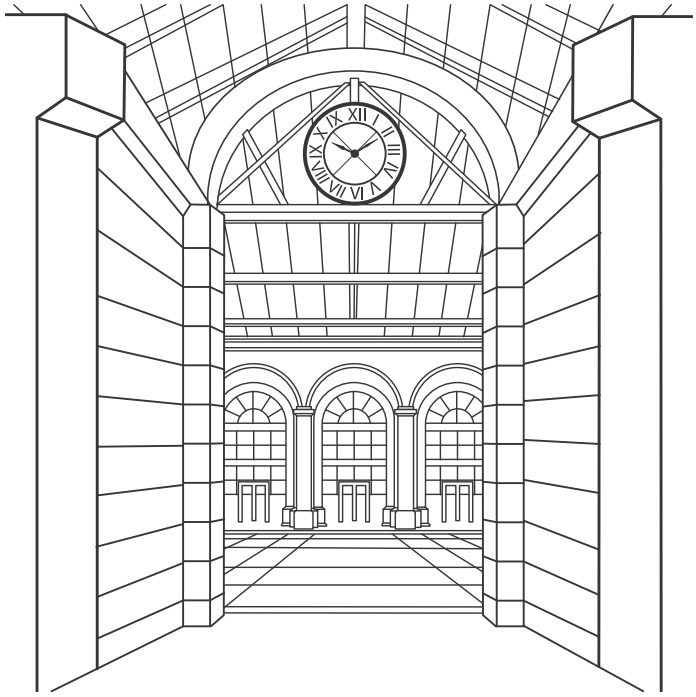
Project 14A

Clock for the Ages

Henry Flagler was important to the development of Florida's Atlantic Coast. He founded what became the Florida East Coast Railway.

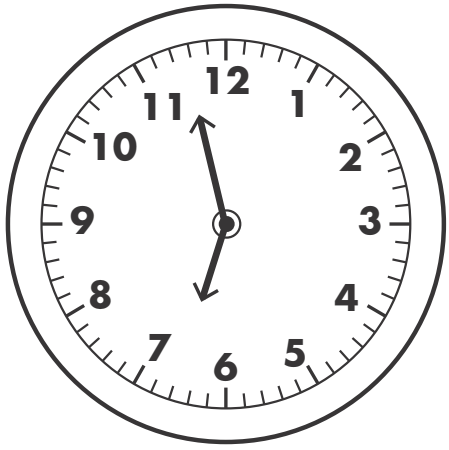
Flagler also had an estate in Palm Beach, called Whitehall, built in 1902. Whitehall is Florida's first museum.

Inside Whitehall's massive Grand Hall is a beautiful clock. It was designed by cabinet maker François Linke. The clock shows the importance of technology at that time in our history.



Your Project Write and Tell a Story About Time

Draw four clock faces on the board. Make sure to include the hours 1 through 12 and the tick marks between the numbers. Alternatively, use the blank clock faces on Teaching Tool 20.



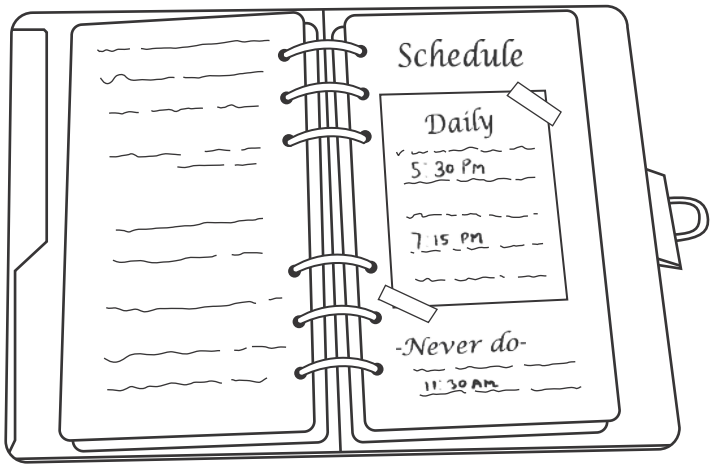
Write a story that begins at 1:00 in the afternoon. Include four "blank" times at which something exciting happens.

Now read your story aloud to the class. When you come to the first of the four blank times, ask a classmate to toss number cubes to find the elapsed time from 1:00. Toss one number cube for the hour (or hours) and find the sum of two tossed cubes to find the minutes. Then show the new time in your story on one of the clock faces on the board. For example, if the first number cube shows a 2 and the two cubes have a sum of 11, the new time would be 3:11 in the afternoon. Do this for each of the four times in your story.

Name _____

What's the Plan?

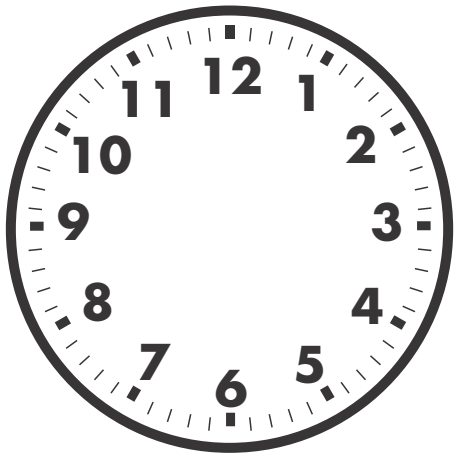
Have you ever been unable to complete everything you wanted to do in a day? Maybe you had to do chores and finish your homework, but you also wanted to see a movie, which you missed!



Sometimes it feels as if there are too many activities to complete in a day. When that happens, it helps to create a schedule to plan your day. A schedule can break down the day into hours or even parts of hours. You can fill in the different time slots with what you have to do.

Your Project Create and Play a Matching Game

Design 12 clock faces. Cut the circles from construction paper. Mark the clock faces using 1–12 for hours and tick marks for minutes between the numbers. Alternatively, use the blank clock faces on Teaching Tool 20.



With a partner, think of 12 activities that each take different amounts of time. You might spend 2 minutes brushing your teeth or 2 hours watching a movie. Record each activity with its start time, end time, and elapsed time on a piece of paper.

Draw lines to show the elapsed time for a different activity on each of the 12 clock faces. Make a green line for the start time and a red line for the end time. Put the clocks facedown and fold the 12 handwritten activities. Take turns trying to match each clock to an activity. If you do not have a match, put the clock back facedown and return the folded paper. The first to make three matches wins!

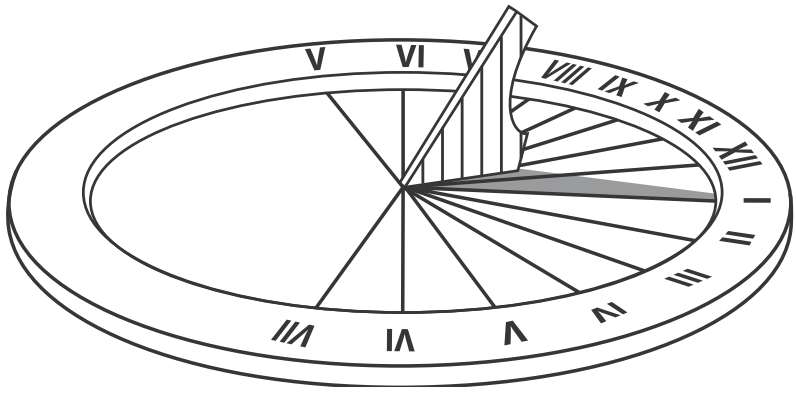
Name _____

Pick a Project

Project 14C

Dial Up the Time

Before clocks were invented, people used the elements to measure time. They used the Sun, the stars in the sky, and Earth itself.

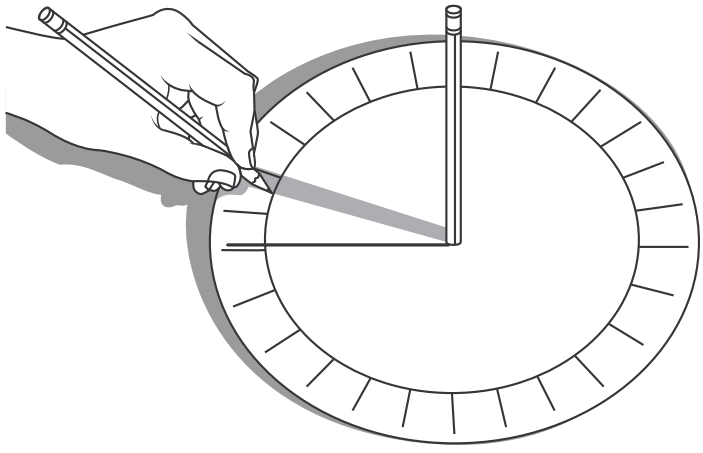


People invented different methods to determine time.

One of the earliest devices to tell time was the sundial. A sundial can be viewed as a sun-powered clock. It shows time based on the position of the sun. It is made of a flat plate, which is the dial, and a gnomon. A gnomon casts a shadow onto the dial to tell a specific time.

Your Project Design and Make a Sundial

Research ways to build your own sundial.



With a partner, write down the steps you need to construct a sundial. Make sure you and your partner clearly explain each step in the instructions. Also, list all the supplies you will need. What will be used for the flat plate? What will be the gnomon? Finally, plan where you will set it up so that you can test the sundial to make sure it works.

Once your plan is in place, present it to the class. Include a drawing of how the sundial will appear at a specific time during the day.

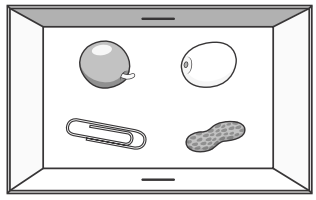
Name _____

Pick a Project

Project 14D

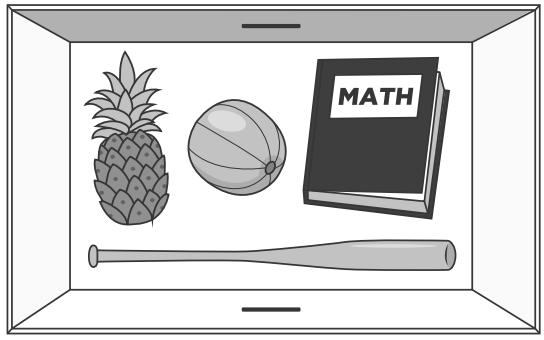
What a Mass!

You can use metric units to estimate the mass of different objects. A gram is one unit of mass. Objects that have a mass of about 1 gram are a grape, an olive, a paper clip, or a peanut.



Each 1 gram

Another metric unit of mass is a kilogram. A kilogram is equal to 1,000 grams. Objects that have a mass of about 1 kilogram are a cantaloupe, a pineapple, a math textbook, or a wooden baseball bat.

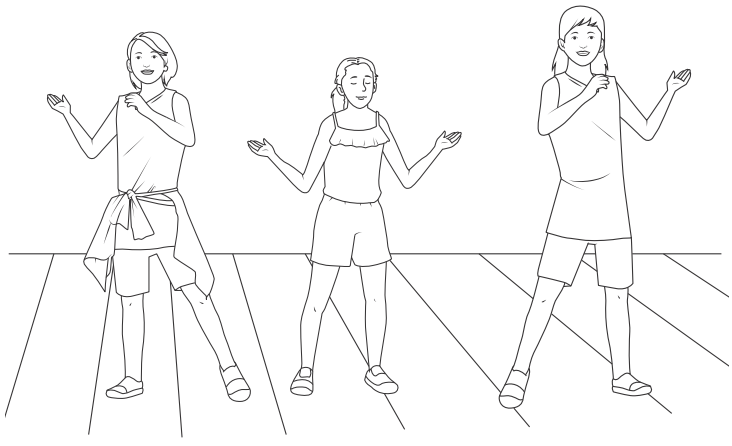


Each 1 kilogram

You can use grams or kilograms to estimate the mass of many objects. A pencil has a mass of about 5 grams and a cell phone has a mass of about 150 grams. A large television has a mass of about 15 kilograms and a large dog has a mass of about 40 kilograms.

Your Project Perform a Song About the Masses of Objects

Write and perform a song about the masses of different objects in your classroom.



With two other classmates, gather three objects of different masses. For instance, you might choose a piece of chalk, a book, and a chair. Your song will have three parts, one for each object you choose. The lyrics to the song should include an estimate of the mass of each object. Use the standard units of grams and kilograms for your estimates. Once you have written the song, each student in your group will sing one part to the class, using the object in the performance.

