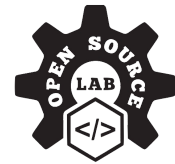


Physics using CoSpaces Edu, Tinkercad and the MERGE Cube



** A CoSpaces Edu Pro license plan is needed for this lesson.*

Lesson complexity: Beginner/Intermediate

Grades: Grade 4 and up

Subjects: STEM, Mathematics, Physics, Computer Science

Created by: Open Source Lab (Mike Page and Nate Lott)

Introduction:

This lesson plan combines building a car in Tinkercad, bringing the car's 3D model into CoSpaces Edu and coding it using the physics blocks available in CoBlocks.

The complexity of the physics lessons can increase depending on the grade level. An additional step that can be added is to place the 3D content created in CoSpaces Edu onto the MERGE Cube. By doing this, students explore 3 different programs combined in one project.

Benefits:

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

Preparation:

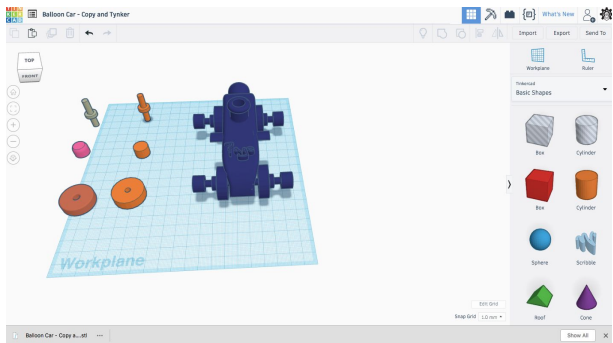
Your students will need a Tinkercad account and a CoSpaces Edu Pro licence plan for this lesson. You can purchase CoSpaces Edu Pro for your class or use it for free for one month with the trial code COSMIKEPAGE.

A MERGE Cube and the CoSpaces Edu MERGE Cube add-on are also needed if you want to explore placing the content created onto the cube and viewing it in AR. Teachers can APK (access prior knowledge) of car parts and what makes them move.

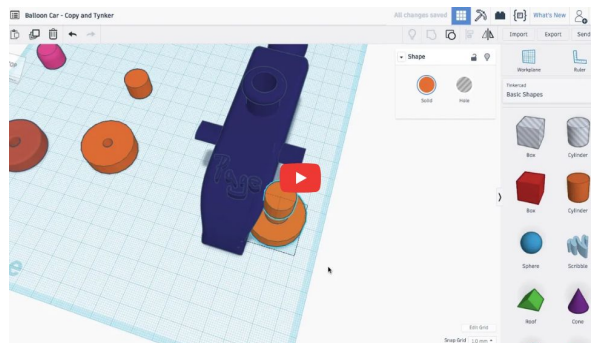
Creation guide

The 3 videos below will guide you through the creation process. Click on the video thumbnails below to watch the videos.

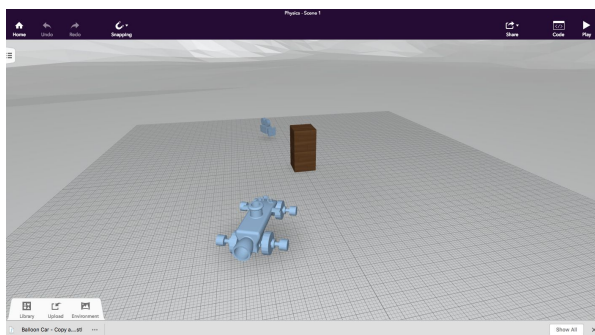
Video 1



Video 2



Video 3



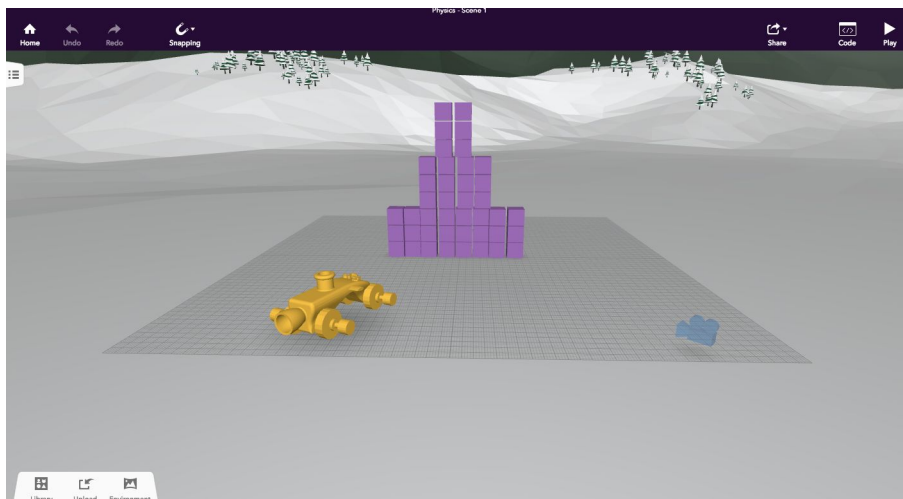
Video 4



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!



Here's another example taken further. Click on the picture below to view it.



Student guide

For additional information, check out the Open Source Lab website link here:

[Tinkercad, CoSpaces and Merge Cube lesson with PHYSICS](#)

My Tinkercad username:

My Tinkercad password:

My CoSpaces username:

My CoSpaces password:

Drawing of my first car: