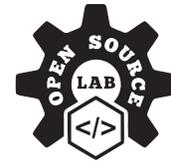# CoSpaces Edu roller coaster

Lesson complexity: Beginner
Grades: From grade 4 up
Subjects: STEM, Mathematics, Computer science
Created by: Open Source Lab (Mike Page and Nate Lott)

Introduction:

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.

Benefits:

- Prototyping, testing and reflecting on a design idea
- Teach basic movement skills on a 3D plane
- Can be weaved into multiple subject areas
- Learning the fundamentals of block-based coding

Activity example:

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.

Creation guide

Follow the video tutorials below to start creating!
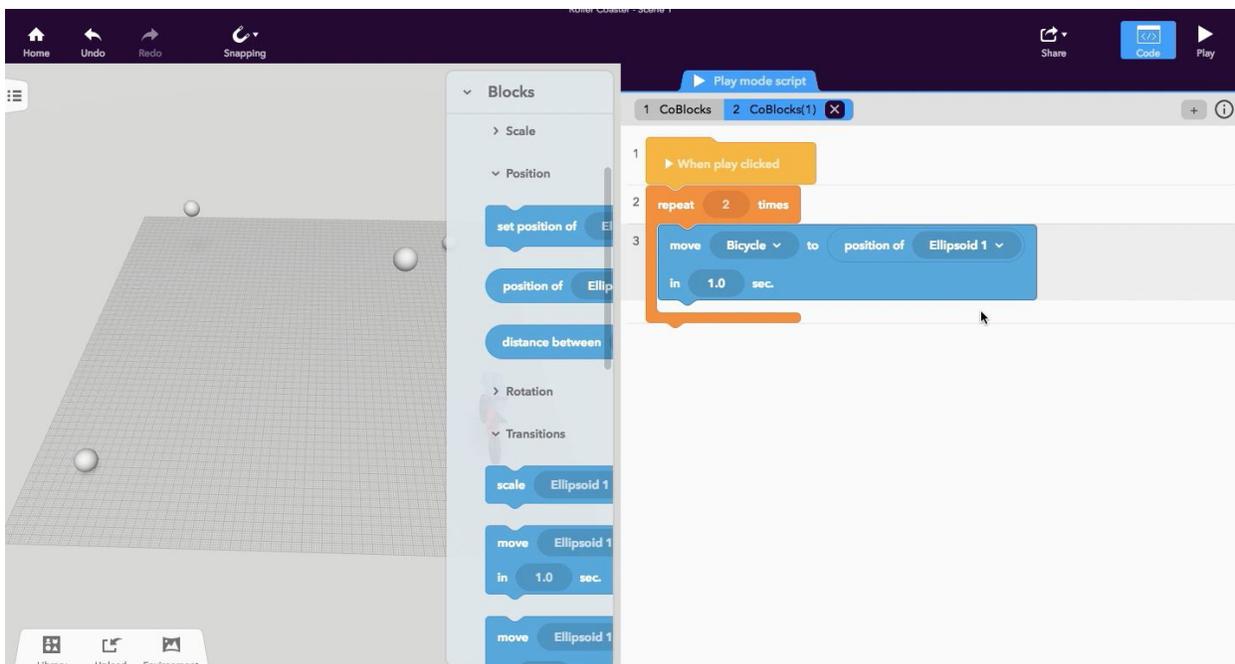We recommend using headphones while watching the tutorials.

Video 1
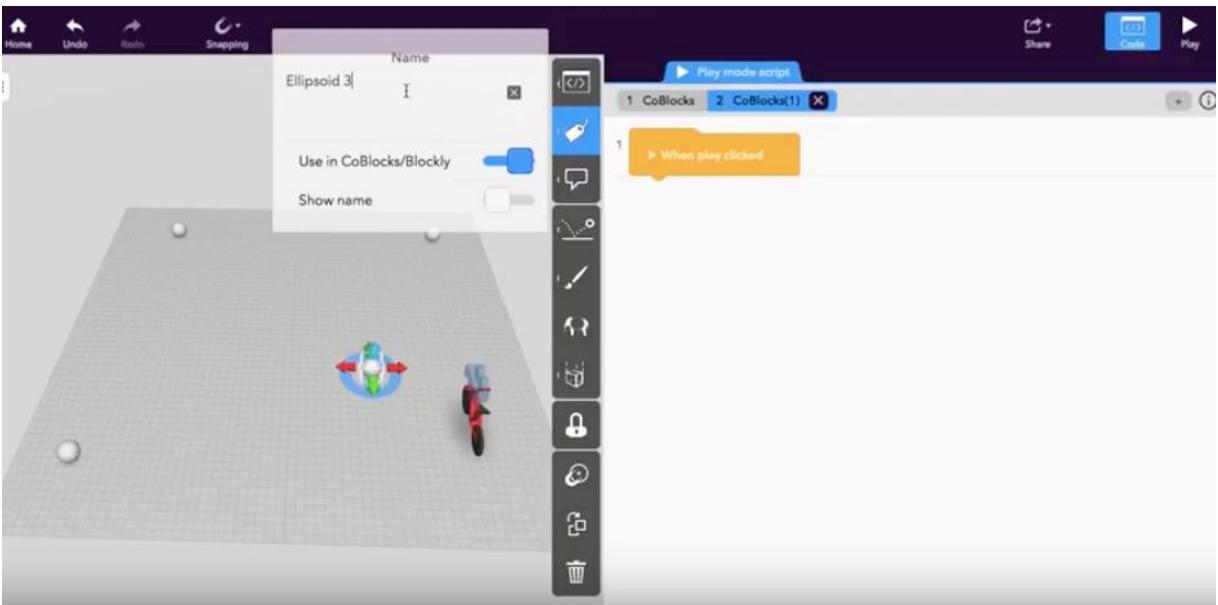
[Watch the video](#)

Example space

Click on the picture below to see what the complete program looks like.

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

View example space

Student guide

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 space?

Get crazy and add your own photosphere!