

MAKE A SUNDIAL

Farmer Fergus “looked up towards the sun and saw that it was over near the giant skyscraper tree. Perfect! That meant it was three o’clock”. While Farmer Fergus used the position of the sun in the sky to tell the time, he could also use the shadow the tree cast on the ground.

This form of telling the time has been around for centuries in the form of sundials. Used in Egypt as early as 1500 BCE, obelisks and shadow clocks used the movement of shadows to indicate time. The ancient Greeks and Romans developed this to introduced the idea of dividing the day into twelve parts, which led to the development of the twelve hour dial which you can make using the details below.

YOU WILL NEED

- A large paper plate
- A straw, pen, pencil or thin dowel rod - the gnomon
- Adhesive Tac
- Marker Pen
- Clock

INSTRUCTIONS

- 1 Starting just before 9am take all the materials outside to a sunny location that will not be disturbed during the day.
- 2 Use the ruler to find the centre of the circle and stick the gnomon in place.
- 3 At exactly 9am turn the plate so the sun casts a shadow on the outside of the paper plate. Mark this as 9am.
- 4 Leave the plate in position, ensuring it cannot blow away, and set a timer on the clock to return just before 10am.
- 5 At 10am mark the shadow line on the outside of the plate.
- 6 Continue to do this throughout the day to create your own sundial.

Follows a sequence of steps for making designed solutions.

