

Designing a roller coaster

Lesson plan

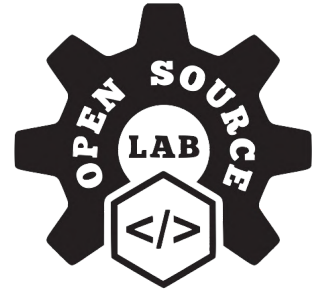
Created by Open Source Lab

Education level: From elementary school

Subject: STEAM, mathematics, physics, computer science, coding

Format: Individual or in groups

Duration: Approx. 3 hours



Introduction and lesson objectives:

Did you know that you can build a roller coaster in CoSpaces Edu?

In this lesson plan, we will teach students how to imagine and create a custom roller coaster in any environment that they like. As CoSpaces Edu works on an XYZ grid, it is possible to build a rollercoaster that moves all over the XYZ grid.

This lesson acts as a fundamental base for future lessons, as students begin to create increasingly sophisticated immersive scenes in their virtual environment.

Learning goals and student benefits:

- Practice prototyping and testing
- Learn coding skills
- Learn movement skills in 3D
- Learn 3D creation skills

Activity preparation:

1. Help your students log into their CoSpaces Edu accounts.
2. Ask them to draw on a piece of paper their favourite roller coaster that they've been on before. What did it look like?
3. Encourage students to share their drawing with a classmate and ask them to add on other elements that they particularly like in a roller coaster.

Extension idea:

Ask your students to share their roller coasters with their classmates and let them experience them. Encourage them to exchange feedback in a constructive way.

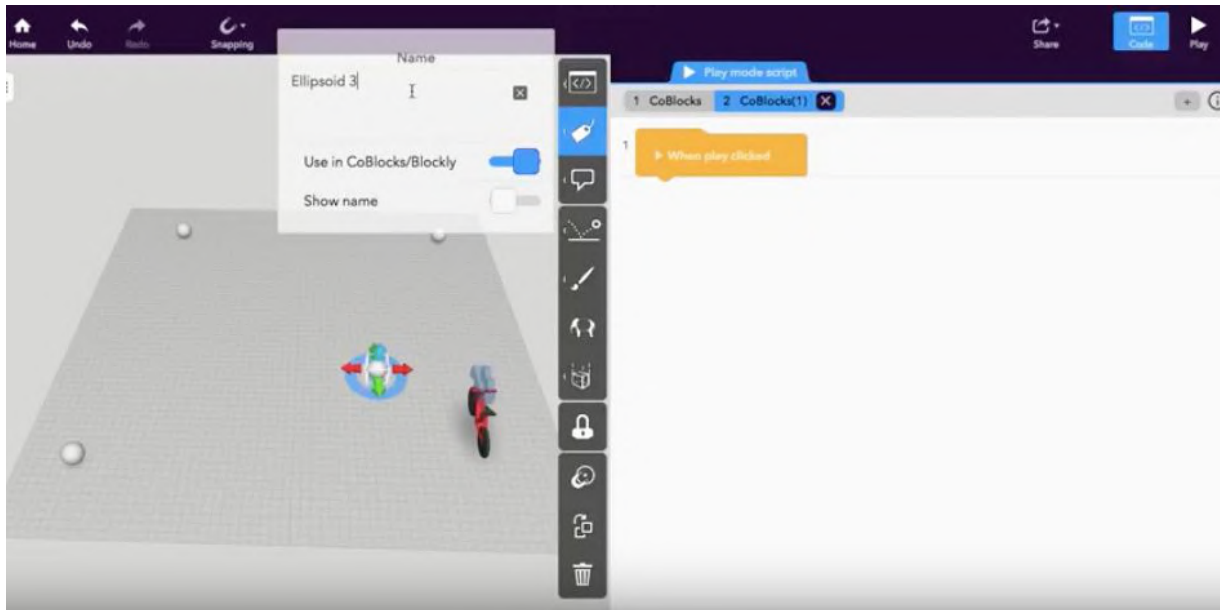
Assessment and evaluation suggestions:

- Have your students managed to build their roller coaster in CoSpaces Edu?
- Did your students go through the creation process in an organized and well thought-out manner?
- Have your students managed to code with CoBlocks?

Creation guide

The video tutorial below will guide you through the creation process.

We recommend using headphones while watching these videos.



Video 1

youtu.be/hbL_a3RoWGs

Now that you know how to attach the camera and make items follow each other, perhaps you could make clouds move across the sky, or shoot fireworks?

How can you be even more creative?

Could you make your roller coaster flip upside down?

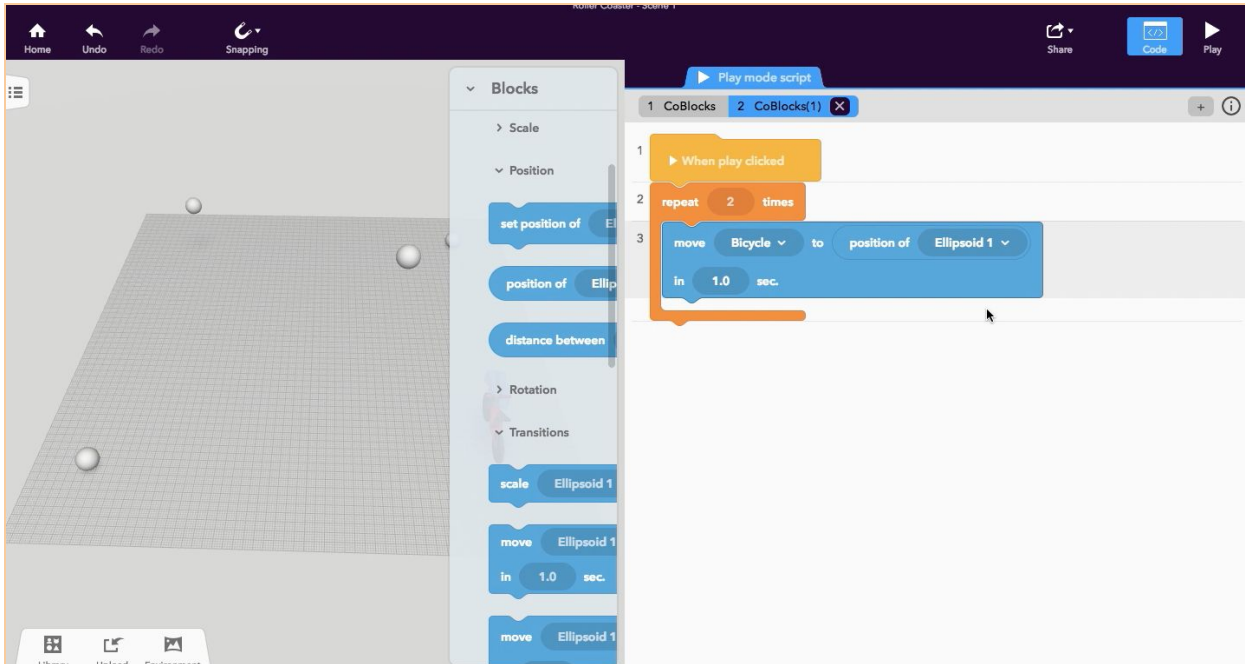
Think about your favourite roller coaster and try to recreate how it was.

What about sharing your projects with a classmate and having them make alterations to your coding or your items in your CoSpace?

Get crazy and add your own photosphere!

Example CoSpace

This is a minimalist example, but experiment and try out different pieces of code with various objects in the CoSpace you have built and get creative!



Roller coaster

edu.cospaces.io/RCC-CGZ