

LEARNING RESOURCE



HITCHHIKERS GUIDE TO THE SOLAR SYSTEM

This guide is going to help you to create a “map” of the planets in the solar system. Because they are all always moving it is difficult to create a proper map, and because they are so very different in size (the Sun is 320,000 times the size of Earth) it is very difficult to produce something that is to scale. What we are going to do is produce a linear illustration of how far apart the planets are.

MATERIALS

- A long strip of paper (approx. 2m)
- Pencils/Felt pens
- String (optional)
- Cut outs/pictures of the planets of the planets (optional)
- Scissors (optional)
- Ruler (optional)
- Tape (optional)

PREPERATION

We recommend a 2meter strip of paper and really the length of the paper is important. When we run this activity we use lengths of display boarders, which are about the width of a till roll, however you might find it easier to just stick pieces of A4 paper together end to end. This will also allow you to draw pictures and write information on your “map”.

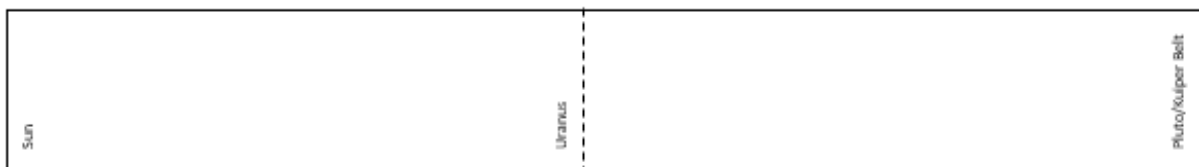
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INSTRUCTIONS

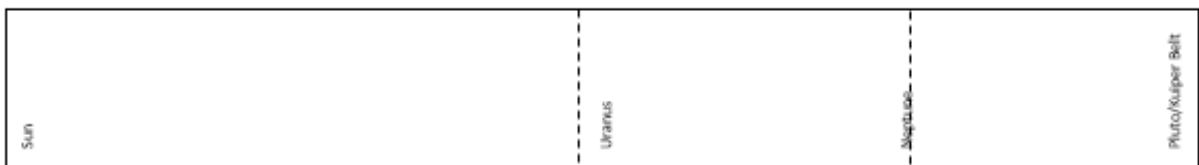
1. Cut a 2m length of (Boarder) Paper
2. At one end write "SUN". At the other end write "Pluto/Kuiper Belt". Try to keep writing small and neat, you will see why, by the time you get to Mars! The Kuiper Belt is an asteroid belt that encircles the solar system. Pluto, now considered a "Dwarf Planet" is part of that asteroid belt.



3. Fold the paper carefully in half, Pluto to the Sun. Write "Uranus" on the fold.

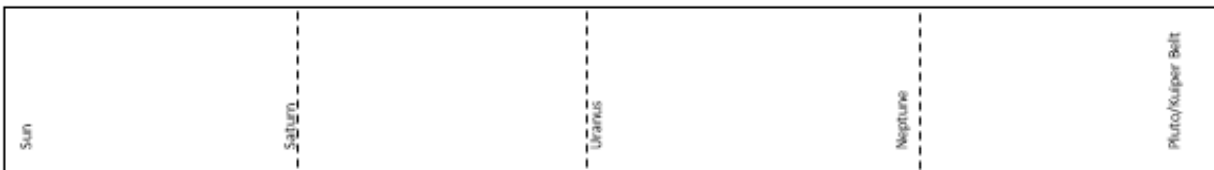


4. Fold the paper again, the end labelled "Pluto" to the fold labelled "Uranus". Write "Neptune" on the new fold.



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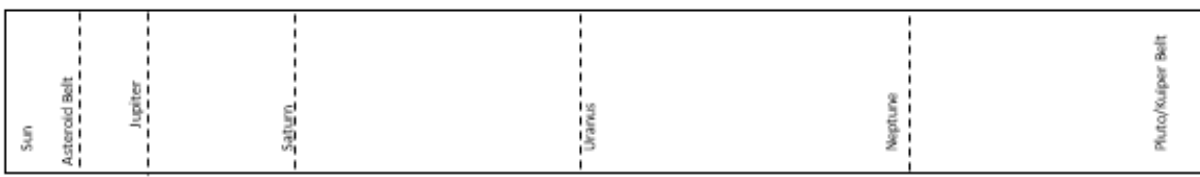
5. Fold the paper again, the end labelled “Sun” to the fold labelled “Uranus”. Write “Saturn” on the new fold.



6. Fold the paper again, the end labelled “Sun” to the fold labelled “Saturn”. Write “Jupiter” on the new fold.

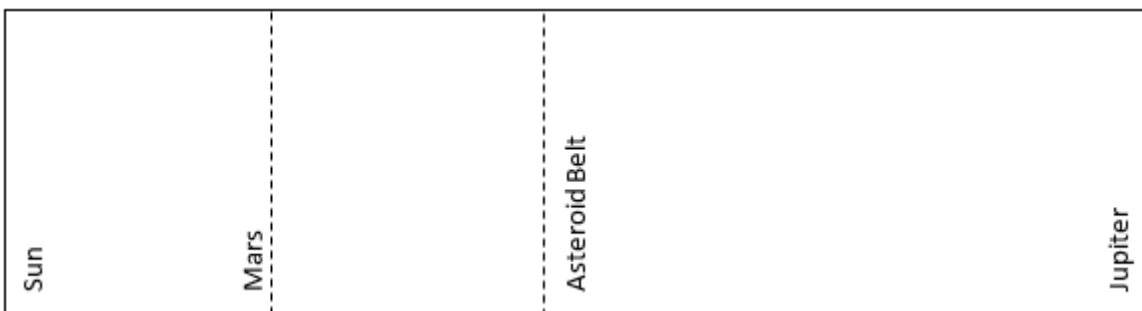


7. Fold the paper again, the end labelled “Sun” to the fold labelled “Jupiter”. Write “Asteroid Belt” on the new fold. Our Solar System has an asteroid belt that separates the solid/” terrestrial” planets from the Gas Giants.

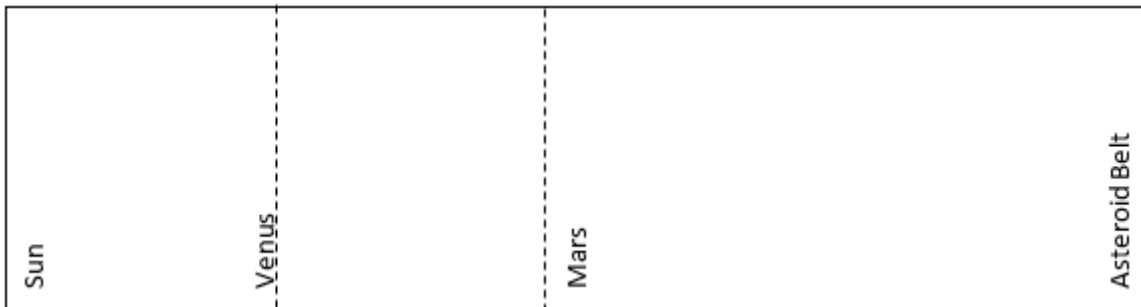


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8. Fold the paper again, the end labelled “Sun” to the fold labelled “Asteroid Belt”. Write “Mars” on the new fold. Labelling is going to start getting more difficult here! This is why small neat writing is helpful.

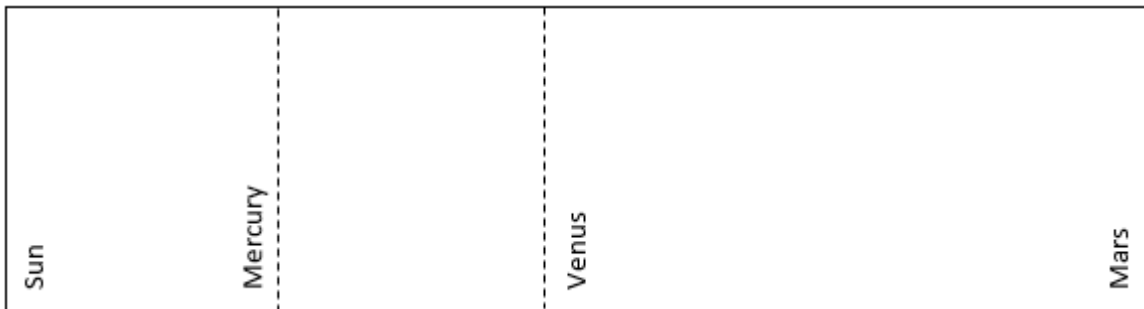


9. Fold the paper again, the end labelled “Sun” to the fold labelled “Mars”. Write “Venus” on the new fold.

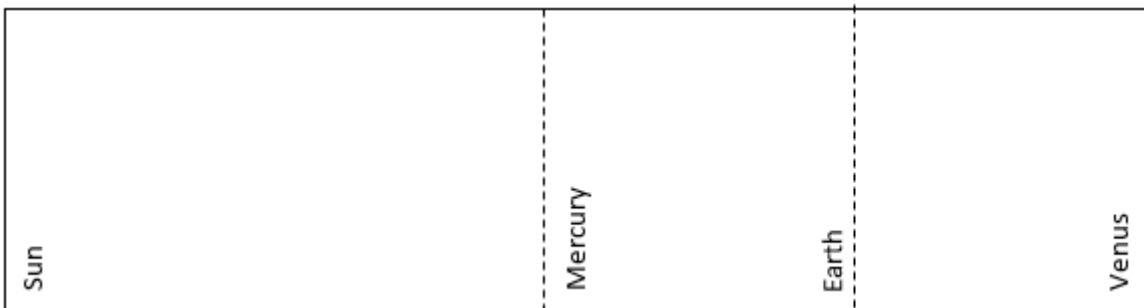


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10. Fold the paper again, the end labelled “Sun” to the fold labelled “Venus”. Write “Mercury” on the new fold.



11. You will notice that one very important planet is missing! This final fold is tricky, so take your time to get it right. Fold the crease labelled “Venus” to the fold labelled “Mars”. Write “Earth” on the new fold.



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EXTENSION

You can draw or print out pictures of each of the planets to attach to your map. If you are using a thin strip of paper, you might want to use some string and tape to attach them.

Research and write facts about each planet on your map, for example, What colour are they? How long is a day on that planet (1 rotation on its axis)? How long is a year on that planet (1 orbit of the Sun)? What is the temperature? Are there any moons?

The distance between the Sun and the Earth is about 93 million miles, (we refer to this distance as an astronomical unit). Measure, with a ruler, the distance between the Sun and the Earth on your map, then using that information, I want you to see if you can work out how far it is between the sun and other planets.