Getting started kit



Last updated: June 2023

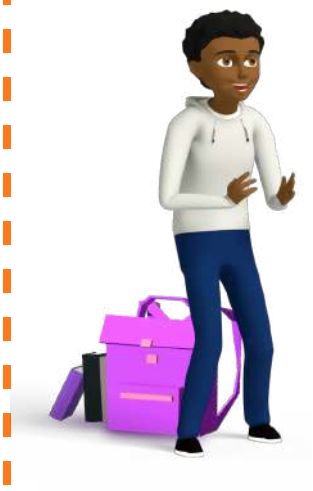
Everything for educators to get started with CoSpaces Edu

Ready to become a CoSpacer?

We're excited to have you in our growing community of educators and to work together to transform education and improve student learning in the classroom.

In this booklet, you'll get plenty of resources to get started with CoSpaces Edu and a trial code to test CoSpaces Edu Pro for FREE with your class!

Happy CoSpacing!



30-day Pro trial

with 100 seats including the MERGE Cube add-on

Use the trial code:

COSGETSTART



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As easy as 1, 2, 3!

This step-by-step guide will take you through the three main steps to get started for FREE with CoSpaces Edu in the classroom.

1 2 3

Register **Create** **Explore**

Quick tech check

The CoSpaces Edu web app works on any computer (including Google Chromebooks). We recommend using the latest version of Google Chrome, Firefox or Safari.

The CoSpaces Edu mobile app for iOS, Android and Microsoft lets you create and explore your creations on a smartphone or tablet.

Need support?

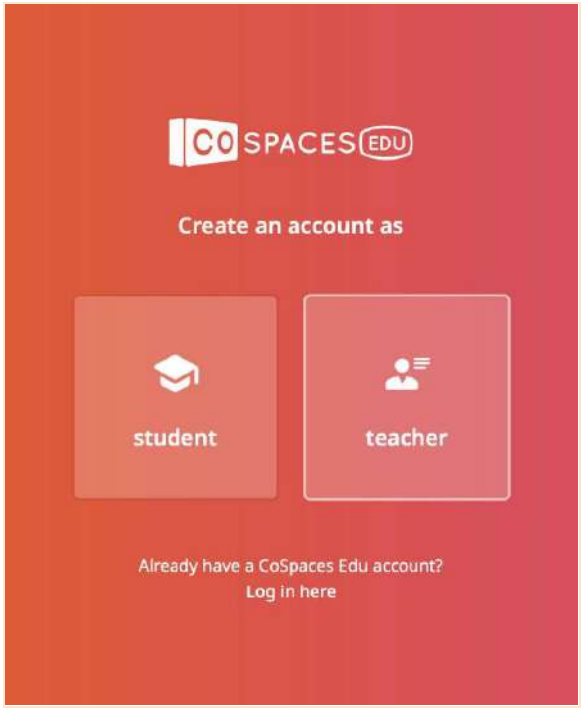
Get support from our active community of educators on forum.edu.cospaces.io and in the CoSpaces Edu Community on Facebook.



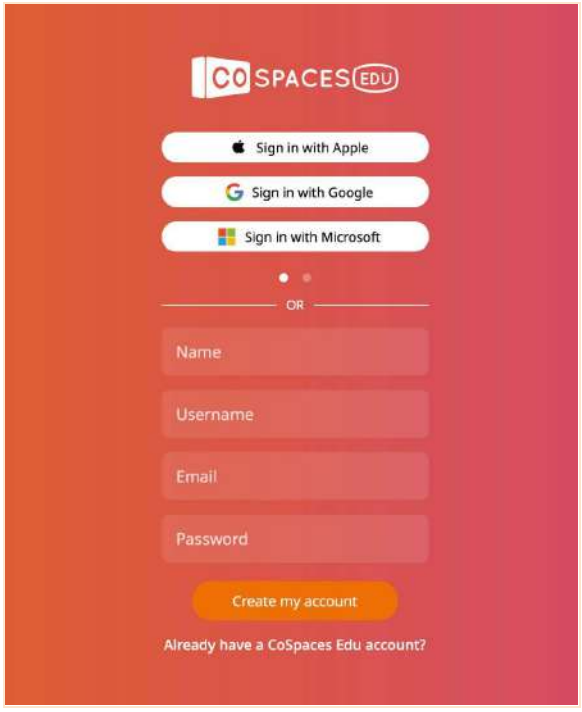
1. Register

1. Go to cospaces.io and click **Register** to create your CoSpaces Edu account.





2. Create an account as a **teacher**.



3. Choose how you'll log into your CoSpaces Edu account.

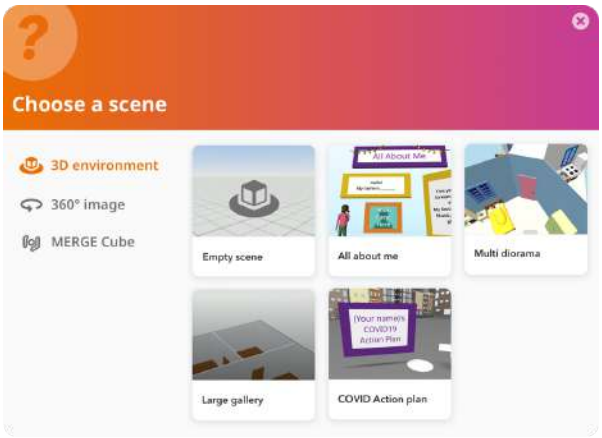
2. Create



To start creating, go to **CoSpaces**. This is where your creations are stored!

Start by exploring the welcome CoSpace to get familiar with the basics.

To create your first CoSpace, click **Create CoSpace**.

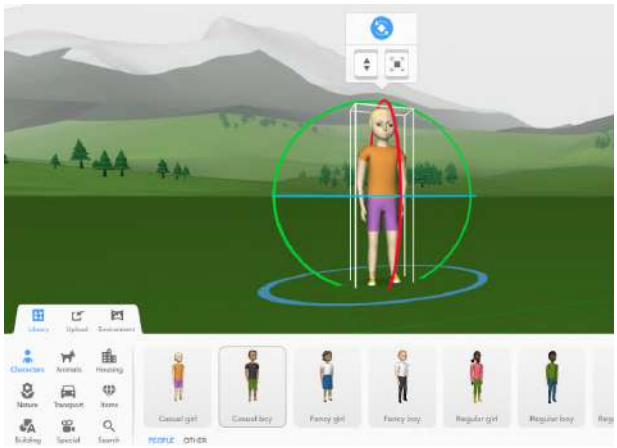


Your first step is to choose a first scene to build in.

You can build in a **3D environment** of your choice and view it in VR and AR.

You can also build upon a **360° image** that you choose and view it in VR.

If you have the **MERGE Cube add-on**, you can also build for the **MERGE Cube**!



Drag and drop 3D objects from the **Library** to add them to your scene.

You can even build your own using building blocks under **Building**.

Go to **Upload** to add 3D models, images and GIFs, videos and even sounds!

3. Explore

The magic is that you can explore your CoSpaces in many ways!

Play mode

The **Play mode** lets you easily explore a CoSpace and move around it on any device. Simply open a CoSpace and click Play.

Gyro mode

You can explore a CoSpace with the Gyro mode using a **tablet** or a **smartphone** and the **CoSpaces Edu mobile app**. This lets you move your device to look around your CoSpace through the screen.

Open a CoSpace in Play mode and click the Gyro icon.

VR (Virtual Reality) mode

Your creations can be experienced in VR using the ClassVR and Pico headsets or with a mobile VR headset. To explore with mobile VR, open the **CoSpaces Edu mobile app** on a VR-compatible smartphone, Play your CoSpace and click the VR icon.

AR (Augmented Reality) mode

Using an AR-compatible tablet or smartphone, open the **CoSpaces Edu mobile app**, Play your CoSpace and click the AR icon.



Ready for more?

Go to the next level with CoSpaces Edu Pro!



Download print version

cospaces.io/edu/CoSpaces-Edu-Pro-Guide.pdf

Teacher checklist

Follow these simple steps to start using CoSpaces Edu with your class:



Sign up on cospaces.io

- Register for a free CoSpaces Edu Basic teacher account. You'll get 30 seats to be used by you and up to 29 students.
- Open the email sent to the address you used to sign up.

Optional: Upgrade to CoSpaces Edu Pro

- Upgrade to Pro to get all features with your desired number seats.
- Pro plans can be bought directly online or through a quote and PO process.
- Go to cospaces.io/edu/pricing for more information on getting a Pro plan.
- Once you've bought your plan, you'll get a key to unlock CoSpaces Edu Pro.

Create your first class

- On the left menu, go to Classes and click Create class.

Invite students to your class

- Each class has a specific class code that you can find in the class you've created.
- Share the class code with your students to let them join your class in CoSpaces.

Create an assignment

- In your class, go to Assignments and click Create assignment to prepare a first assignment for your students.

Student checklist



Teachers: Simply give this checklist to your students to let them get started.

Students: Follow the steps below to start using CoSpaces Edu.

Create your CoSpaces Edu account

- From a computer, go to cospaces.io and click **Register**.
  From a phone or tablet, install the CoSpaces Edu app.
- Create an account as a **student**.
- Enter the **class code** provided by your teacher.
- Choose your login. Use something you're sure to remember!
- Let your teacher know if you need help to join CoSpaces Edu.

Enter your class

- On the left menu, go to **Classes** and enter your class.
- Let your teacher know if you can't find your class in CoSpaces Edu.

Open your assignment

- When your teacher gives you an assignment, you'll find it in your class.
- Make sure to read the assignments' instructions before getting to work!

Download print version

cospaces.io/edu/CoSpacesEdu-student-teacher-checklist.pdf

Key application videos

These tutorials explore some of the key applications of CoSpaces Edu! Scan the QR codes below or click the links to watch the videos.



360° tours

Learn how to build immersive 360° tours

youtu.be/Mi5MYVpAmuU



Virtual exhibitions

Learn how to design a virtual exhibition on any topic

youtu.be/xQU60KryO2E



Storytelling

Learn how to create interactive stories

youtu.be/SAaLoXmpUig



Games

Learn how to program and play games

youtu.be/uzbVkIWZAUc



Simulations

Learn how to visualize or simulate anything in 3D

youtu.be/vtcIENClmGo

Desktop shortcuts

EDITOR

Navigation:

 = Rotate camera view

 = Zoom in/ out

SPACE +  = Move camera view

SPACE +  = Zoom camera to mouse position

V = Center in on selected object

C = View whole scene

\+ = Zoom in

\- = Zoom out

Building:

R = Rotation mode

S = Turn grid snapping on/ off

G / U = Group/ ungroup selected objects

ALT +  = Duplicate and move

CTRL + A = Select all objects

CTRL + C = Copy selected object(s)

CTRL + V = Paste object(s)

CTRL + D = Deselect object(s)

CoBlocks:

CTRL + C = Copy selected CoBlock(s)

CTRL + V = Paste CoBlocks

CTRL + A + C = Copy all CoBlocks from the current workspace

PLAY MODE

Flying camera:

↑ W = Move forward

← A = Move left

↓ S = Move backward

→ D = Move right

Q = Move up

E = Move down

Walking camera:

↑ W = Move forward

← A = Move left

↓ S = Move backward

→ D = Move right

SPACE = Jump

Orbit camera:

 = Rotate camera view

SPACE +  = Move camera view

 = Zoom in/ out

\+ = Zoom in

\- = Zoom out

Mobile shortcuts

EDITOR

Navigation:

 = Rotate camera view left/ right

 = Zoom in/ out

 = Tilt camera view up/ down

 = Move camera view

Building:

 = Select object

 = Scale object

 = Move object



= Open object inspector

PLAY MODE

 = Object interaction

Walking/ Flying/ Fixed camera:

 = Turn camera

 = Move forward

Orbit camera:

 = Rotate camera view left/ right

 = Zoom in/ out

 = Tilt camera view up/ down

 = Move camera view

Download print version

cospaces.io/edu/keyboard-shortcuts-and-controls.pdf

Student certificate

Print and fill out this certificate to reward your students for their work with CoSpaces Edu



Download print version

cospaces.io/edu/CoSpacesEdu-student-certificate.pdf

360° tour creation lesson plan

Created by the CoSpaces Edu team



Education level: From primary
Subject: Adaptable to any
Format: Individual or in groups
Duration: Approx. 2 hours

Introduction and lesson objectives:

CoSpaces Edu is a great tool to create virtual tours using 360° photos! This can easily be done by students and can be a great way to let them research a topic and then create an educational tour based on their findings.

This lesson plan will present how to create a simple virtual tour using uploaded 360° photos. Virtual tours can be guided or not, and can be made more or less interactive.

Learning goals and student benefits:

- Learn 3D creation skills
- Develop research skills
- Develop digital literacy skills
- Foster creativity

Activity example:

1. Lead a discussion on guided tours in general. What are guided tours, what's their purpose and what kind of guided tours have your students participated in?
2. Explore examples of 360° tours in CoSpaces Edu with the class. Let your students explore them in VR for an immersive experience and even more fun!
3. Explain the assignment to your students. Define what their 360° tours will be about and how they'll get the 360° photos for their virtual tours.
4. Ask your students to make a plan and create a short storyboard of their tour.
5. Ask your students to conduct research for the content of their tour and to collect the 360° photos they'll be using.
6. Give your students some time to create their virtual tours in CoSpaces Edu.

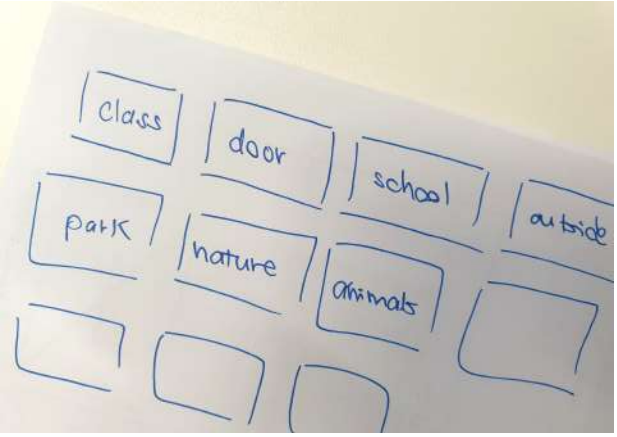
Extension idea:

- Encourage your students to share their creations with their classmates.
- If possible, give your students the possibility to explore their creations in VR.

Assessment and evaluation suggestions:

- Have your students managed to create their virtual tour in CoSpaces Edu?
- Did they follow a well organized process moving progressively from a scene layout, for example, to gathering photos and creating their scenes?
- Have your students conducted research and based their virtual tours on relevant and accurate information?
- Have your students managed to code switching between scenes in their tour?
- Is the viewer able to navigate the virtual tour through the different scenes easily?

Creation guide



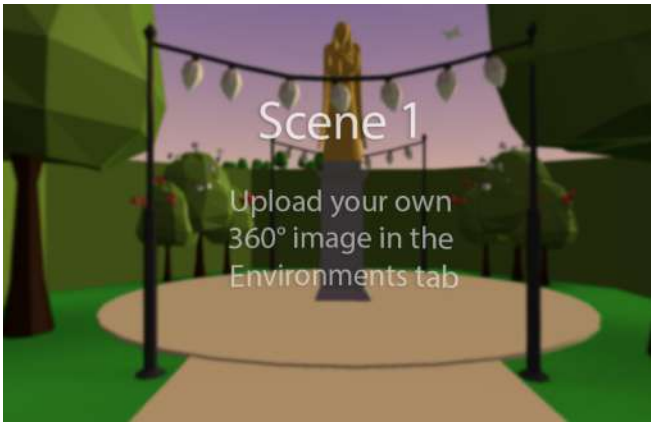
First, create a **scene layout** to plan what you'll show in your virtual tour.

Do some **research** on the place(s) and topic(s) that will be explored through your virtual tour.

Gather the **360° photos** you'll use to create your virtual tour and collect all the information you want to include.

How can I get 360° images?

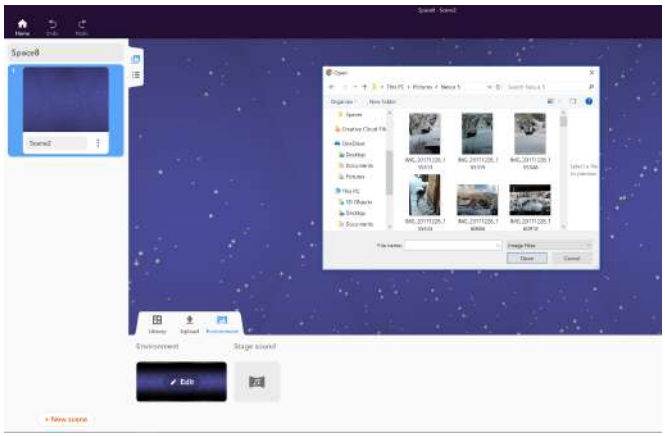
- On the web, searching for 360° photos labeled for reuse or royalty-free.
- On Flickr: equirectangular images: www.flickr.com/groups/equirectangular
- On other websites with free images such as:
  www.freegreatpicture.com/seamless-360-degree-panorama
  pixabay.com/en/users/pixexid-4729217/
- Creating them from your device's camera or with a 360° camera.



Time to start creating your 360° tour in CoSpaces Edu!

Go to **CoSpaces**, create a new CoSpace and create a **360° image** scene or use the **360° tour template**.

This will make the creation process even easier, as the basis of your 360° tour is already there!



Click Environment and Edit to add a 360° photo.

Each 360° photo in your tour will be placed in a new scene.

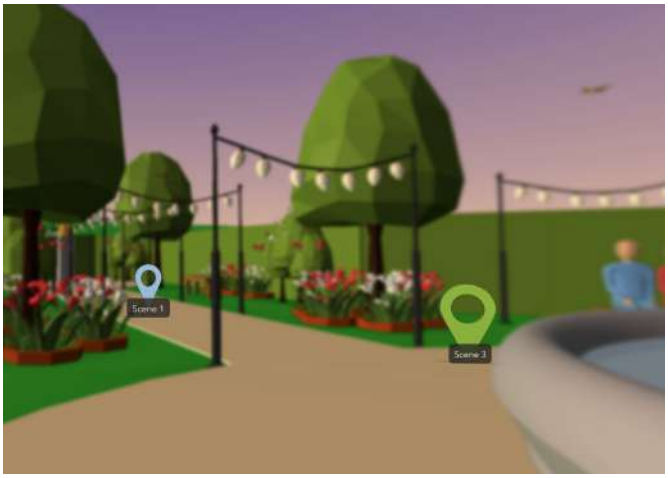
Planning the order of the 360° photos in your tour in advance will make creating the scenes easier!



Once all the scenes of your virtual tour are created, you can then add some information to be displayed.

Add **POI (points of interest)** related to this place onto your 360° photo.

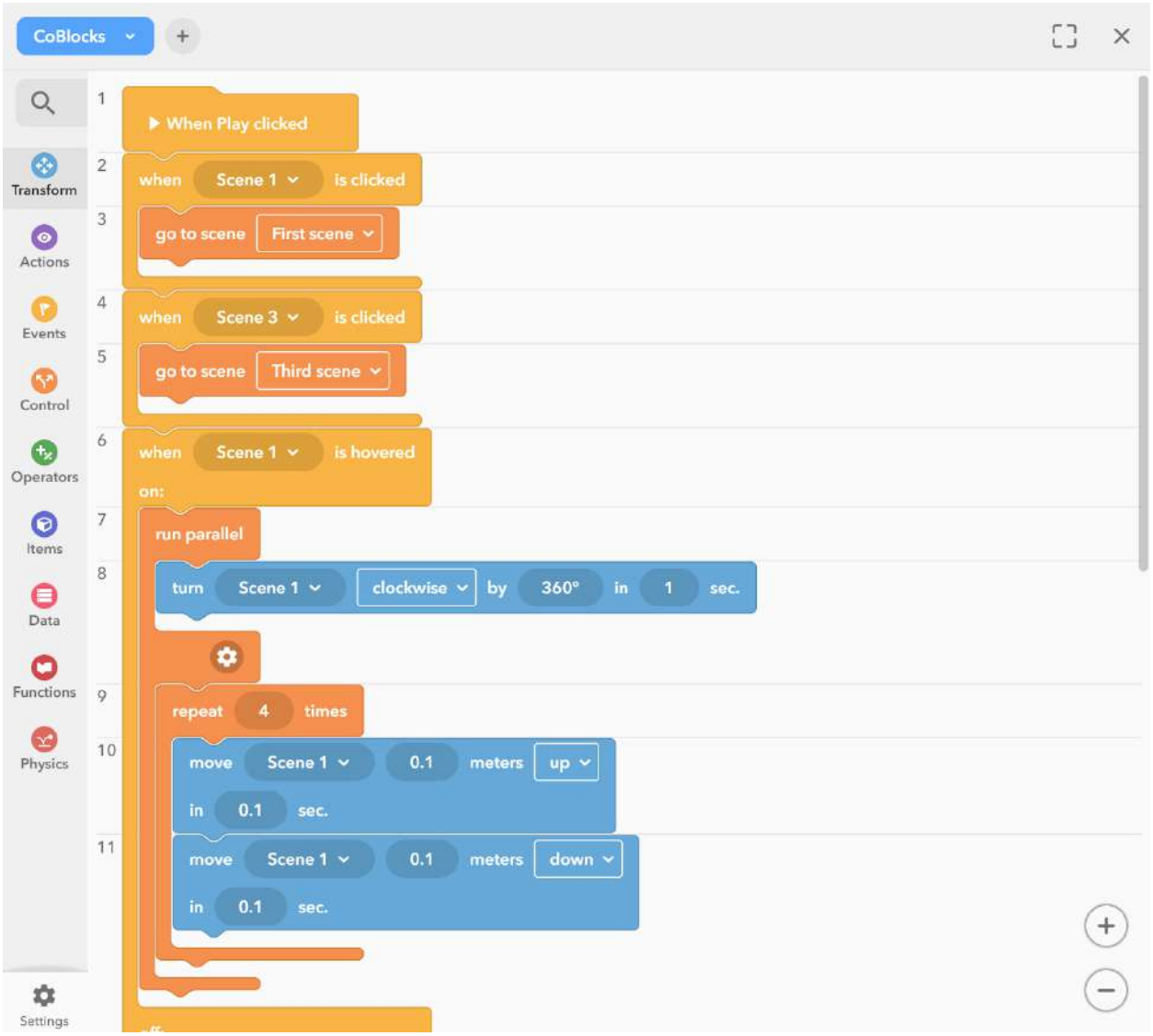
You can search for **icons** directly in CoSpaces Edu. Click Upload, go to Images and Search and drag and drop icons into your scene.



Add as many scenes as you like! Then, use markers to let the viewer move between scenes in your tour.

You can use the existing markers in the template or code your own.

Use the when is clicked CoBlock together with the go to scene CoBlock as shown on the next page.


CoBlocks
Transform
Actions
Events
Control
Operators
Items
Data
Functions
Physics
Settings
When Play clicked
when Scene 1 is clicked
go to scene First scene
when Scene 3 is clicked
go to scene Third scene
when Scene 1 is hovered
on:
run parallel
turn Scene 1 clockwise by 360° in 1 sec.
repeat 4 times
move Scene 1 0.1 meters up
in 0.1 sec.
move Scene 1 0.1 meters down
in 0.1 sec.



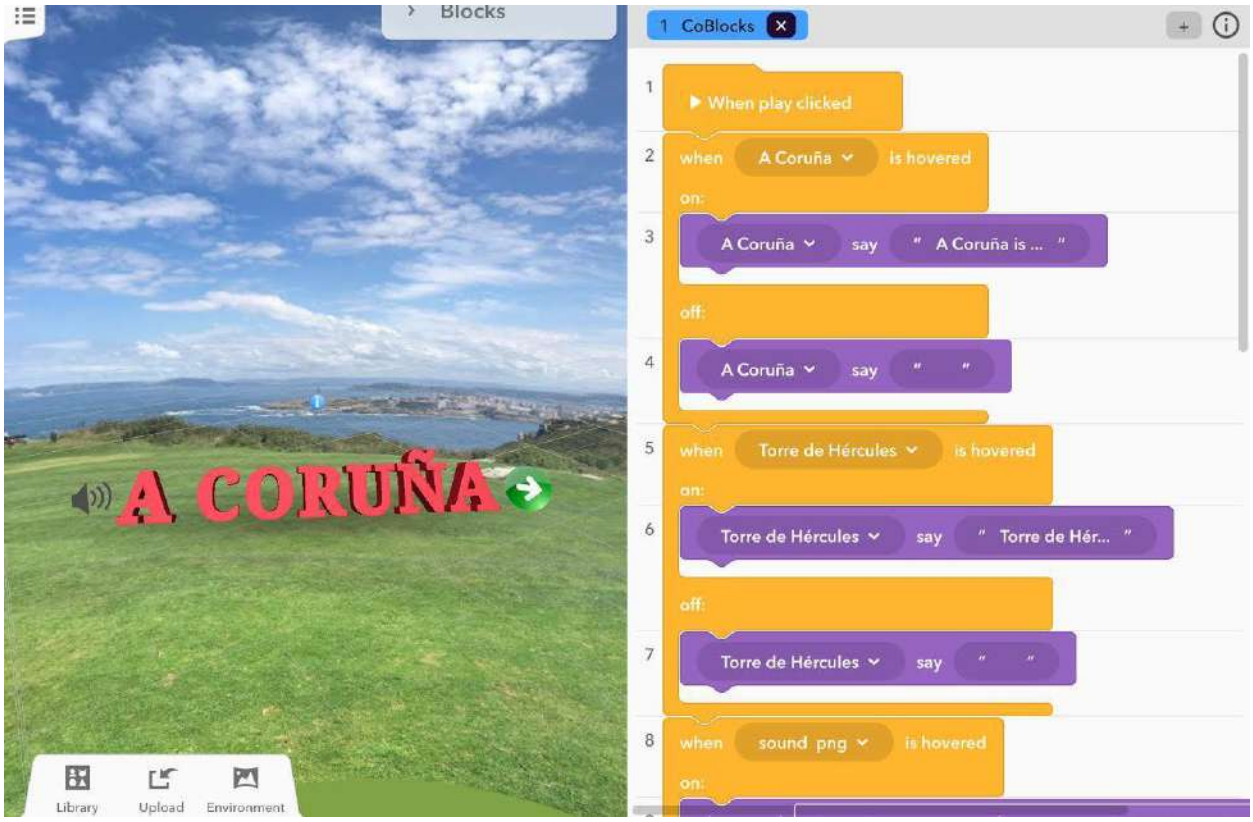
You can also add sounds, music or record your own narrated voice to make a guided tour for example!

Click **Upload** to add or **Record** sound. Use only music that is labeled for reuse or royalty-free!

You can then program your 360° tour further to make it interactive and add information.

In the **Events** CoBlocks, drag the **on hover of** CoBlock. This will let you define what happens when you interact with an element in your tour. For example, you can use the **item say** CoBlock from the **Actions** category to display additional information.

To play your sound recordings after an interaction, you can use the **Play sound item** CoBlock instead of the **item say** CoBlock.



Example CoSpaces



A Coruña City Tour

edu.cospaces.io/FHF-TYV



New York city tour

edu.cospaces.io/YVH-DRA

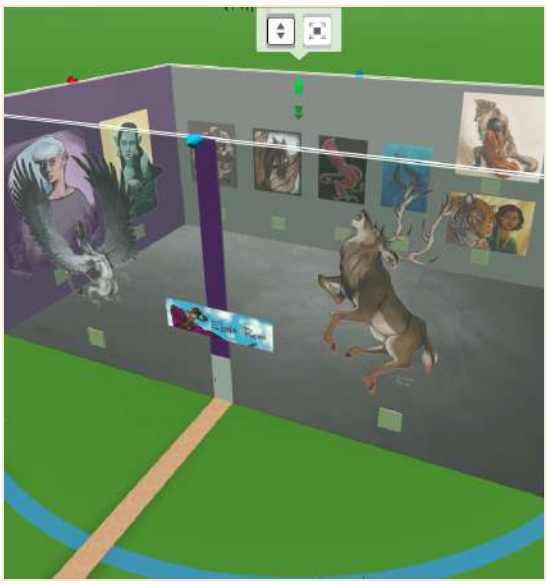


Glenmerry School and Parks

edu.cospaces.io/WXP-NAW

Virtual exhibition design lesson plan

Created by the CoSpaces Edu team



Education level: From primary
Subject: Adaptable to any
Format: Individual or in groups
Duration: Approx. 2 hours

Introduction and lesson objectives:

With CoSpaces Edu, your students can easily create a virtual exhibition on any topic, whether it's on animals, a historical event, a favorite painter, or anything that was studied in class. Students can even use their own art (photos or digitized paintings).

At the end of this lesson, students will have conducted extensive research on a subject, truly connected with the material and been given an opportunity to demonstrate their learning in an engaging way.

Learning goals and student benefits:

- Practice spatial thinking
- Learn 3D creation skills
- Develop research skills
- Develop digital literacy skills
- Foster creativity

Activity example:

1. Discuss museums and exhibitions with the class: What are exhibitions for? Who goes to an exhibition? What are you likely to find and see at an exhibition?
2. Ask students for ideas: What would they like to see in a museum or exhibition?
3. Assign your students a topic or let them choose one for their virtual exhibition.
4. Ask your students to find 10 facts (or any number you like) about their topic for their exhibition and ask them why they have selected this information.
5. Let your students create their own virtual exhibition with CoSpaces Edu. They could create a simple exhibition, build an exhibit room, or even a full museum.
6. Once the task is over, let your students explore their virtual exhibitions on their devices or in VR and discover what their classmates have created.

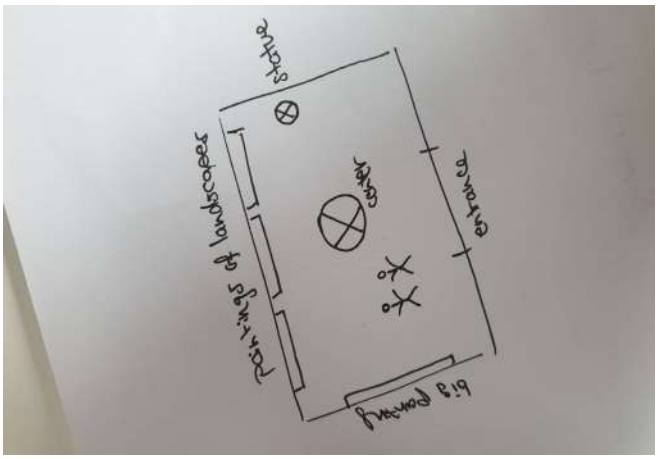
Extension idea:

- Discuss the various exhibitions created and what the students learned.
- Virtual exhibitions look best when explored in VR (Virtual Reality)!
  Using a smartphone with the CoSpaces Edu mobile app and a VR headset, let your students dive into the virtual exhibitions they've created and explore as if they were really there!

Assessment and evaluation suggestions:

- Have your students managed to create their virtual exhibition in CoSpaces Edu?
- Did they follow a well organized process moving progressively step by step?
- Is the viewer able to navigate through the exhibition and explore the exhibit content easily?

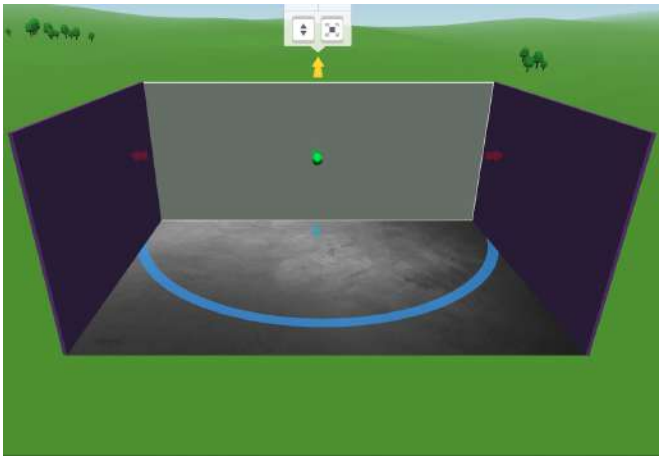
Creation guide



First, plan what the virtual exhibition that you want to create will be like.

Is it a simple exhibition or a complex museum? On what topic is it? What will be displayed in the exhibit?

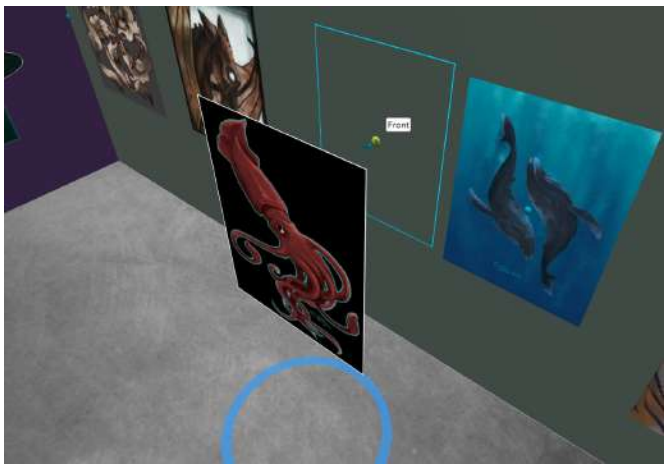
Make a small **plan of your exhibition** layout on paper or on the computer. Then, collect the material you want to display in the exhibit.



Start your creation by setting-up the environment of your exhibition.

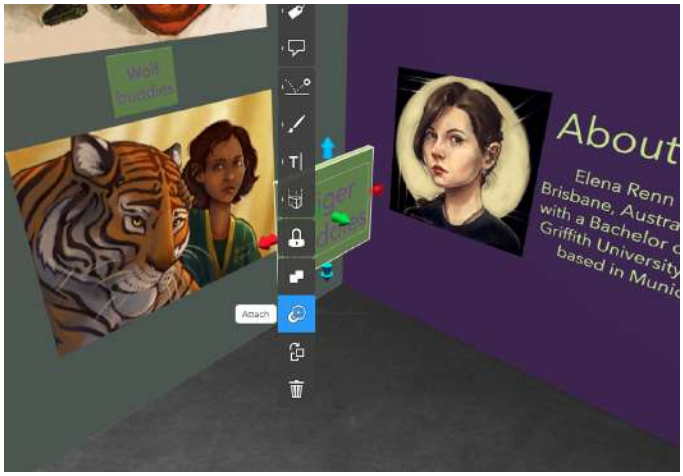
The **building blocks** under Building in the Library are perfect for this and let you create pretty much anything.

For now, let's leave a wall open as it'll make creating easier. You can later create your exhibition's entrance.



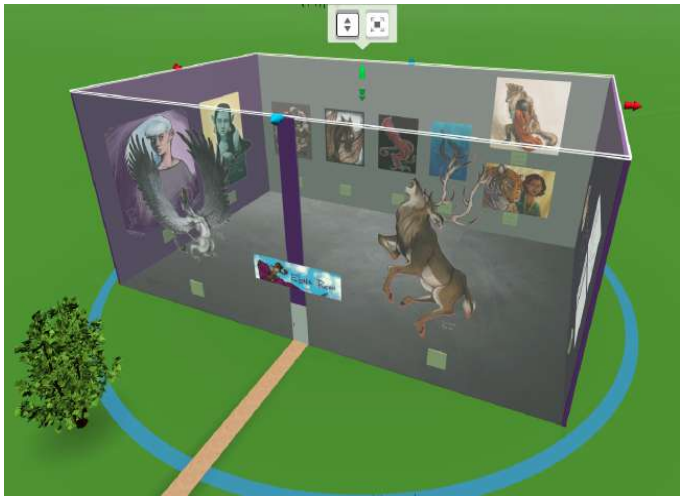
Prepare the layout of your exhibition in a way that suits your plans. Then, go to Upload to add the pictures, GIFs and even videos that you've selected for your virtual exhibition.

To hang an image on the wall, double-click it and click Attach. Images can be moved along walls' surface and rotated to place them however you like.



When you've finished hanging all of your visual support, you can add **information panels** with text like the images' titles or descriptions, the paintings' and artists' names, or the dates of historical events.

You can even create a **voice over** as an audio guide for your exhibition! To do this, click Sound and Record.

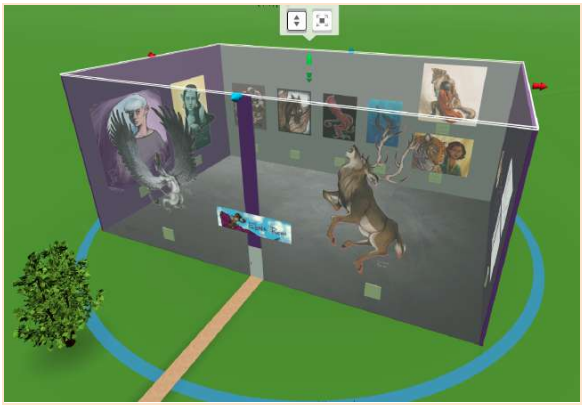


Once you're happy with your virtual exhibition, add the final wall and a ceiling to complete your building.

If you want to hang images on the last wall as well, change your view to inside your exhibition.

You can do this by simultaneously pressing Space on your keyboard and the left-click on your mouse. Done? Hit Play to view your expo!

Example CoSpaces



Elena Renn Exhibition

edu.cospaces.io/WLX-LZB



VR & AR Museum

edu.cospaces.io/QTQ-KNR



US Presidents Museum

edu.cospaces.io/LEJ-YVQ



Language learning EN-DE

edu.cospaces.io/FTK-QTJ

Storytelling lesson plan

Created by the CoSpaces Edu team



Education level: Adaptable to any
Subject: STEAM, social sciences, languages, ELA, literature
Format: Individual or in groups
Duration: Approx. 2 hours

Introduction and lesson objectives:

Letting students tell their own story is one of the best ways to help them develop their imagination. There are many ways you can teach your students storytelling with CoSpaces Edu, including:

- **Listening comprehension** - Students hear or read a story and then put it into a visual representation based on their understanding or create its illustrations.
- **Literature interpretation** - Students read a story or a chapter of a book they're studying and recreate story parts showing their interpretation of the reading.
- **Story writing** - Students first write a story or create a storyboard and bring it to life in 3D. The story can be interactive or even a CYOA or "Choose Your Own Adventure" story, in which the viewer makes choices that influence the story.
- **Speaking** - Students and teachers create short story scenes in CoSpaces Edu and discuss them together. This is great for foreign languages learning at a beginner's level or to explore a complex issue in Social sciences, for example.

Learning goals and student benefits:

- Develop imagination
- Foster creativity
- Develop 3D creation skills
- Practice storytelling

Activity example:

1. Explain the different ways a story can be told. Ask your class to give examples.
2. Introduce CoSpaces Edu and some of the basic tools your students will need.
3. Give your students their assignment and let them create their story visually.
4. Let them explore their virtual stories in VR, AR or simple gyroscope mode.
5. Give your students some time to share their creations with their classmates.
6. Hold a discussion to reflect and think critically about what they've experienced and how they built their stories and made certain choices.

Extension idea:

Optionally, ask your students to evaluate their classmates' virtual stories and to communicate their feedback in a clear and constructive manner.

Assessment and evaluation suggestions:

- Have your students managed to create their virtual story in CoSpaces Edu?
- Did they follow a well organized process moving progressively step by step?
- Were your students able to successfully communicate their story?
- Is the viewer able to easily follow the story?
- Does your students' work reflect a good understanding of the different creation tools available in CoSpaces Edu?

Creation guide



First, prepare the material for the story you'll be creating in CoSpaces. Write it down and add drawings to plan what you'll create.

Who are the characters in the story? How does the story start and what will happen? How does it end?



Start by choosing the environment in which your story will take place.

To do this, click the **Environment** icon and select a 3D environment.

With some environments, you can also adjust the mood of your scene. Is it a sunny or cloudy day? Click on **Mood** to define this.



Then, create the setting for your story by dragging and dropping 3D objects from the **Library**.

This storytelling example shows how to recreate the Lion and the Mouse fable.

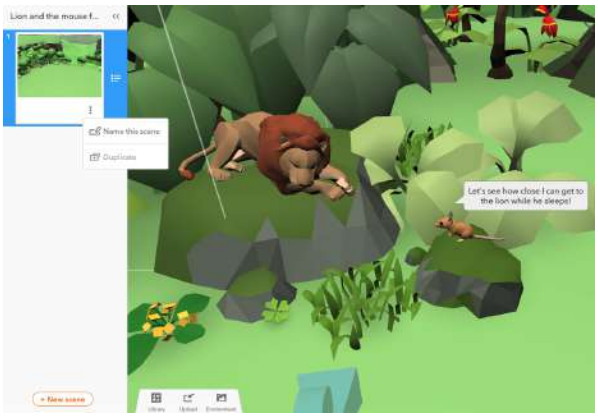
Find the characters needed for the story and place them on the stage. Adjust their size, position and color.



Continue filling your scene with more objects such as vegetation or anything else that fits your story's environment.

Any object can be repositioned, rotated and resized however you like.

Double or right-click an object to edit it or add animations to your characters.



You can also add **Speech** and thought bubbles to your characters.

In order to structure your story, create multiple scenes within your CoSpace. To do this, open the menu on the left and click on **New scene** or select a scene to **Duplicate** and edit. Create as many scenes as you like to tell your story and bring it to life!



Once all the elements of your story are in place, you can add code to make your scenes interactive.

You can upload a sound recording to add a narrative to your story. Why not ask your students to record their own?

When your story is ready to be played, click **Play** to explore it and dive in!

Example CoSpaces



The Lion and the Mouse fable

edu.cospaces.io/RCE-BXX



Eli and the Rocket

edu.cospaces.io/GDR-QYD



Goldilocks and the Three Bears

edu.cospaces.io/NZW-ETY



Romeo and Juliet

edu.cospaces.io/NTU-AZP



Have the MERGE Cube add-on?

You can also create interactive and “Choose Your Own Adventure” stories to be played with the different sides of the MERGE Cube!

Game creation lesson plan

Created by the CoSpaces Edu team



Education level: From elementary
Subject: Adaptable to any
Format: Individual or in groups
Duration: Approx. 4 hours

Introduction and lesson objectives:

Your students can learn to code by creating their very own games and then play them with their classmates! There are many different types of games your students can create with CoSpaces Edu:

- **Adventure games** - Your students create adventure games in which the player experiences a story and has to go through a series of actions to win.
- **Parkours** - Your students program their own parkours or 3D platform games in which the player has to move to get from a start position to a finish line or goal.
- **Scavenger or treasure hunts** - Your students create a virtual scavenger hunt in which the player has to find hidden objects inside a world that they create.
- **Quizzes** - Your students create and code their own quiz game on a topic that was studied in class and get to demonstrate their learning in a fun way.
- **Mazes** - Your students create a virtual maze in which the player has to go through a series of questions or puzzles in order to exit the maze.
- **Escape rooms** - Your students create and code their own virtual escape room!

Games can also be created specifically for VR for an immersive gaming experience!

Learning goals and student benefits:

- Develop 3D creation skills
- Foster creativity
- Demonstrate learnings
- Practice computational thinking
- Learn coding skills
- Practice collaboration

Activity example:

1. Discuss with your students the components of a game and how a game is usually designed: What makes a game fun? How does the player win or lose?
2. Help your students define the scope of the game they'll create.
3. Optionally, assign them a specific topic to incorporate into the game content.
4. Let them code their game and then play it as well as their classmates' games.

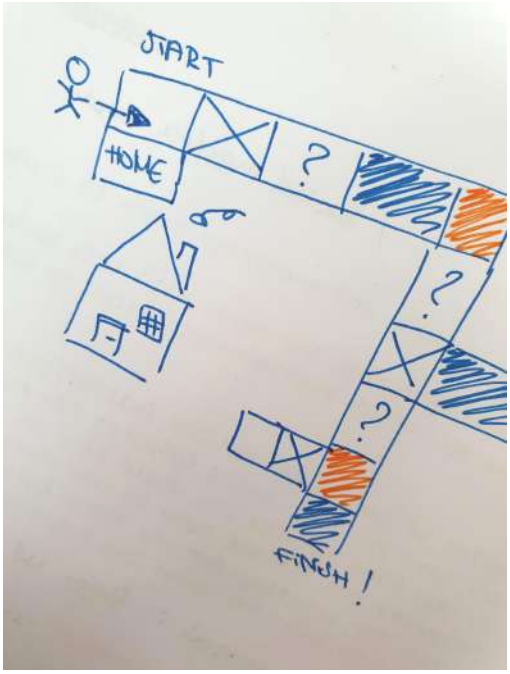
Extension idea:

Optionally, ask your students to evaluate their classmates' games and to communicate their feedback in a clear and constructive manner.

Assessment and evaluation suggestions:

- Have your students managed to create a game in CoSpaces Edu?
- Were your students able to program their game with code?
- Is the player able to easily understand and play the game?
- Does the game have a clear outcome (game over, winning, score reach, etc.)?
- Does your students' work reflect a good understanding of the different creation tools available in CoSpaces Edu?
- Does your students' work reflect a good understanding of basic coding?

Creation guide

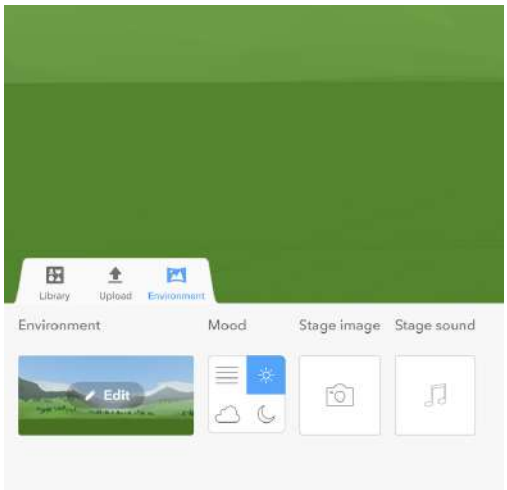


Think about what you want your game to be like. What will the player have to do? How does the player win or lose? When is the game over? Write down or draw your ideas.

Plan the logic and design of your game:

- Define a **goal**: How do you win?
- Plan how your game will **start** and **end**.
- Define a set of **rules** for your game.
- Plan some **obstacles** or other **challenges**.
- Define what'll make your game interactive.

Think about other elements to include. Are points counted? Does your game have a specific theme or story? Are there characters?



Ready to create your own game?

Start by building the environment of your game. Click **Environment** and select a 3D environment.

With some environments, you can also adjust the **Mood** of your scene.



Add all the elements needed for your game. Drag any objects you need from the **Library** and drop them into your scene.

You can adjust the size, position and color of most of the objects.

Missing something for your game? You can **Upload** or **Search** for additional objects.



Time to program your game! Start by coding all of the main interactions in your game first, as these will define how to progress through the game.

Click **Code** and **CoBlocks** to start coding. To program an object, right or double-click on it, click **Code** and enable its **Use in CoBlocks**.



When you're done, hit **Play** to test your game! Check that the player is able to go through the whole game and reach the end. Make any edits needed until you're happy with it!

Then, let others play your game and play your classmates' games. Can you improve your game based on your classmates' feedback?

Example CoSpaces



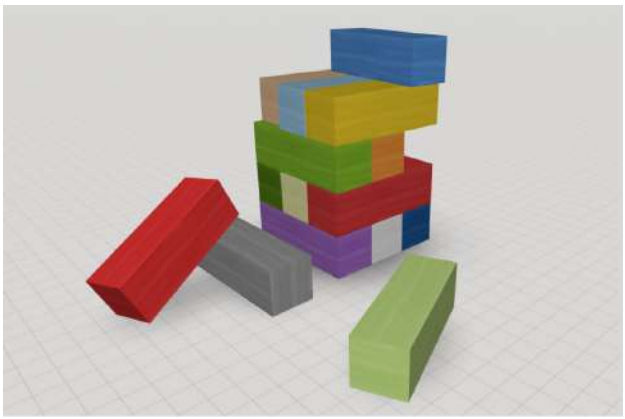
Space quiz

edu.cospaces.io/TBK-SAG



VR adventure game (parkour)

edu.cospaces.io/PGE-SDD



Colorful jenga

edu.cospaces.io/CDP-GES



Egg hunt

edu.cospaces.io/HHR-BEA

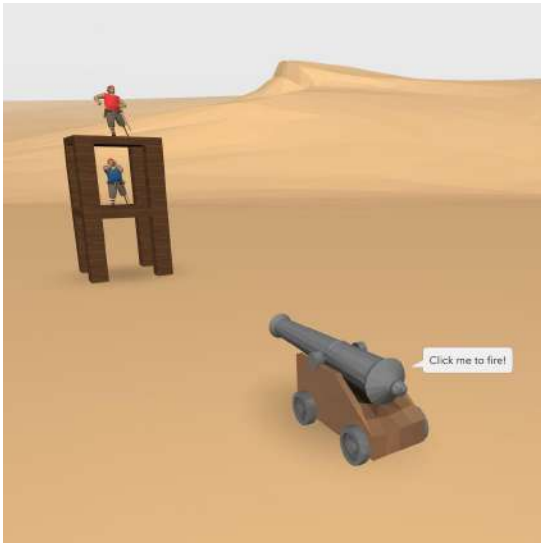


Have the MERGE Cube add-on?

You can also create fun games to be played by interacting with the different sides of the MERGE Cube!

Simulations lesson plan

Created by the CoSpaces Edu team



Education level: Adaptable to any
Subject: STEAM, physics, geography, earth sciences, social sciences
Format: Individual or in groups
Duration: Approx. 3 hours

Introduction and lesson objectives:

As anything is possible in CoSpaces Edu, it's the ideal tool to conduct any experiment and simulate anything virtually!

You and your students can create various types of simulations of subjects studied in class and make it possible to visualize concepts in 3D and in fun ways such as VR and AR or even by interacting with the MERGE Cube if you have the add-on.

- **Real-life simulation** - Your students create or interact with a virtual and dynamic demonstration of phenomena taken from real-life and get some learnings by interacting with it.
- **Scientific experiment** - Your students use their CoSpace to freely and safely conduct their own scientific experiments such as playing around with the physics properties of objects on the earth.
- **3D visualization** - Your students create or play with a 3D representation of something they've learned in class in order to physically connect with it for better understanding and retention.

Learning goals and student benefits:

- Develop 3D creation skills
- Engage with the study material
- Understand through visualization
- Practice collaboration

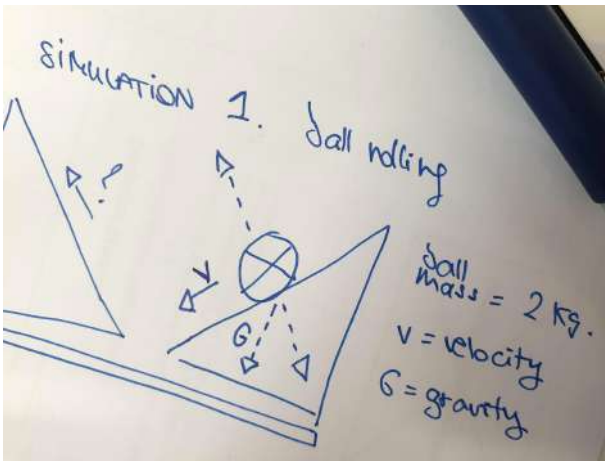
Activity example:

1. Assign your students with a simulation to experiment with.
2. Ask them to collect some of their key observations based on the simulation.
   What did they notice? Is there anything they found surprising?
3. Discuss the simulation conducted in small groups or as a class.
4. Summarize the different learnings and other outcomes of this simulation.
   How did it feel to visualize this simulation in 3D? Was it easier to understand?
   Is there anything they wish they could have been able to interact with?

Assessment and evaluation suggestions:

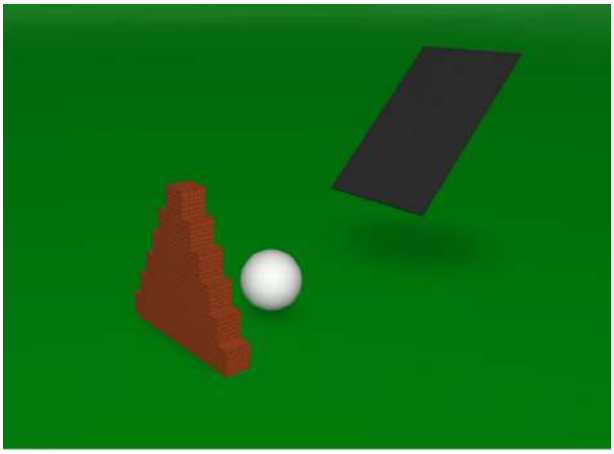
- Have your students managed to experiment with the simulation?
- Did your students understand the simulation?
- Did your students express relevant and interesting observations?

Creation guide



First, clearly define the **subject** of your simulation and discuss it with your teacher. What are you trying to show or test? What are the **possible outcomes**?

Make sure you have a concrete idea in mind and that it's of a reasonable scale. Write down a **plan** and make **sketches** to conceive what you'll build.



Layout the various elements that will be needed to create your simulation.

Drag and drop **3D objects** from the Library and use the **building blocks** from the Building category to build anything you might need.

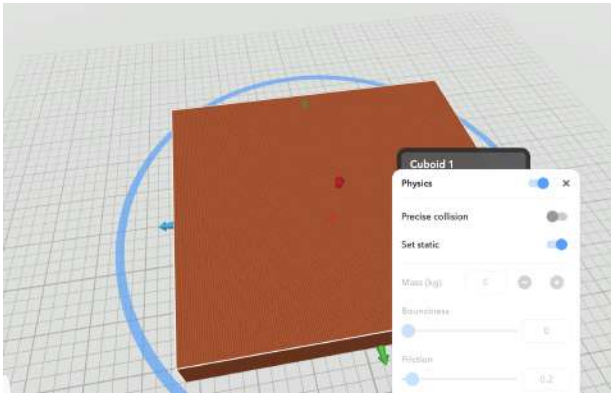
Need something you can't find there? You can add it under Upload.



Once all the elements are in place, you can start coding your simulation.

Double or right-click each object, click Code and activate their Use in CoBlocks to program it.

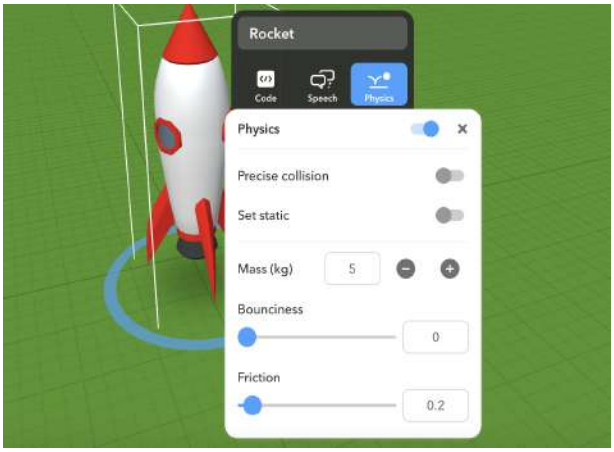
Also activate Show name to make it easier to see what objects you're coding. Don't forget to give them clear names!



Do you want to use physics on the objects in your CoSpace?

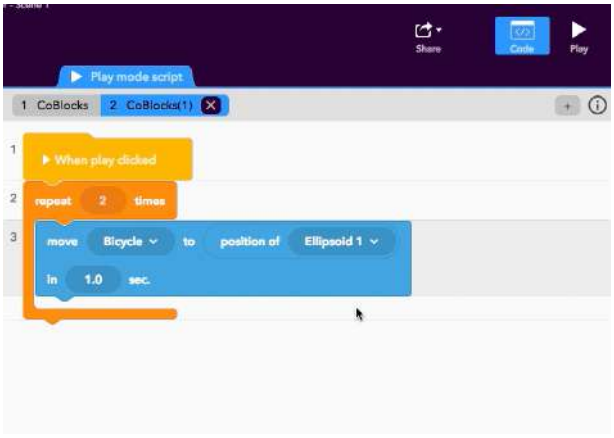
Click your objects and activate **Physics**.

You can then play with the physics properties of any object, define collision precision and whether your object should be set static.



You'll be able to precisely define several physics properties.

Define what your objects' **Mass**, **Friction** and **Bounciness** should be for your simulation.



Add code to make whatever you want to show with your simulation happen! Click **Code** editor and **CoBlocks**.

Don't forget to enable **Use in CoBlocks** for all objects. Want to use physics? Click your objects and activate **Physics**. Play with **physics properties**: define **Collision** precision and whether your object should be **Set static**.



Hit Play regularly in order to test your simulation and understand what works and what doesn't. Then, go back to your code to make changes.

The **CoBlocks debugger** lets you view your code running as you're playing with your simulation.



Time to see what happens when you interact with your simulation!

Try to summarize the results of your simulation. What happened? Is it what you expected?

Let your classmates play with it and test their simulations too.



Have the MERGE Cube add-on?

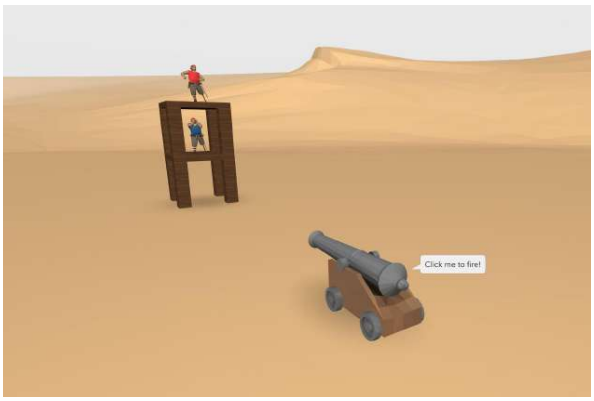
You can also create visualizations and simulations to be experimented by interacting with the MERGE Cube!

Example CoSpaces



Catapult simulation

edu.cospaces.io/YXU-XQT



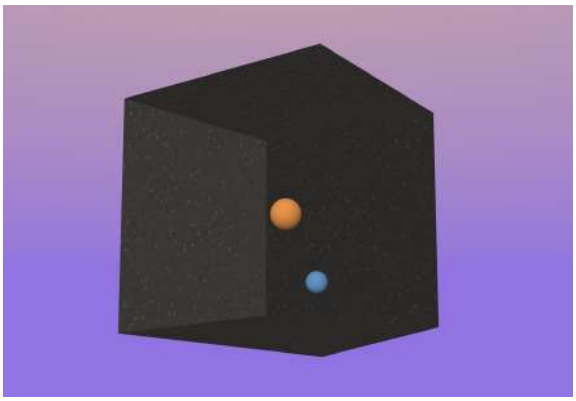
Physics with CoBlocks

edu.cospaces.io/ZXW-YAC



Anti-gravity room

edu.cospaces.io/JHA-CHJ



Atoms simulation

edu.cospaces.io/SFC-CTG