

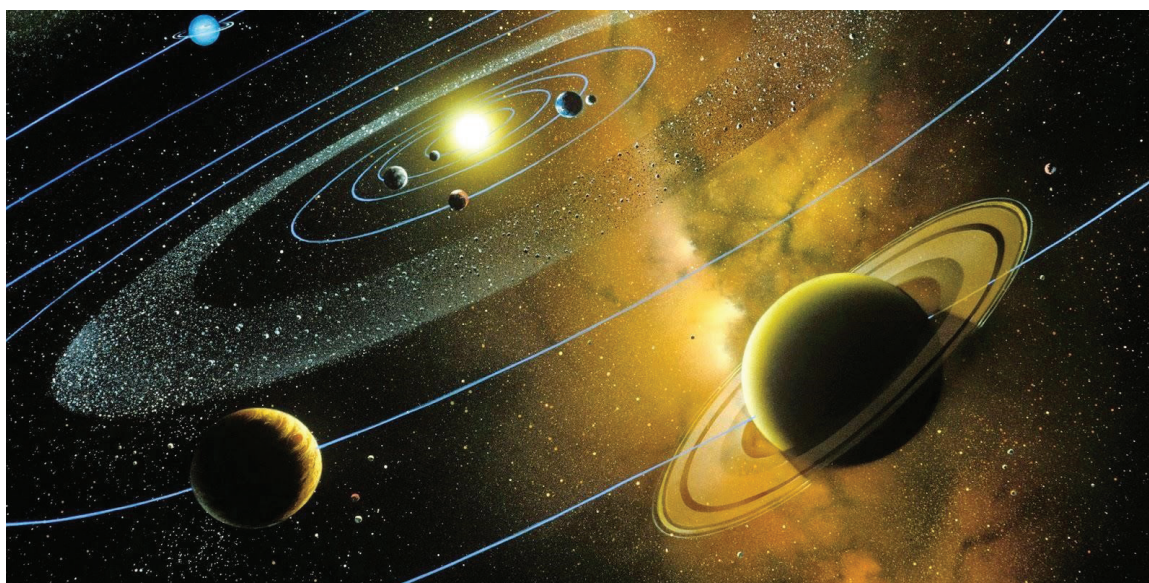
# STEM from Home

## Our Solar System!

### Build Your Own Solar System

From time immemorial, humans have been fascinated with Space and have tried to unravel the many mysteries of our Universe. The great scientist and mathematician Kepler proved in the 16th century that the Sun was the centre of the solar system and planets revolved around it in elliptical paths. In the early 20th century, around 300 years after Kepler, a Russian scientist Konstantin Tsiolkovsky thought of how rockets may work. And in 1926, Robert Goddard launched the world's first liquid-fuelled rocket. Although it could only reach a height of 41 feet.

The first successful travel to space was in 1961 by the Soviet cosmonaut Yuri Gagarin. Neil Armstrong and Buzz Aldrin were the first to reach another planetary body from Earth on 20th July 1969. Mankind's journey from initial discoveries about solar system and early travels to space has been very long. But after that many space missions were launched in quick succession. The twin spacecrafts Voyager 1 and Voyager 2 were launched in 1977 and are still exploring the space for more than 40 years.



You can explore the following links to learn some interesting facts about our Solar System.

- [Solar System Facts](#)
- [Solar System 101](#)
- [The Solar System](#)
- [The Solar System](#)

A very interesting movie takes you on a voyage from earth to the universe. Click on the link given below.

[Journey to the Edge of the Universe](#)

In this STEM Pack you will use an online simulation tool to explore our fascinating Solar System and look at real time data and images; you will create your own solar system and finally in an interesting challenge activity you will get to calculate your age on different planets.

# Main Activity: **Our Solar System**

## Introduction:

In this activity, you will use an online program to explore the solar system.

## What You Will Learn

You will learn about our solar system and know some interesting facts about it.

## What You Will Need

### **Hardware**

A computer connected to the internet.

### **Software**

A modern web browser like Microsoft Edge, Chrome, or Firefox.

## Getting Started

You can access [guidelines for the activity](#) here.

# Bonus Activities

## Activity 1: Build Your Own Solar System

### Introduction

In this activity, you will build a solar system on your own using a simulation program.

### What You Will Learn

- The positions of the planets and their distance from the sun.

You can access [guidelines for the activity](#) here.

## What You Will Need

### **Hardware**

A computer connected to the internet.

### **Software**

A modern web browser like Microsoft Edge, Chrome, or Firefox.

# Challenge Activity: Calculate Your Age on Different Planets

We measure our age on Earth in years. Earth orbits once around the Sun in one year. So, our age in years is actually Earth's revolutions around Sun in the same period. For example, if you are 14 years of age, then Earth has taken 14 revolutions around Sun since your birth.

Similarly, a year on another planet will be equal to one revolution of that planet around Sun.

If we are living on another planet in the Solar System, our age will be different because each planet takes a different amount of time to orbit the Sun. In other words, each planet has a different year length.

In this activity you will calculate your age on other planets of our solar system.

Click [here](#) to get started.