Virtual tour creation
Lesson plan

Created by María Begoña Codesal Patiño

Education level: From elementary
Subject: Social sciences, geography, history, languages, ELA
Format: Individual or in groups
Duration: Approx. 3 hours

Introduction and lesson objectives:

The objective of this lesson plan is to create different VR brochures or touristic guides in which students show their knowledge of their community, their city, a culture, or a civilization. This lesson involves getting students to do a significant amount of research and data collection, organize the information they gathered, and decide how to best present it in narrated or written format.

CoSpaces Edu allows students to use 360° images onto which complementary information can be added through different types of icons or shapes available on the web or on the platform itself.

The use of this type of visuals and the creation of 360° walks or itineraries is absolutely fantastic for class. It offers a way of bringing students closer to distant or nearby places and offering them a full view of the place. We can use this format to emphasize many details, offer additional information, add pictures, etc.

What has caught our attention the most during the virtual tours is:

- Its **interactivity**: It allows you to travel between photos in 360°.
- Its **points of interest**: It makes it possible to include clickable zones capable of opening additional pieces of information like photos, text, or audio.
- Its flexible **visualization**: It offers different types of visualization: standard navigation on tablet or computer, gyroscopic mode, VR mode or AR mode.
It's a useful tool to work in an integrated way in different areas of the curriculum. In language classes we can imagine them creating wonderful descriptions or stories set in those places, in artistic creating different compositions based on those locations, in social science showing historical places and facts...

Learning goals and student benefits:

- Learn 3D creation skills
- Develop digital literacy skills
- Foster creativity
- Explore outside of the classroom

Activity example:

First session (approx. 45 minutes):

1. Introduction (approx. 10 minutes): Discussion about guided tours
   - Ask your students what kind of guided tour they've participated in: museum tours, natural park tours, library tours, city building tours, school tours or a vacation related tour...
   - What aspects were most highlighted by the guide?
   - What details did the touristic guides include when describing the places?

2. Show students an example of virtual trip in CoSpaces Edu (approx. 5 minutes) A Coruña City Tour: edu.cospaces.io/FHF-TYV

3. Decision time (approx. 10 minutes): Explain to your students that they’ll be playing the role of a tour guide as they create their own digital travel tour. Students must decide the place(s) they would like to include in their 360° tour. The project will also include a narrated voice-over highlighting important information and interesting facts about the places.

4. Creation time (approx. 10 minutes): Create a quick storyboard on a piece of paper or on your tablet/laptop.

5. Show your drawing to your classmates and explain to them what you created (approx. 10 minutes).
Second session (approx. 50 minutes):

6. Students can work in pairs or in small groups (approx. 50 minutes):
Students research the site they selected and define the areas they want to focus on. They’ll have to look for 360° photos to create their virtual tour with.

You can provide different resources to them:

- Downloading them from the web, for example on Flickr.
- Creating their own 360° photos using Street View.
- Using a 360° camera to take their own 360° photos.
- Downloading them from iStreet view.

7. Additionally, you can ask your students to think about the location of different specific points of interest throughout the tour.

8. Your students can create a folder in Google Drive or a similar cloud platform to store the different files to use in their virtual tour: 360° photos, texts about their points of interest, photos, audio recordings, etc.

Third session (approx. 50 minutes):

9. Students then create their virtual tours in CoSpaces Edu (approx. 50 minutes).

Fourth session:

10. You can then visualize their projects with your students in VR or AR mode or even on the MERGE Cube, if you have this possibility. This is also a good time to give feedback and let students make final improvements to the project.

Assessment and evaluation suggestions:

- Have your students managed to create their virtual tour in CoSpaces Edu?
- Did your students use their own 360° photos?
- Did your students explore each other’s virtual tours and exchange constructive and helpful feedback?
Creation guide

You’ll first need to gather 360° images to create your virtual tour with.

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.

Then, upload your images to CoSpaces Edu. Here’s a tutorial to help you: youtu.be/gOvr15jILjk

Go to your CoSpaces Edu account and create a CoSpace.

Click the Environment tab to upload your first 360° image as the environment of your first scene.

Select and click Upload 360° image.

It is important to plan the order of your scenes in advance as you’ll place your 360° images in the order that you’ve defined for your virtual tour itinerary.
Select the 360° images you want to add to your CoSpace and upload them.

You’ll then be able to use these 360° images as the Environment of your scenes.

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

You can look for .png icons like the ones below directly in CoSpaces Edu and simply drag and drop them onto your scene.

You can also create titles with words in 3D in Tinkercad and export them as OBJ or STiles.

A Zip folder is created.

Extract the files and upload them to CoSpaces Edu.
Add sound or music or narrated voice to your virtual tour.

Remember to search for music with a Creative Commons license.

Once you have the 360° image and the icons ready in your scene, you can code to add information and make the project interactive.

Make sure that you’ve named your item. You’ll see why the name is important when you begin coding.

Also enable **Use in CoBlocks**.

You can code in **CoBlocks** or with **Script** languages. CoBlocks is a block-based coding language that lets you code with simple drag and drop.

You can use CoBlocks on the web on your laptop or code on your tablet with the CoSpaces Edu mobile app.

Click **Events** and get the **on hover** of CoBlock. Under **Actions**, get the **item say** CoBlock. You’ll need 2 of these, so copy paste them or add them twice.

If you want to use your own audio recordings to give information, 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

Munich city tour

By the CoSpaces team

edu.cospaces.io/PWA-PMH

New York city tour

By Andrea Guerra Arcos, grade 5

edu.cospaces.io/YVH-DRA