

This app-based exploration is best for students in grades 4-8.

Why were time zones created? What are the consequences of not measuring time accurately? Using this series of activities and the WA State History Museum app, you and your student will learn about the part railroads played in changing time in the United States.

Use this activity sheet with the museum's FREE app, WA State History Museum. Each virtual gallery tour in the app provides "stops" that feature exhibition highlights. Activity sheets have associated questions or actions for various stops on the app tours.

How to get the app:

For **Android** and **Windows** devices, use the web-based application at this link:

<https://web-app.cuseum.com/?Washington-state-history-museum>
For **iPhones**, go to the Apple App Store, type in "WA State History Museum." Click "open" and you'll be prompted to download the app to your phone.

Stop #1 Create a Water Clock

Gather these items:

- One paper cup
- A clear container to collect water
- A thumbtack
- Masking tape
- Markers
- Water
- A timing device
(note: you can use the timer on a cell phone!)

Follow these steps:

- Use the thumbtack to poke a small hole in the bottom of the paper cup. This hole should be in the center of the cup.
- Over a sink or covered surface (this will be messy!), put water in the paper cup.
- Enlarge the size of the hole as needed so that the water drips from the cup at an even rate. Ask your child to time the falling of the water, either with a watch or by counting at an even pace.
- Place the cup on top of the glass jar or container. Make sure that the neck of the jar is narrow enough to keep the cup from falling in. (If you have difficulty finding a jar to fit this purpose, consider washing out a 2-liter soda bottle for use in this activity.)
- Measure out a strip of masking tape.
- Place the tape so that it lines up vertically with the neck of the bottle. Explain to students that they will be measuring how much of the container is filled with water. Time one minute and have a student mark the tape. After this point, use a watch or timer to mark the clock at specific intervals of your choosing (5 minutes, 30 minutes, 1 hour).
- After you have marked and observed the clock in motion, talk about the things that you see.

Stop #2 High Noon

Looking at the map on the app, try to answer these questions:

Where are the different time zones located?

Where do you think the names of these time zones came from?

Stop #3 Keeping Time

Now, use your imagination and pretend that you live in the early 1800s. Imagine that time zones have not been invented yet. Think about the things that you learned from your reading and answer these questions.

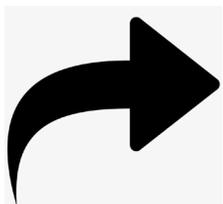
How do you tell time?

What problems do you have without any time zones?

Who found the solution to these problems? What was it?

Stop #4

Explore
More



Look up different ways of telling time and find another example of a clock that you could build on the internet. Depending on your local weather, a sundial might be an excellent choice!

Look at timetables at the Washington State Historical Society's collections site at WashingtonHistory.org. Pretend you're going on a train journey and use the timetable chosen to plan it. (You can also look up railroad menus on our website to add to the experience.)