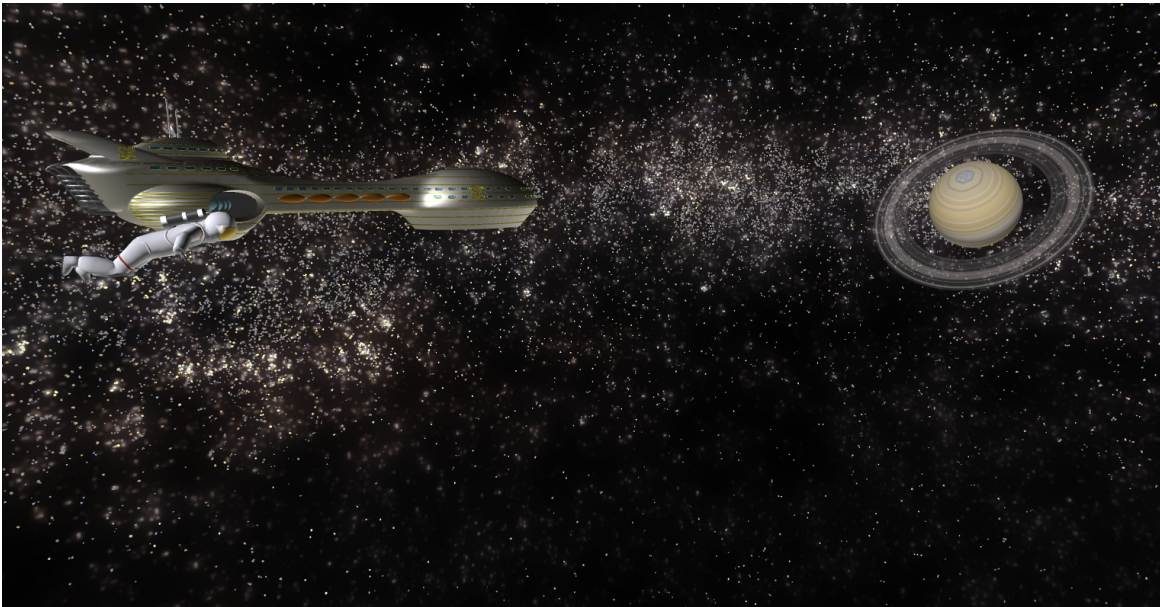


Space Explorers: An interactive VR adventure

Lesson plan

Created by Giorgio Lampis, Delightex Edu Ambassador



Short description:

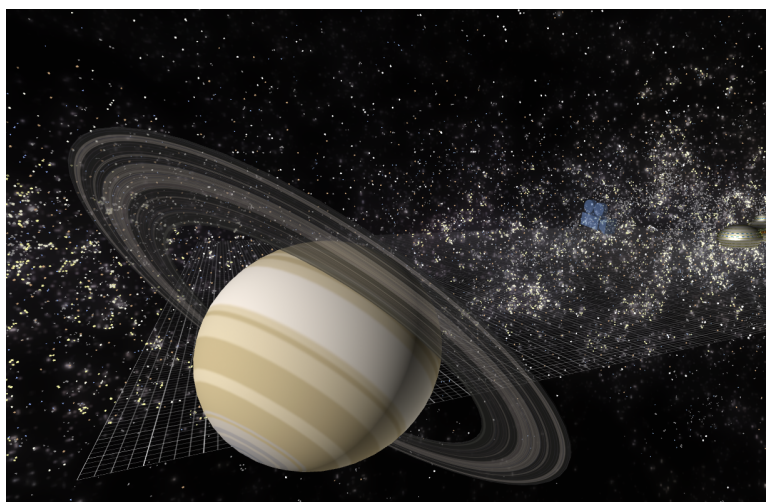
Students will create an interactive space environment, learning block-based coding to make objects move and trigger events on click.

Educational level: From Middle school

Subjects: Technology, Science, Computer Science

Format: In groups of 2-3 students or individually

Assignment duration: Approx. 2 hours



[Space Explorers Project link](#)

Introduction: This Lesson Plan introduces students to Virtual Reality and block-based coding by creating an interactive space environment. The activity is designed to be fun and engaging, allowing students to experiment with basic concepts such as instruction sequences, conditions, and events, without the complexity of traditional syntax.

Curriculum standards:

- Development of computational thinking
- Understanding the fundamentals of block-based programming
- Creative application of digital technologies
- Collaboration and problem-solving skills

Learning goals:

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|-------------------------------|-------------------------------------|
| ● Learning 3D creation skills | ● Developing design skills |
| ● Improving spatial skills | ● Developing computational thinking |
| ● Developing creativity | ● Learning basic block-based coding |

Lesson structure: (for the teacher)

1. **Preparation:** The teacher introduces Delightex Edu and shows examples of completed Projects. The teacher will then create an empty Project and share it with the class.
2. **Environment creation:** Students add objects from the library (such as planets, spaceships, asteroids, and astronauts) to build their space environment.
3. **Guided programming:** The teacher guides students through the first steps of programming. For example, "use a '**move**' CoBlock to make the spaceship fly" or "use a '**on click**' CoBlock to make a message appear".
4. **Independent development:** Students work in groups to add more complex animations and interactions, such as making a planet orbit or an astronaut talk when clicked, while maintaining scientific consistency (e.g., gravity in space).
5. **Sharing and discussion:** At the end, each group shares their Project and explains the features they created, discussing what they found easy and what they found challenging.

Evaluation suggestions:

- Observe group collaboration and problem-solving strategies.
- Evaluate the functionality of the final Project. Do all the CoBlocks work as intended?
- Ask each student to explain at least one part of the code they contributed to.
- Discuss whether the final result is consistent with the basic physical characteristics of space.

Extension ideas:

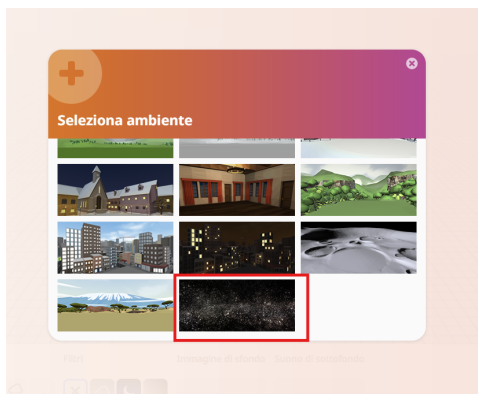
- Integrate 360° images as a background (using the built-in AI creation feature).

- Use the camera to follow a moving object within the scene.
- Add a final objective or a winning condition to the Project.

Assignment steps: (for the student)

Duration: 120 minutes

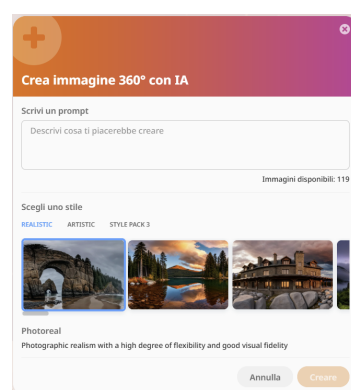
- **Immerse yourself in space:** Open the Project shared by your teacher. Go to the "**Environment**" menu and select "**Edit**." Choose the spatial landscape (1). Alternatively, if the scene is a 360° image, go to "Edit" and select "**Create AI 360° image**." Describe the space environment you want to create for the background (2).



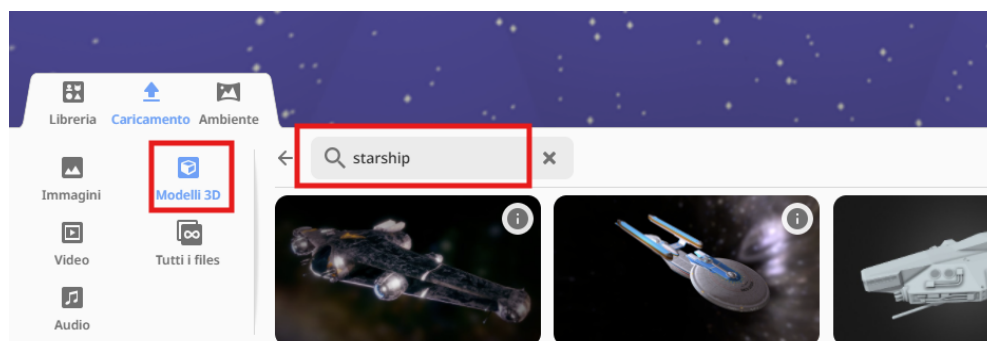
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- **Insert characters and objects:** Go to the **Library**, find the "**Space**" category, and drag at least **three space objects** into your environment (e.g., a planet, a spaceship, an astronaut, or an alien). Also, check out the available **3D models** (3).



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- **Start your spaceship:** Select the spaceship and enable it for coding. Click on "**Code**" (top right), choose "**CoBlocks**," and drag the "when [spaceship] is clicked" block. Below it, add a "**move**" block to make the spaceship fly forward some meters.
- **The talking planet:** Add a planet. Select the planet and enable it for coding. Using **CoBlocks**, create a simple program: "**when I click on this, say 'Welcome to the planet...'**".
- **Move the astronaut or alien:** Enable this subject for coding and make it move by following the spaceship.
- **Everyone in orbit:** Select your planet. Add the "**forever**" block (found in "**Control**") and inside, add the "**turn**" block to make it spin on its axis.
- **Present your work:** When you are finished, click "**Present**" and show your interactive Project to the teacher and classmates. Explain what each programmed object does.
- Add your own variations to make the project more creative or interactive.

