You Make My Heart Spin Lesson plan

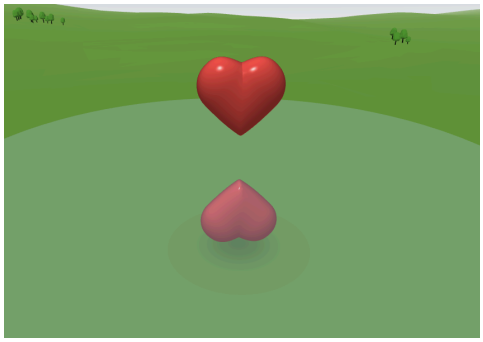
Created by Create 3D Models, Delightex Edu Training Partner

Education level: Adaptable to any

Subject: STEAM, Math, Computer science, Arts

Format: Individual activity

Duration: Approx. 1 hour



Introduction and lesson objectives:

With Delightex Edu's creation tools, kids can easily create a spinning heart to share with friends and later view it in Virtual Reality. This enables students to explore 3D creation while deepening their understanding of a topic or educational resource. It also lets them explore new ways of demonstrating their knowledge in the classroom.

The steps in this lesson 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 Delightex Edu.

Learning goals and student benefits:

- Learn 3D creation skills
- Learn basic coding skills
- Demonstrate learnings
- Foster creativity

Activity example:

1. Ask students to explain the difference between counterclockwise and clockwise.
2. Ask students to explain the difference between the X, Y & Z axis.
3. Ask students to explain what the reflection or mirror image of a particular example would look like.

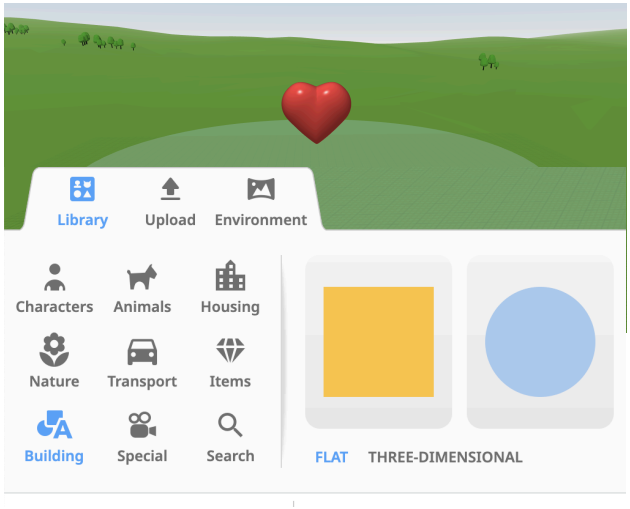
Extension idea:

Ask students to demonstrate something spinning on the Z axis both clockwise and counterclockwise. This can be as simple as attaching a rubber band to a pencil and twisting it to explain the process.

Assessment and evaluation suggestions:

- Did your students successfully demonstrate the correct rotation and axis?
- Did your students manage to create a spinning heart in Delightex Edu?
- Do your students' Projects demonstrate their learnings?
- Have your students added code using CoBlocks?

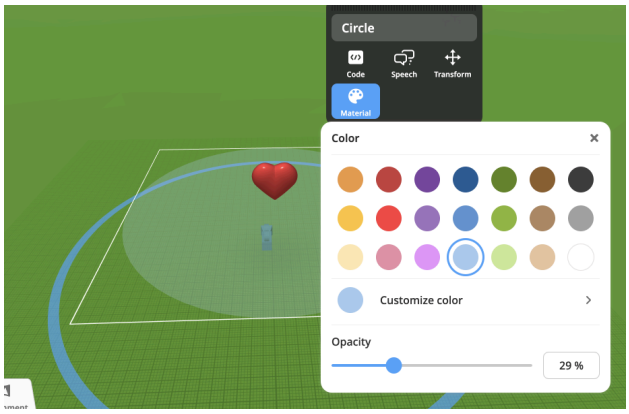
Creation guide



Start preparing the main scene in which your spinning heart will be built. For example, you can use the landscape environment.

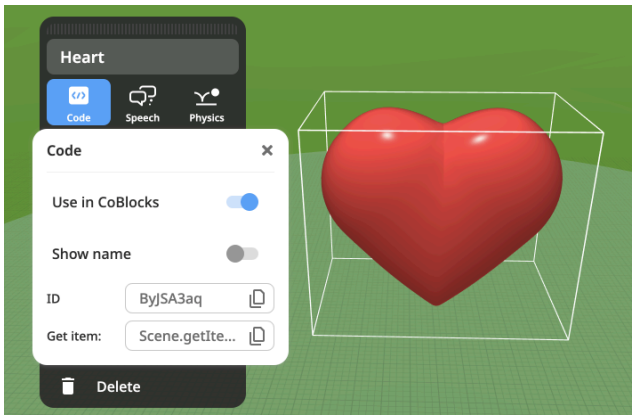
Choose an **Environment** and click **Library** to add objects like the red heart from the **Items** category.

Choose a flat circle under **Building**. You'll use it to simulate a reflection!



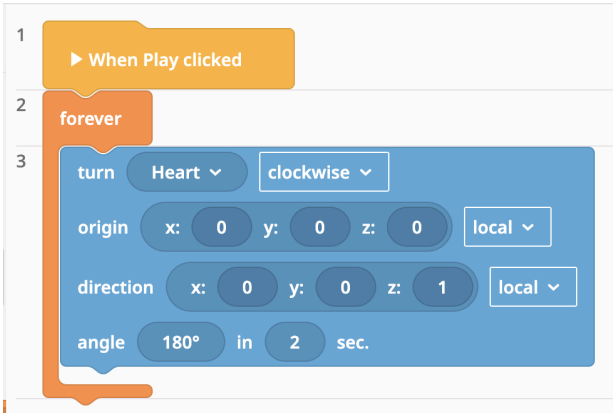
When you double or right-click the flat circle, its **Material** can be adjusted to different colors and variations in transparency.

To simulate a reflection, change the **Opacity** to 29%.

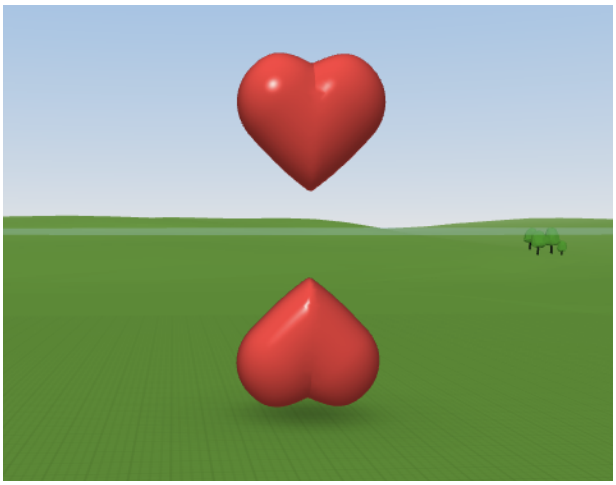


Double or right-click the heart in order to make it possible to **Code** it. This will let you program the spinning motion with **Transform** and **Control** CoBlocks.

Objects can be coded to be animated or move in order to make the Project more lively when played. The script below shows an example of how you can use CoBlocks to make the heart spin clockwise forever.

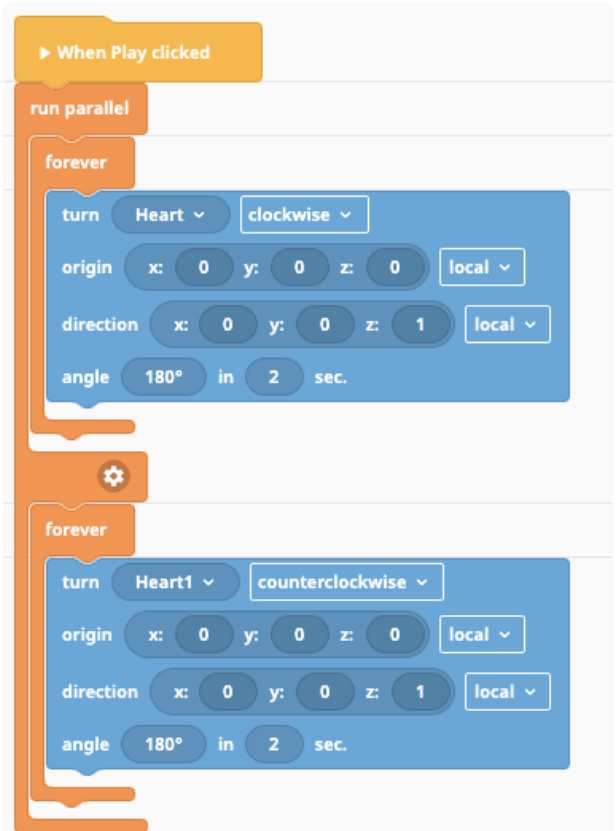


- Line 1 simply starts the code when the Project is played.
- Line 2 defines the control loop - in this case, a **forever** loop - allowing the heart to continuously turn.
- Line 3 makes the heart move clockwise on the Z axis with an angle of 180 degrees. To adjust the speed, change the time in seconds.



To create the reflection, duplicate the heart, rotate it 180° and move the second heart below the transparent circle. Make sure that it's placed just below the first heart.

Right-click to activate the code on the duplicate heart and add a second set of CoBlocks as shown below.



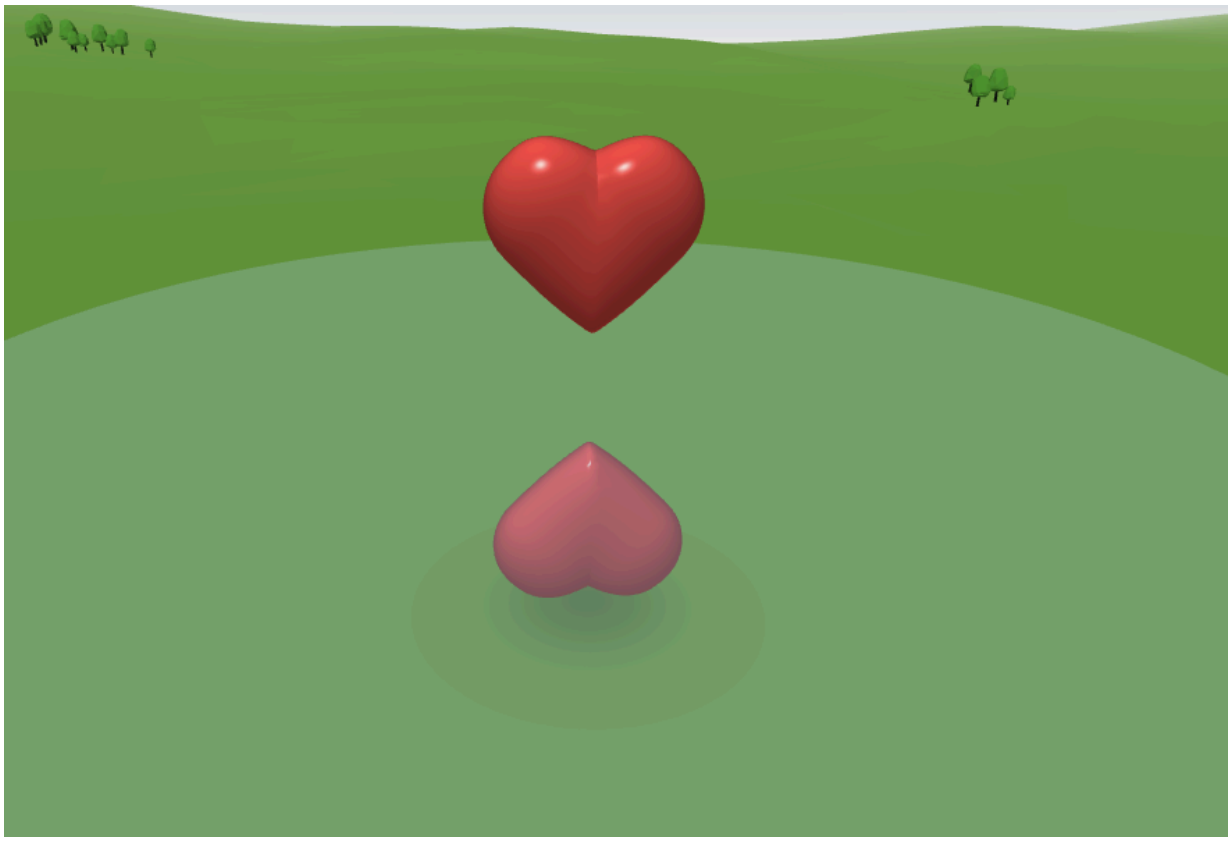
Add a **run parallel** CoBlock from the **Control** category. Duplicate the **forever** loop and the blue **Transform** section. Move the newly created CoBlock into the workspace under 

The second section should look the same except that the first line will need to be configured for the second heart.

Click the drop-down menu next to **turn** to select the first heart and turn it counterclockwise.

**Note: The camera may need to be adjusted to view both hearts in motion.*

Example Project



You Make My Heart Spin

https://edu.delightex.com/XGG-VKB