The Big Idea:
There’s a lot of math involved in telling time! Let’s explore time by turning ourselves into the hands of an analog clock.

You Will Need:
★ To print (optional): Clock numbers (1 packet)
★ Digital clock or cell phone with a digital clock display
★ Masking tape
★ Paper: 1 sheet per kid, plus 2 extra
★ Pencil
★ Stopwatch or cell phone with a stopwatch function

Key Prep:
★ Tape the clock numbers (or just numbered pieces of masking tape) to the floor in a 10 foot circle, like a giant clock. Mark the center of the clock with a small masking tape X.
★ Write “Hour Hand” on one sheet of paper, and “Minute Hand” on another.

The Math Behind the Scenes:
Clocks help us measure the passage of time, and are really helpful tools when we need to be someplace at a certain time. To read an analog clock, we need to know how to count to 60 and how to skip count by 5s. Telling time with a clock is a great way to learn about basic fractions, too.
Time for a Birthday (for little kids)

There are 2 kinds of clocks, digital and analog. Digital clocks are the kind that you see on microwave ovens, stoves, cars and smart phones. They display the time like this:

09:14

★ What would your birth date look like on a digital clock? That’s the month and day of your birthday. This clock shows September 14, because September is the 9th month and the 14 shows it’s the 14th day.
★ Are you able to come up with a time that shows your birthday?
★ Would any birthday work?
★ Your birthday time shows up on the clock twice every day. Are you usually awake both times or just one?

Now let’s find out what time our names make:
★ Count the number of letters in your first name and use that number as the hour.
★ Now count the letters in your last name and use that number as the minutes. For example, the name Jonathan Smith would be 08:05.
★ If you have more than 12 letters in your first name, use 12 for the hour and add the extra letters to the last name for additional minutes!

**BONUS:**
★ What time has the same digits in all 4 spaces?
★ What’s the largest number you can make using the digits on the clock?
★ What’s the smallest number you can make?
All Hands on Deck
(for 2 or more little and big kids)

Not all clocks look like the digital one. Some clocks have hands that spin in a circle and point to numbers to tell us the time. Those are called analog clocks. They were invented long before electricity and digital clocks.

Analog clocks look like this:

★ The short ("hour") hand takes an hour to advance from one number to the next number (for instance, from 1 to 2).
★ The long ("minute") hand takes 5 minutes to advance from one number to the next number, and it takes an hour to go around the clock once.
★ Each number on the clock represents the hour when reading the hour hand, and 5-minute increments when reading the minute hand (so 1 is 5 minutes, 2 is 10 minutes, 3 is 15 minutes, etc.).
★ What time does the clock say when the hour hand is on 10 and the minute hand is on 12?
★ How do you read the clock when the hour hand points halfway between 10 and 11, and the minute hand is on the 6?
★ What if both the hour and the minute hand are on the 1?
Today, you’re going to be the hands on a clock and race to show the time!

★ Give one kid the “Hour Hand” sign, and another kid the “Minute Hand” sign.
★ Have an adult or older kid call out a whole-hour time, like “6 o’clock!” and start the stopwatch
★ The two kids lie inside the clock as the “hands,” each pointing to the correct number. The minute hand kid should extend his/her arms longer than the hour hand kid.
★ Stop the stopwatch when the kids display the time correctly.
★ Repeat with different times ending in 0 or 5 and see if the kids can display the times faster.
★ Times to avoid for overcrowding: 12:00, 1:05, 2:10, 3:15, 4:20, 5:25, 6:30, 7:35, 8:40, 9:45, 10:50, 11:55.

As Time Goes By (for big kids)

Now that we have the basics figured out, let’s see what our clock looks like when time elapses, and the hands move!

★ Give the kids a starting time (e.g., 4:15, 3:55), and then have them advance 15 minutes by figuring out the new time and rolling the hands to it. Both hands may need to move!
★ Try it again with different starting times, and advancing by longer times (e.g., 30 minutes, 60 minutes, 90 minutes).
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