Make a Shadow Clock!

Your first grader probably doesn't know that before we had watches and clocks, people used shadows to tell time! These "shadow clocks" were called sundials, and used the measurement of the shadows to tell what time it was. Introduce your child to the science of sundials by making your own shadow clock. It's a fun way to play with shadows, and will help improve her time-telling skills, too!

What You Need:

- Pencil
- Empty thread spool
- Glue
- Large piece of white paper
- Permanent marker
- Clock
- Sunny day

What You Do:

1. Use glue to attach the bottom of the spool to the center of the white paper, and invite your child to stick the pencil inside the hole in the spool.
2. Go outside on a sunny day. Encourage your child to find the sunniest spot, and lay the shadow clock there.
3. Start your experiment on the hour (for example, at 10 o'clock exactly but not 10:15 or 10:30, etc). Take a look at the shadow clock, and point out the shadow that the pencil is making on the paper.
4. Invite her to trace the length of the shadow with the marker, and label the time of day beside it. Repeat this every hour throughout the day.
5. At the end of the day, ask your child to take a look at the shadow tracings and describe them. Were the shadows all the same sizes? What time's were they the longest? The shortest? Mention that if the sun is setting your shadow is longer, and when the sun is directly overhead there are no shadows! It's a great way to help her understand the concept of time in relation to the moving world.

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