Virtual mathematics museum

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

Lesson complexity: Intermediate
Grades: Grade 7 and up
Subjects: STEM, Arts, Mathematics, Computer science
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Introduction:

With CoSpaces Edu's creation tools, kids can easily create a virtual museum on any topic and later view it in Virtual Reality. This enables students to explore 3D creation while deepening their understanding of a topic or educational resource and lets them explore new ways of demonstrating their knowledge in the classroom.

This lesson plan provides instructions for creating a Mathematics and Arts museum. The steps in this lesson plan can be adapted to create a similar project on any subject. In addition, this lesson plan also provides a section with instructions for programming different interactions with CoBlocks, the visual coding language in CoSpaces Edu.

Benefits:

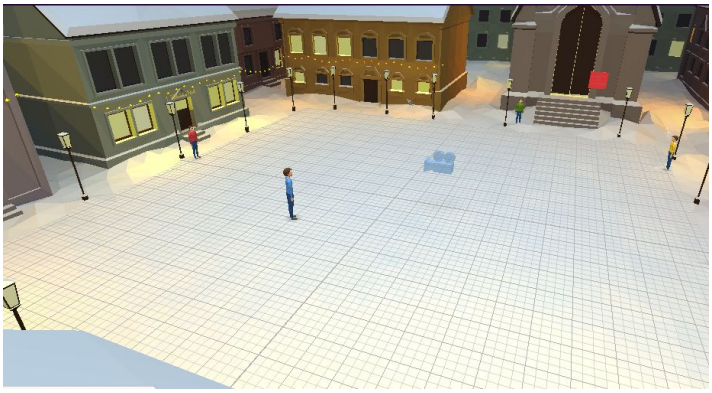
- Empower students to demonstrate their knowledge
- Develop creativity and 3D creation skills
- Introduce coding with a visual block-based language

Activity example:

1. Ask your students to do some research on a topic or a specific subject for their virtual museums' exhibitions. You can either let them come up with a subject based on their interests or assign one. For example, for a Maths class, your class could create an exhibition on the relationship between Maths and Arts.

2. Give your students some time to search images or GIFs in relation to the chosen topic online, in order to use them for the visuals in their exhibitions.

Creation guide



Start by preparing the main scene in which your virtual museum will be built. You can for example use the village environment and add its inhabitants with 3D characters.

Click the “Environment” icon and select an environment. Then, click “Library” to drag and drop objects.

Every 3D character in the scene can be coded in order to explain something related to your virtual exhibition when you click on it.

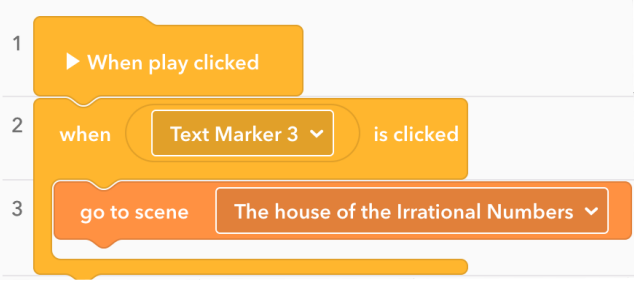
The short script below shows an example of code you can use to make your characters interact and say something. Try to understand the code and use it in your scene.

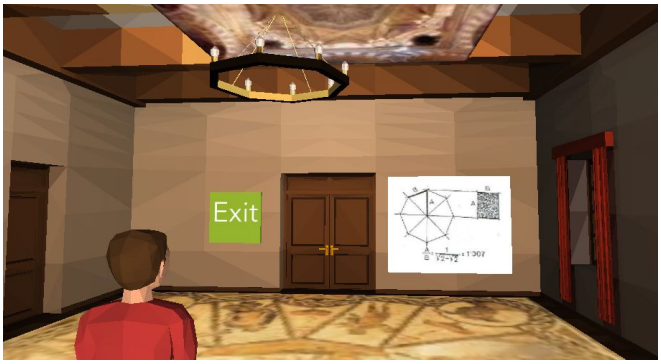
The block in line 1 simply starts the code when the space is opened in “Play” mode.
The block in line 2 activates the coded action following it when the character is clicked.
The block in line 3 defines the interaction - in this case, saying something and specifies the words that the character should say.
The block in line 4 makes the character take a pause for the amount of time specified.
The block in line 5 defines a new interaction.

You can use the facade of the buildings in the village to create portals to enter the different rooms.

This action can be coded with a simple combination of blocks.
To do this, each room will have to be defined as a separate scene.

The block in line 1 starts the code.
The block in line 2 activates the code following it when the text marker object is clicked.
The block in line 3 defines the action of switching to another specified scene.

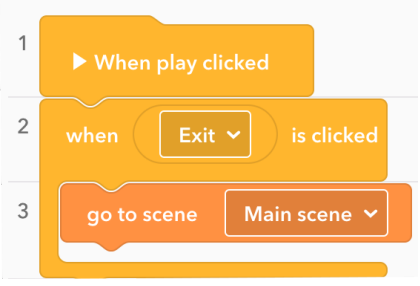




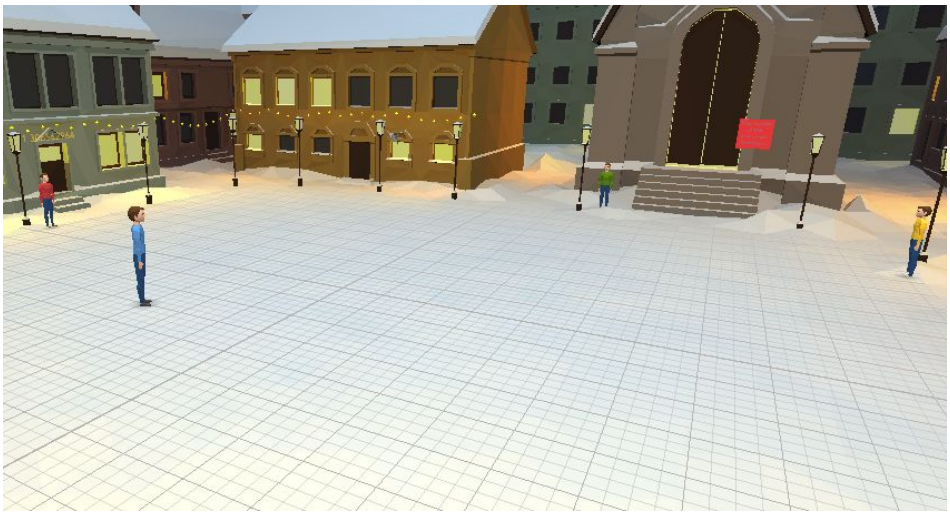
To create the different rooms of the museum, you can use the standard 3D room available in “Environments”.

You can also include an interactive text panel in this room in order to go back to the main scene.

The block in line 1 starts the code.
The block in line 2 activates the code following it when the text marker object is clicked.
The block in line 3 defines the action of switching to another specified scene.



Example space



Irrational numbers museum

View example space

Note:

This lesson plan can easily be adapted to any subject with any topic. There is also the possibility of making coding activities more complex with more block combinations.