# Analysis

### Introduction

The solar system is an important part of the physics curriculum, and it’s something that children often find more interesting than other core physics topics such as circuits or mechanics. I think it’s important to teach the solar system because it’s fun, and because it can also help students understand the more boring topics, such as forces or energy, as forces and conservation of energy can be demonstrated with the solar system.

However, there is a lack of interactive tools available for teaching the solar system that also incorporate other physics topics such as energy. It would be useful to teachers, and students, to have an application that can use an interesting topic like space that also teaches important concepts from other topics such as conservation of momentum or Newton’s laws.

### How a simulation of the solar system works

The orbits of the planets are governed by two fundamental laws of physics:

* Newton’s second law of motion:
* Newton’s law of universal gravitation:

To demonstrate this, a force diagram is attached.