

## Make a Solar System Hat

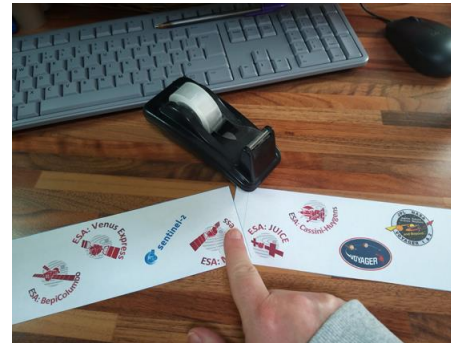
The Science and Facilities Council has been involved in over 220 space missions including some that have travelled to other planets in our solar system.

To make your solar system hat, all you need to do is match the planet to the correct space mission!

### How to make your hat



1. Carefully cut out the headband with scissors



2. Stick the middle part together then test it around your head.



3. Stick the remaining ends together to make a headband to fit.



4. Cut out the planets and match them to the space mission that visited them. Stick them on carefully and your hat is ready to wear!

# Space missions to the solar system



## ESA: BepiColombo

This mission is currently on the way to study the planet Mercury. It will study the atmosphere and magnetic fields of Mercury, and study the landscape from close up.

[https://www.esa.int/Science\\_Exploration/Space\\_Science/BepiColombo\\_overview2](https://www.esa.int/Science_Exploration/Space_Science/BepiColombo_overview2)



## ESA: Venus Express

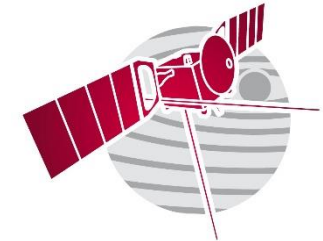
This mission investigated the atmosphere on the planet Venus and studied the gases and clouds in detail.

[https://www.esa.int/Science\\_Exploration/Space\\_Science/Venus\\_Express\\_overview](https://www.esa.int/Science_Exploration/Space_Science/Venus_Express_overview)



The Sentinel mission is made up of seven separate satellites to observe the Earth. Each satellite studies something different, helping scientists to study and understand our changing planet.

<https://sentinel.esa.int/web/sentinel/missions>



## ESA: Mars Express

This mission is currently studying the structure of planet Mars, observing the atmosphere and climate and looking for traces of water.

[https://www.esa.int/Science\\_Exploration/Space\\_Science/Mars\\_Express\\_overview](https://www.esa.int/Science_Exploration/Space_Science/Mars_Express_overview)



## ESA: JUICE

The name stands for **JU**piter **ICy** moons **E**xplorer. It is currently being built and is due to launch in 2022 and arrive at the planet Jupiter in 2029, making observations of this giant planet and three of its moons – Ganymede, Callisto and Europa.

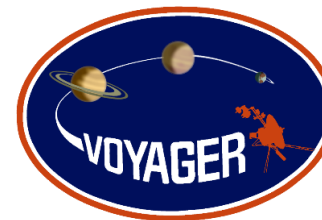
<https://sci.esa.int/web/juice>



## ESA: Cassini-Huygens

The Cassini spacecraft observed Saturn and its rings from 2004 to 2017, passing through the rings and finally plunging into the atmosphere of the planet. The Huygens probe landed on Saturn's moon, Titan.

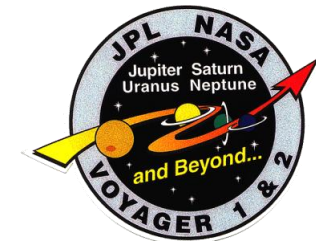
[https://www.esa.int/Science\\_Exploration/Space\\_Science/Cassini-Huygens\\_overview](https://www.esa.int/Science_Exploration/Space_Science/Cassini-Huygens_overview)



## NASA: Voyager 2

In 1986 *Voyager 2* flew closely past Uranus. It came within 81500 km of Uranus's cloud tops and sent thousands of images and huge amounts of data on the planet, its moons, rings, atmosphere, interior and magnetic fields.

<https://voyager.jpl.nasa.gov/mission/science/uranus/>



## NASA: Voyager 2

In 1989 *Voyager 2* became the first spacecraft to observe the planet *Neptune*. Voyager spotted six previously undiscovered moons and four new rings.

<https://voyager.jpl.nasa.gov/mission/science/neptune/>

If you don't have a printer, you can draw pictures of the planets and satellites and use those instead!

**Neptune**



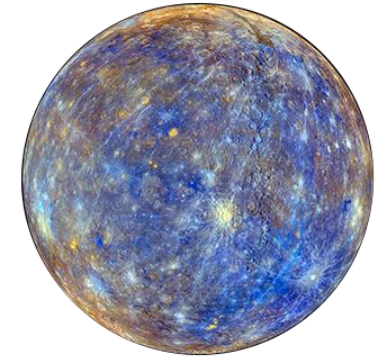
**Venus**



**Mars**



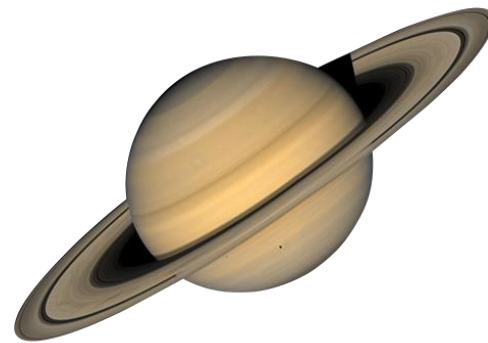
**Mercury**



**Earth**



**Saturn**



**Uranus**



**Jupiter**



