

sloughmuseum

Make with the Museum at Curve Club

Paper Solar System

Create the universe to understand the sizes of and distances between each planet.

Slough Museum background information:

Slough Museum's Discovery and Innovation Pod is on the first floor of The Curve.

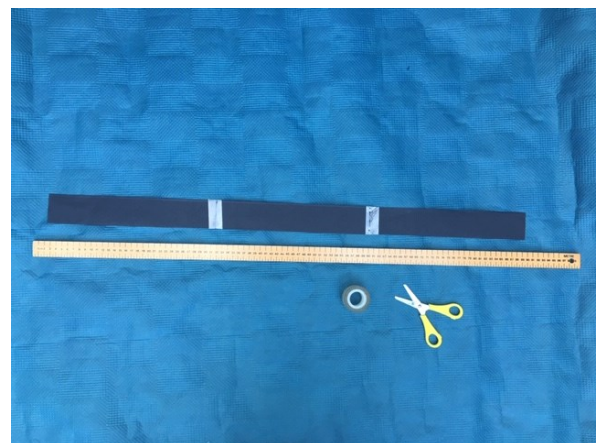
The Pod shares the local history of Slough based 18th century astronomers William Herschel and his sister Caroline who developed the modern mathematical approach to astronomy and made many discoveries including the planet Uranus and several comets, stars and nebulae.

You will need:

- 2 x pieces A4 paper – scrap paper is fine
- Pencil (and optional pencils/crayons/pens for colouring in)
- Glue or sticky tape

How to make:

- 1) Fold one piece of A4 paper length ways into quarters – you could use black paper or white paper or colour it in
- 2) Cut the quarters then stick three of the quarters together to make approx. 1 metre

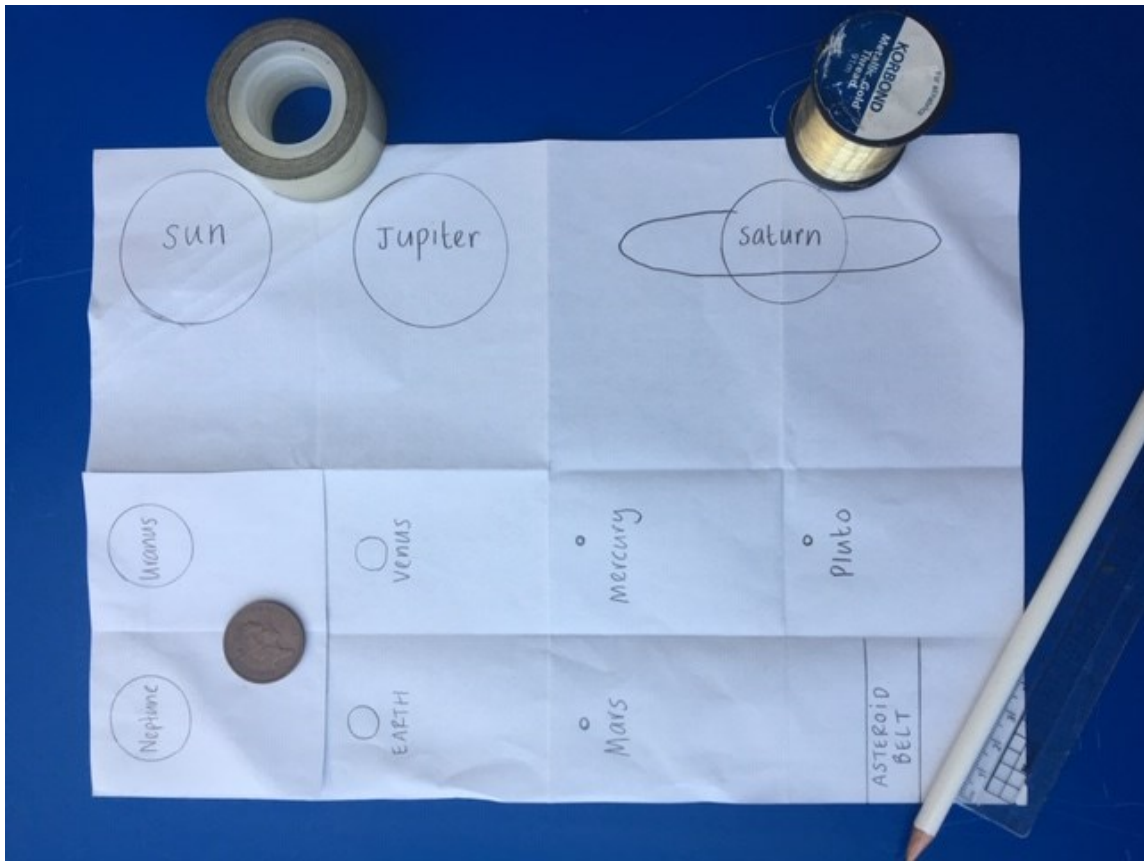


- 3) Fold the other piece of A4 into sixteenths and draw and label the following – you could use cotton reels, coins, etc to draw around – SUN; JUPITER; SATURN (with rings); URANUS (Herschel planet!); NEPTUNE; EARTH; VENUS; MARS; MERCURY; PLUTO (even though Pluto is a dwarf planet, it is a useful reference point; ASTEROID BELT

According to NASA, this is the estimated radii of the eight planets in our solar system, in order of size. The radii sizes relative to Earth can help you picture them better.

- Jupiter (69,911 km / 43,441 miles) – 1,120% the size of Earth
- Saturn (58,232 km / 36,184 miles) – 945% the size of Earth
- Uranus (25,362 km / 15,759 miles) – 400% the size of Earth
- Neptune (24,622 km / 15,299 miles) – 388% the size of Earth
- Earth (6,371 km / 3,959 miles)
- Venus (6,052 km / 3,761 miles) – 95% the size of Earth
- Mars (3,390 km / 2,460 miles) – 53% the size of Earth
- Mercury (2,440 km / 1,516 miles) – 38% the size of Earth

Objects in space are tremendous distances apart from each other and hard for us to understand. This solar system starts to make sense of the size of and space between planets.



- 4) At one edge of the paper length add the SUN. At the other edge add PLUTO.
- 5) Fold the paper in half and crease it. Add to this middle URANUS.
- 6) Fold the paper into quarters by folding PLUTO to URANUS. Add to this fold NEPTUNE.
- 7) Fold the paper into quarters by folding SUN to URANUS. Add to this fold SATURN.
- 8) Fold the paper into eighths by folding SUN to SATURN. Add to this fold JUPITER.
- 9) Fold SUN to JUPITER. Add to this fold ASTEROID BELT. This is made up millions of stone and rock asteroids with some metals – space rubble - held together by gravity.
- 10) Fold SUN to ASTEROID BELT. On SUN side of this fold goes EARTH. On the other side of ASTEROID BELT goes MARS.
- 11) Halfway between SUN and EARTH goes MERCURY and VENUS.



You will notice that in the centre of your solar system is URANUS – discovered by the Herschel family! When you can next visit The Curve, come to the Slough Museum Pod and find out more...