

Time to Shine

TELL TIME WITH A SUNDIAL

Note: Sundials can be as elaborate or simple as you want to make them, depending on your time and budget. The one given here is made from inexpensive, easy-to-find materials. Search the internet for other options if you'd like to use other longer-lasting materials.

This is an experiment they can begin during class and continue throughout the week at their own home.

Materials

- 1 flashlight
- 1 globe or ball
- Small stick
- Sturdy, water-resistant foam plate, 1 per child
- Plastic drinking straw, 1 per 2 children
- Markers, crayons, or colored pencils
- Sharp pencils, 1 per table (for older children)
- Ruler, 2 per table
- Tape
- God Thought of It First cards (11-6-079), 1 per child

Pre-Prep

1. For younger kids, use a pencil to poke a hole in the center of the plate. Older children can do this during class.
2. Cut straws in half.

Class Time Directions

Note: If you are doing this experiment by itself use the introductory text from the previous activity to discuss a biblical perspective on time (from "At Time Lab, we have been talking about time!" to "He established the seven-day week for us.").

After the great flood of Noah's day about 4,400 years ago, only Noah and his family were left on earth. Soon they multiplied, and after the event at Babel,

they spread out over the earth. The various people groups around today are descended from those families who went to different parts of the earth. Those people groups took with them the knowledge of time and how to tell time that had been passed down through the generations. Because they are all descended from the same family, cultures around the world have similar methods for telling time and similar calendars.

Since God gave us the sun for light during the day, people have used it to keep track of time. Our verse for today shows us Jesus is the same yesterday, today, and forever (Hebrews 13:8).

And because of that, the laws and principles that he created in the beginning to rule our universe also stay the same. Read Jeremiah 33:25.

A device called a sundial is one of those ways of using the sun to help us tell what time of day it is. One of the earliest sundials has been discovered and dates to about 1500 BC (after the dispersion at Babel in 4200 BC).

The prophet Isaiah lived about 700 years before Jesus came to earth. In his book, he mentions a sundial and a miracle that happened with it. Read Isaiah 38:7-8.

This is how a sundial works. Demonstrate how the earth rotates on its axis relative to the sun with the flashlight and globe or ball. Attach a small stick perpendicular to the surface of the globe and show how the shadow of the stick changes as the globe rotates.

So, we are going to make our own sundials. We will start them today, but you'll finish them over the next few days at home because you need the sun to make them!

Pass out the paper plates and straws. Have children write the number 12 (or, if you are doing a morning VBS, they can write a number of an hour in the afternoon, e.g., 3) on the edge of the plate. With the ruler, draw a line from the center hole to the number 12. They can decorate the rest of the plate however they



want, leaving the edge clear so they can write more numbers on it later. Use a sharp pencil to poke a hole in the middle of the plate. Poke the straw through the hole in the center and use tape to keep it in place.

Instruct them that at that hour today (or tomorrow), they should take the plate outside and line up the shadow of the straw with the line and number. Use tacks to hold the plate in place. Set a reminder to

check the shadow at the top of each hour after that. Write the corresponding number on the edge of the plate in line with the shadow. Continue until you have written 12 numbers. This measures just the daylight portion of the day.

Pass out the God Thought of It First lotus leaves cards, 1 per child.