**Question: How does a shadow change over time?**

Shadows change due to the Earth rotating on its axis.



1. Predict: Does a shadow change over time? How do you think it will change over time?
2. Attach a thin object to your window, e.g. a pen, ruler or opaque tape.
3. Place a piece of white paper on the windowsill directly below the object. Make sure the object is in the centre of the page. A shadow should appear on your paper.
4. Draw around the shadow and label it with the time.
5. Observe and Record: Check on the shadow every hour or half hour throughout the day, each time drawing and labelling the shadow.
6. Analyse: What can you conclude about how a shadow changes over time?

**Extend:** Use your observations to make a sundial. What distance is there between each hour? Is each hour the same distance apart? Would the clock be correct all year round? Would your clock work if it were used in a different country e.g. Australia, South Africa, Algeria?

Fun link: Can you make a shadow puppet theatre?

*About this type of Scientific Enquiry: Observation over time enquiries help us to identify and measure events and changes in the natural world as well as physical processes. This enquiry type requires using observation, reasoning and analysis skills.*