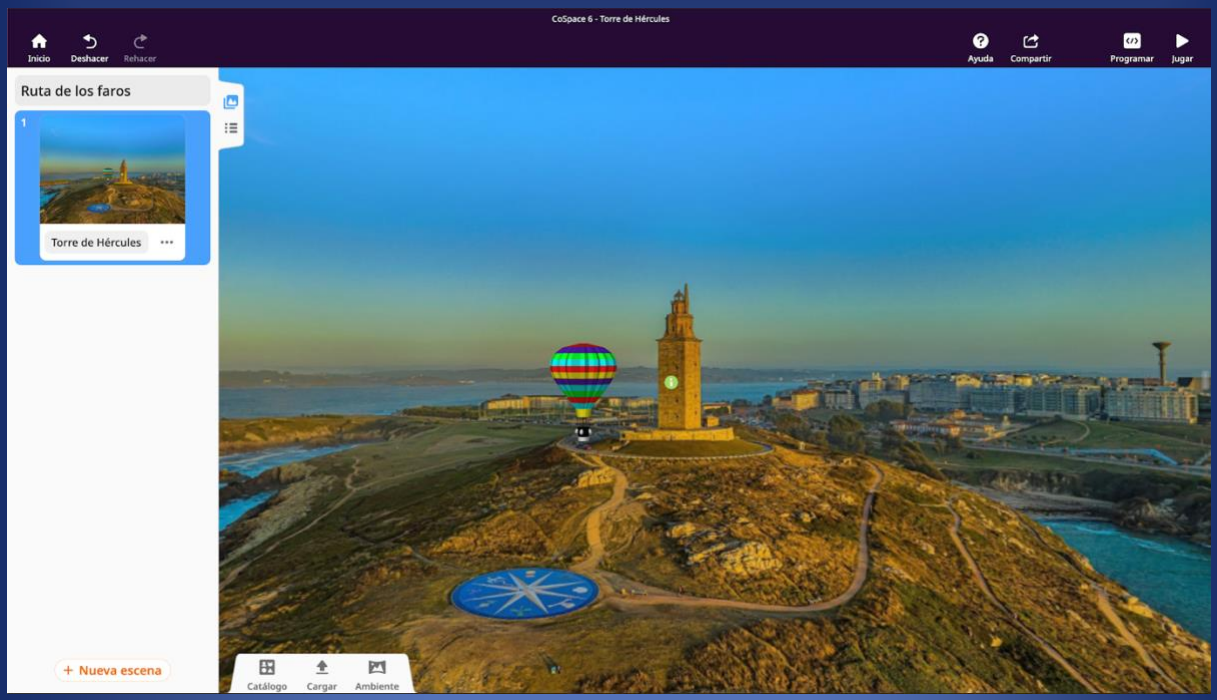

360 IMAGES
COSPACES EDU

WALKING THROUGH THE MEMORY WITH IMMERSIVE TECHNOLOGIES

Co-funded by the Erasmus+ Programme of the European Union

PROJECT:**2019-1-ES01-KA229-065937.** Walking through the memory with Immersive Technologies
CEIP PONTE DOS BROZOS- ARTEIXO

Co-funded by the Erasmus+ Programme of the European Union

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COSPACES EDU. 360 PHOTOGRAPHY

Short description

CoSpaces EDU is a virtual reality platform of German origin launched in 2016 by the Munich-based company Delightex. In this new article about this tool for creating 360-degree virtual worlds, we are going to tell you how to create interactive tours and routes.

Subject/s

It is a useful tool to work in an integrated way in different areas of the curriculum. In language classes we can imagine them creating descriptions, scripts or stories set in those places, in art classes creating different compositions based on those places, in social sciences showing places and historical facts...
It can be used in class, individually, in pairs or in teams. You can also create online tasks and use the tool to promote or encourage distance learning.

Prior knowledges

CoSpaces Edu is perfectly suited to the level and skills of Primary and Secondary school students. The creation process is simple and consists of drag and drop using a variety of 3D characters or objects and building blocks. The block-based visual coding language, called CoBlocks, is ideal for young coders and an excellent way to introduce them to computational thinking.

Objectives

By creating immersive spaces, our students can formulate, represent and solve problems using augmented reality, virtual reality and programming. The aim is to promote computational thinking to solve problems and to teach a new way of thinking, based on the computational model that shows how to deal with big problems by breaking them down into a sequence of smaller, more manageable problems.
The aim of this lesson is to create different virtual reality routes or tourist guides in which students show their knowledge about their community, their city, a culture, a civilisation, a book... This activity involves students doing significant research and data collection, organising the information they have gathered and deciding how best to present it in narrative or written format.
CoSpaces Edu allows learners to use 360° images on top of which complementary information can be added using different types of graphics. This complementary information can be added through different types of icons or shapes available on the web or on the platform itself.

Advantages of using this resource in the classroom

The creation of 360º walks or itineraries is absolutely fantastic for the classroom as it offers a way to bring students closer to distant or nearby places and give them a complete view of the place.
We can use this format to highlight many details, offer additional information, add images, etc.
We can highlight three basic characteristics of this type of 360° photography activities:

● Its interactivity: It allows you to travel between the 360º photos.
● Its points of interest: It makes it possible to include clickable areas capable of opening additional pieces of information such as photos, text or audio.

Its flexible visualisation: It offers different types of visualisation: standard, tablet or computer navigation, gyroscopic mode or VR mode.

Other features offered by the platform with respect to 360 creations are:

- Accessible learning materials: anytime, anywhere. We work in the cloud so learning materials are portable and less expensive. Education becomes more accessible and mobile.
- Increased learner engagement and interest. Interactive learning has a significant positive impact on learners. It keeps them engaged throughout the session and makes learning fun and effortless.
- Ability to collaborate allowing for group projects.

What skills do learners develop that cannot be obtained in more traditional ways?

CoSpaces Edu improves digital literacy skills, enhances creativity and fosters collaboration in the classroom by allowing students and teachers to easily build their own 3D creations, animate them with code and explore them in virtual reality.

What is the resource?

One of the most useful features of CoSpaces is the ability to add 360-degree images very easily. This allows teachers and students to create many types of virtual reality creations, from virtual tours of cities around the world to virtual tours of the settings of a novel or historical tours of places that made the news at other times in history. These experiences can then be viewed in virtual reality (VR), or as a 360º experience in the browser window.
It also has two additional functionalities:

- View the spaces in 360° on any screen or in VR mode on the mobile device.

- Coding in JavaScript or CoBlocks, which means giving more or less interactivity to the project.

You will need 360° images and if you don't know where to find them, we propose different options:

- On the web, looking for 360° photos tagged 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/

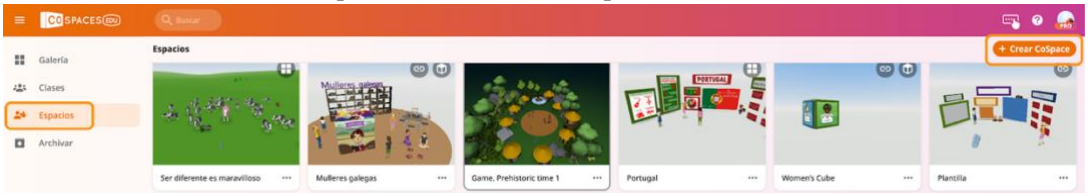
- Creating them from your device's camera. (We recommend the Google Street View app).
- Downloading them from Google Maps.
- Using a 360º camera.

Make sure you have the right permissions to use the photos, as some images are not royalty free or may have copyright restrictions.

How do I use it?

First, create or log in to your CoSpaces Edu account and create a new space.

Once inside the platform, search for "Spaces" and create a new one.



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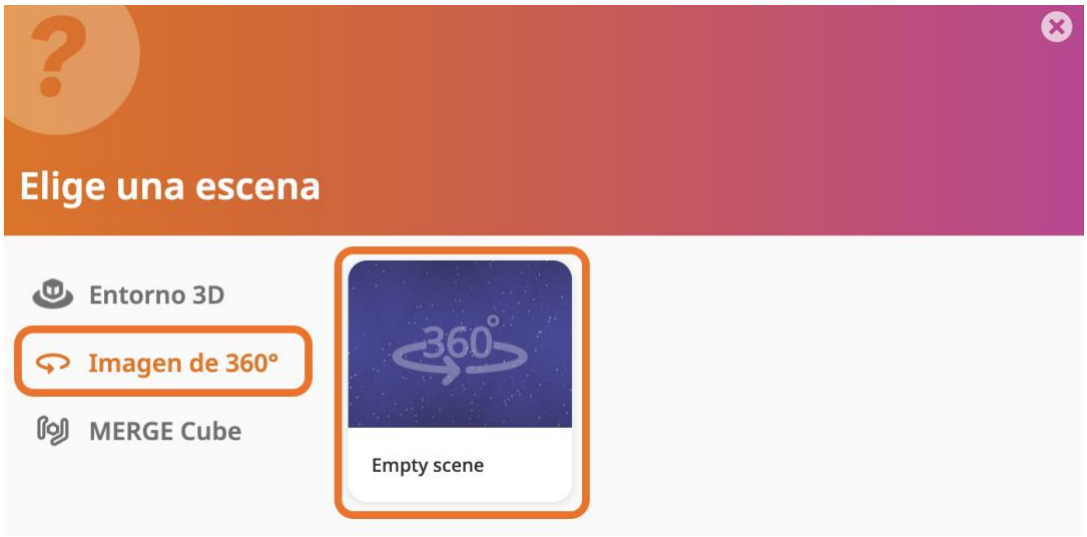
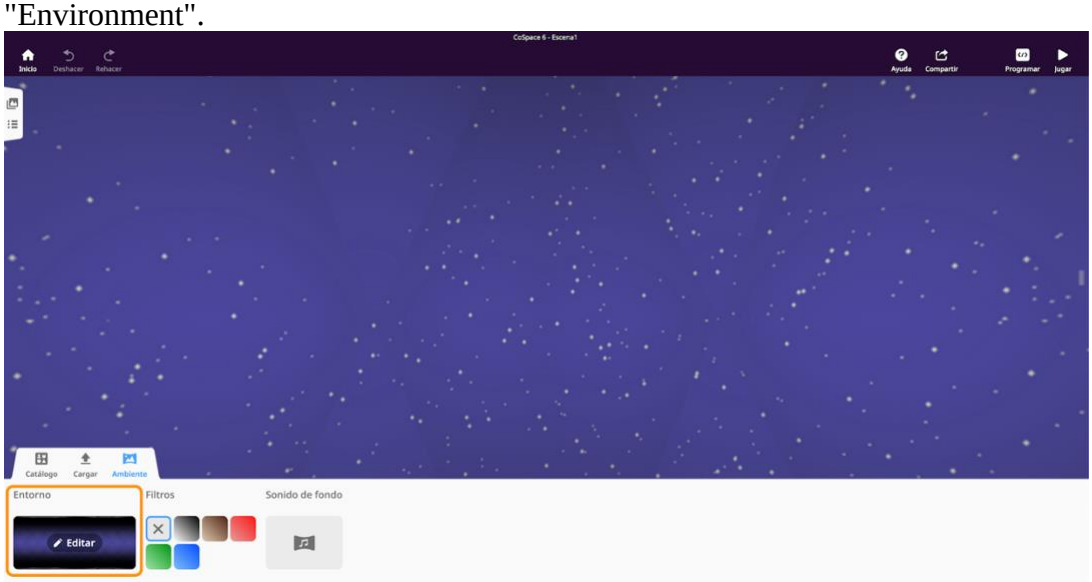
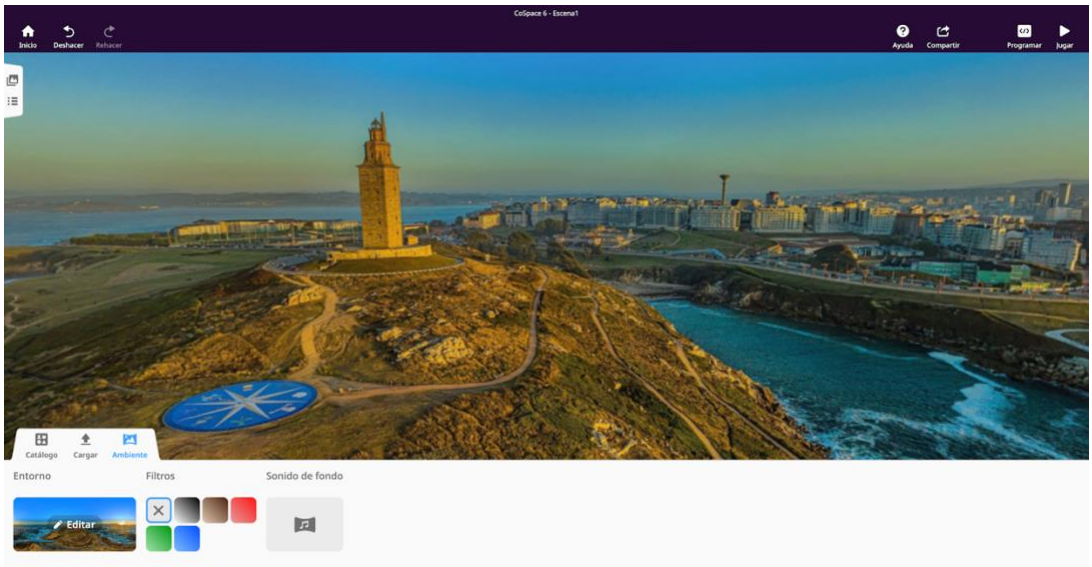


When you are in the space editor, look for the menu in the bottom left corner. Select "Environment".

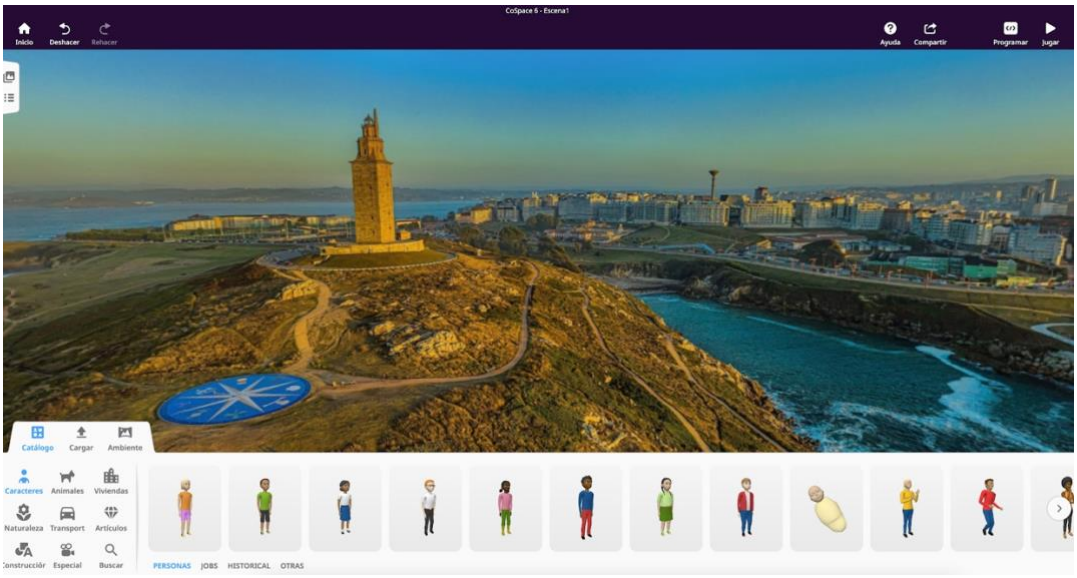


There you have the option to edit that "Environment" and upload your own 360-degree image.

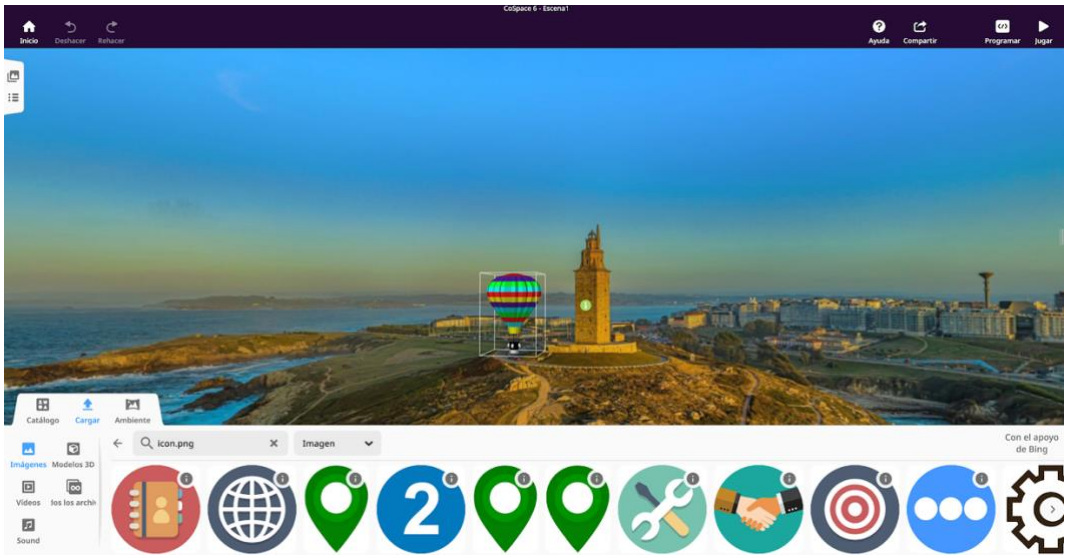


That's it. You now have a 360-degree image as the background of your VR scene.

Next, you can go to the "Catalogue" to add characters, 3D objects or icons to the scene. Make sure you position and resize them to match the space.

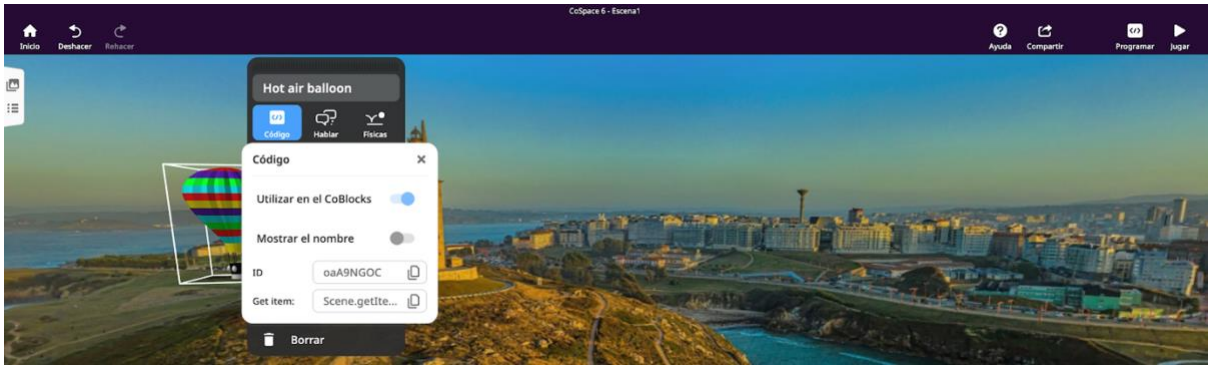


If you don't find what you are looking for in the catalogue, CoSpaces offers you its own search engine. You can filter by icon.png and you will get multiple icons with transparent background for your project).

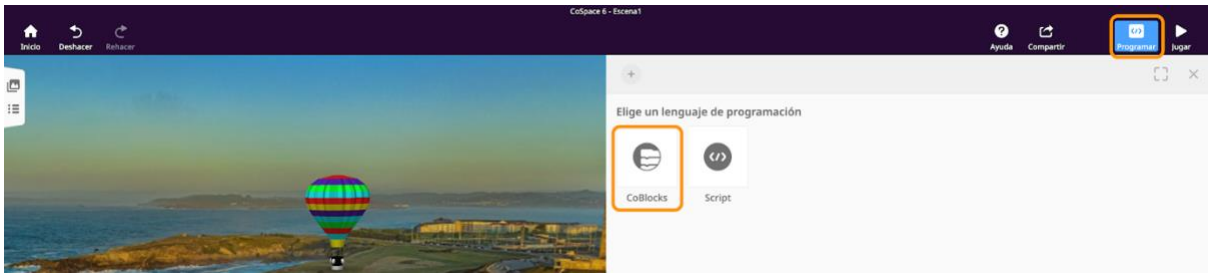


CoSpaces has also been sharing the attribution of images for some time now: title, url and licence of the image or icon you are going to use.

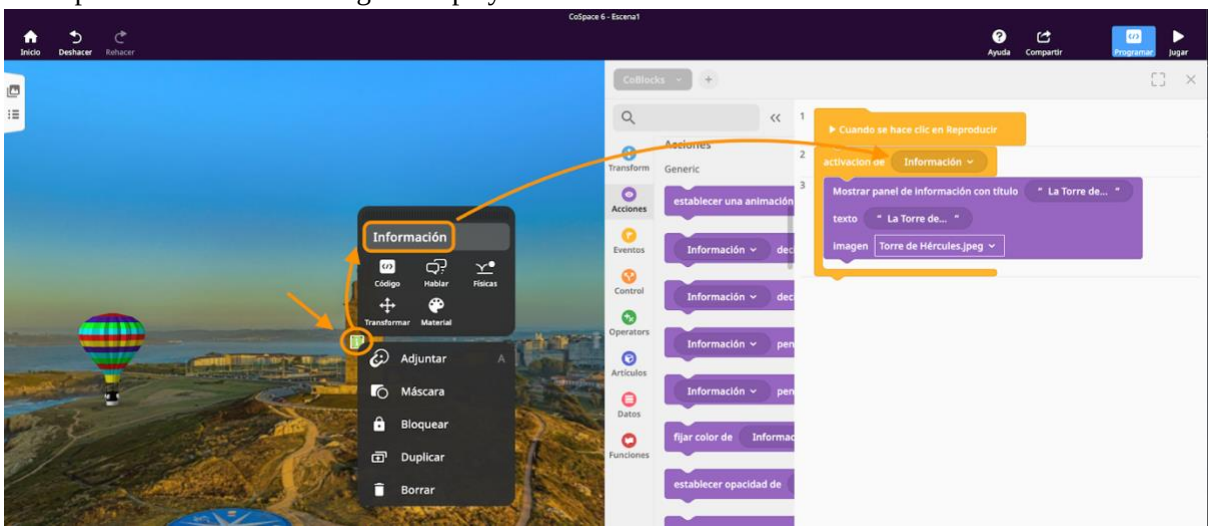
You will need to activate the characters, objects or icons on the screen when using CoBlocks so that you can code them. To do this double click on the character/object and in the "Code" button, activate the button. It will turn blue.



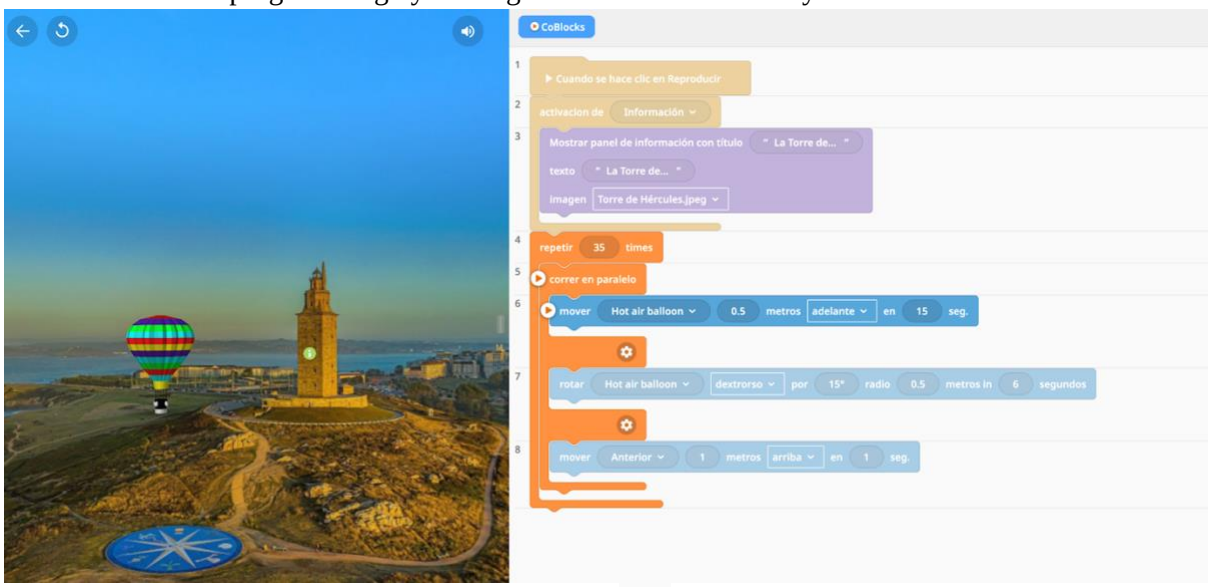
We start programming with the basic blocks (If you want to see all the functionalities of CoSpaces Edu you can do it with the code COSBEGONAC that offers you 100 licenses for a month with all the features activated). To do this, click on the top toolbar, the "Program" button and select "CoBlocks".



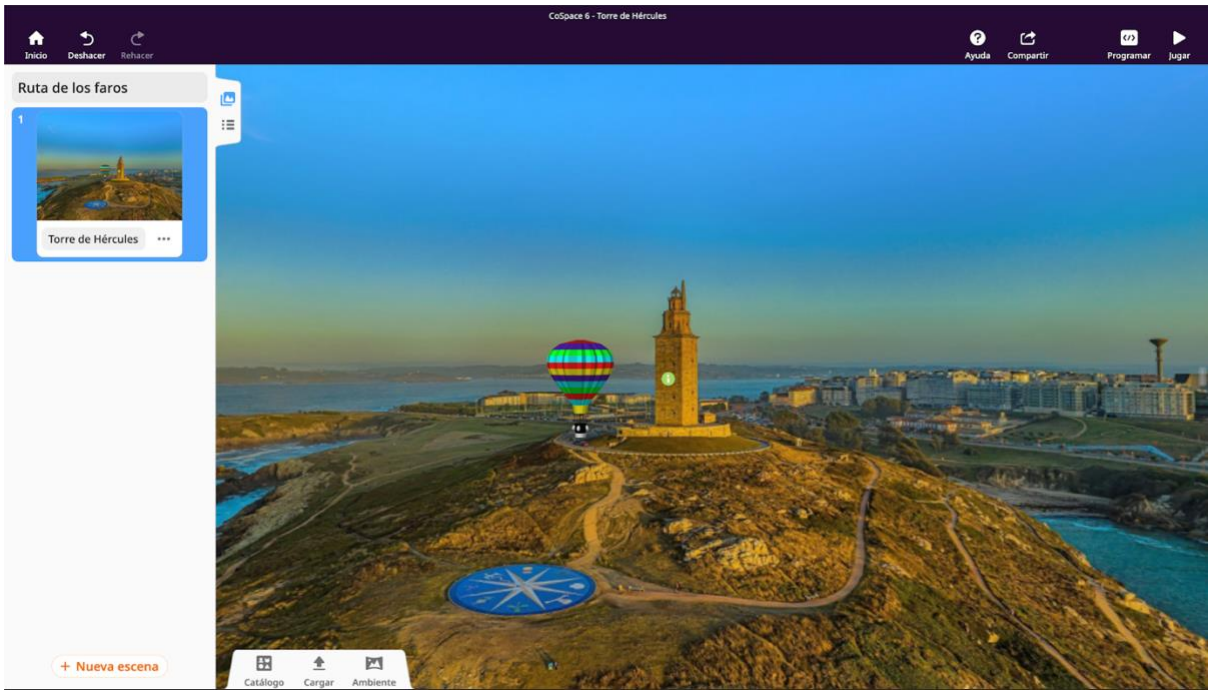
We use the "Event": When we activate "Information", an information banner containing a title, a description and a detailed image is displayed.



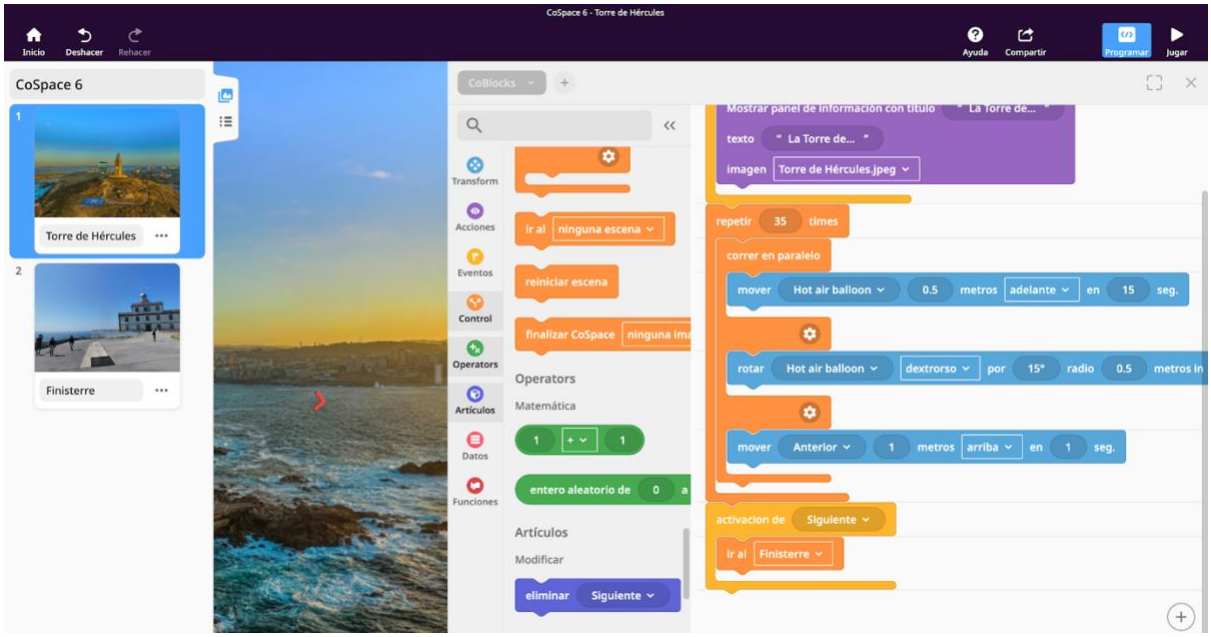
We can extend the programming by making the balloon move slowly.



To add scenes, click on the icon with the mountains on the left-hand side. You will see that there you can add more scenes, title them, order them, etc.



Once you have several 360 images you can link them together and create your 360-degree tour. Simply use the Control block: "Go to...".



CoSpaces allows you to add sounds, music or record your own voice narration for a guided tour. To use this option.

Click **Upload** to add or **Record sound.** Use only music that is labelled for reuse or is copyright free.

To play back your sound recordings after an interaction, you can use the **Play sound item**. Another very interesting option, especially if you are going to visualize your project in an immersive way through Virtual Reality glasses is to use the "Hold mouse over..." block found in the CoBlocs "Events". This will let you define what happens when you put on the Virtual Reality glasses and look over that icon/object.

Some suggestions for using CoSpacesEdu are:

The integration of virtual reality and 360 photography in the classroom requires teachers to have the necessary skills for its technical and didactic use.

It involves the organization of activities based on learning by doing (students learn by doing), encourages entrepreneurship, creativity, initiative and responsibility.

In this design of activities, teachers must choose the most suitable methodology, a varied methodology that can be adapted to the characteristics and individual learning pace of each student.

The most important part of creating a tour is the planning. A virtual tour is made up of different scenes and each scene can have multiple elements:

- a text description
- different audio files, one for the background sounds and one for the narration
- and designated points of interest that may include image overlays, additional text and other audio narration.

Ideally, 5 to 7 scenes should be used to create a virtual tour. More than 10 scenes can be too long and lose interest.

Start by deciding on a theme. It should not be a very general theme so that the tour fits perfectly with what you intend to show. Once the theme has been chosen, we need to create a list of possible locations within that theme and narrow it down to a manageable number. It is important to check if we have the right photos of each scene or need to find them on the web.

Use a storyboard to design the route. For each location, decide what elements (text, images, audio narration and/or audio background) you will include in addition to the 360° image. The use of audio will be great for when you can view the tour through virtual reality glasses.

Research and collect the materials in a single location, such as a shared folder on your desktop, Google Drive or another platform you manage. Audio files should be recorded outside of CoSpaces Edu and uploaded as mp3 files.

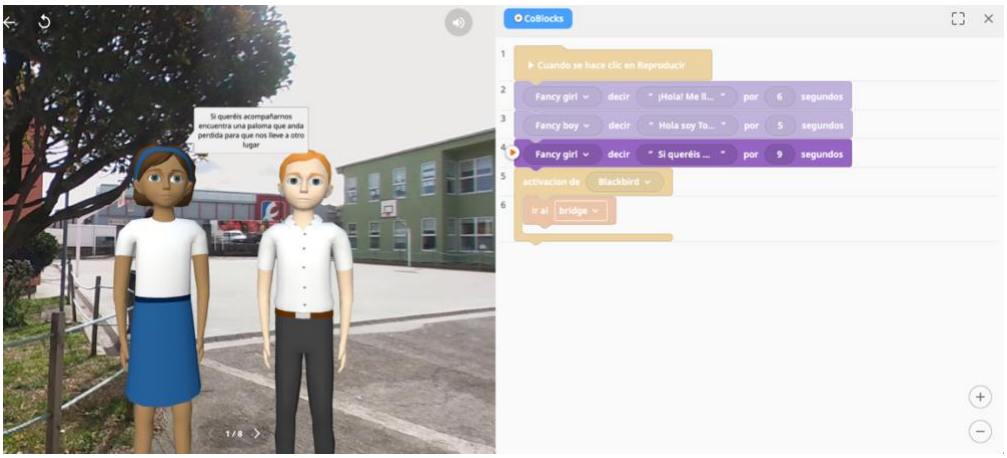
The creation of tours lends itself to a cooperative project. You can divide the locations among members of a team and have each person research the location, determine the points of interest, write the text, find the appropriate images and record the audio.

OK, now that you have completed your planning, it's time to build the tour.

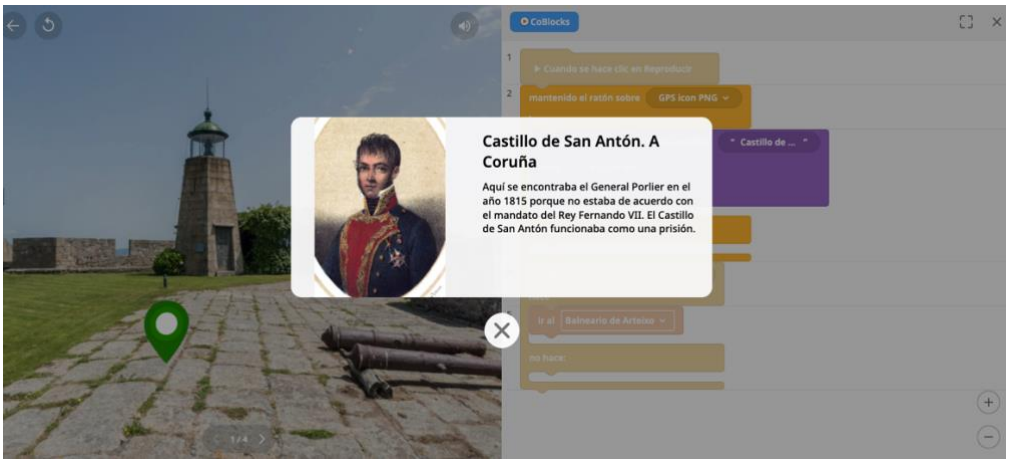
One of the many possibilities offered by virtual tours is to introduce a place or give a guided tour of a special place. We can do this with our school or our institute. It is a very visual way to show it to families, other colleagues, students... If you are carrying out an Erasmus+ project in your school, it is an excellent idea to present the school to the partners. Virtual Tours provide a more engaging experience than traditional photography and offer viewers a unique insight into the environment and facilities of your school.

Here are some inspirational examples:

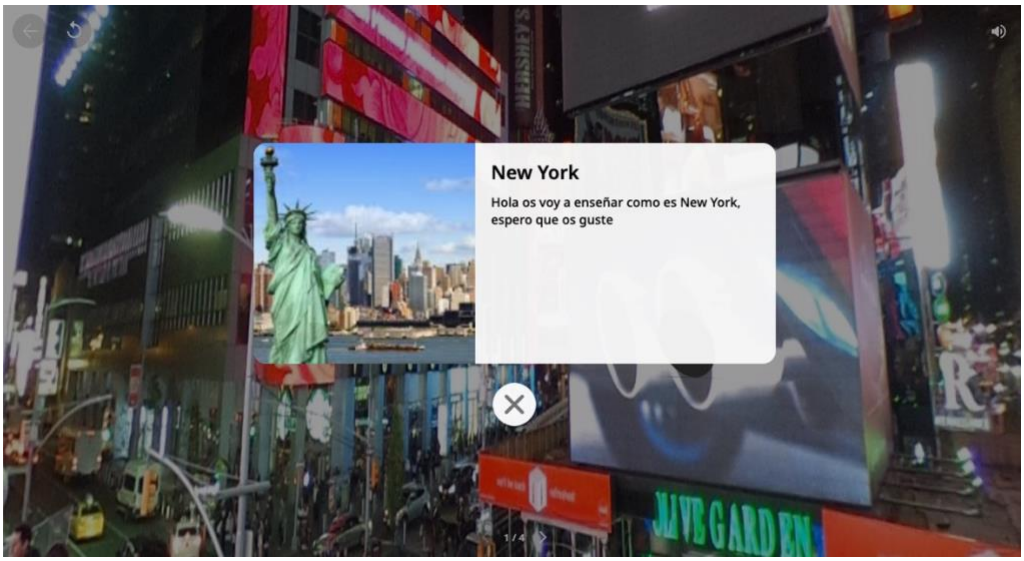
Geographical tour: This is part of a project called Arteixo virtual created by students from 6th grade of Primary Education to introduce them to the town and their school.



Historical Tour: El General Porlier



Touristic Tour: Nueva York



Other possibilities are literary tours through the settings of a novel, gastronomic tours, cultural tours, art exhibitions...