

CoSpaces Tutorial

Introduction to Basic Block Coding

In the tutorial on Customising and Moving Objects, we've shared how you can start coding your objects in CoSpaces. In this tutorial, you'll learn some basic codes to get you started.



SCAN QR CODE TO OPEN
cospaces.io/edu/

Controls in CoSpaces

When you open CoBlocks, you will find the coding dashboard. The coding blocks navigation area on the dashboard is on the extreme left. These are the options available:

- **Transform (light blue blocks)** - Movement blocks
- **Actions (purple blocks)** - Say/Think blocks, adding interactive elements, sound, video
- **Events (yellow blocks)** - Input, Collision and Web blocks
- **Control (orange blocks)** - Loops and If statements blocks, etc.
- **Operators (green blocks)** - Logic and Math blocks
- **Items (dark blue blocks)** - Blocks for modifying and getting objects
- **Data (pink blocks)** - Variables, Values, Lists, and Debug Blocks
- **Functions (dark red blocks)** - Set and custom functions
- **Physics (light red blocks)** - Applying simple and advanced physics, as well as properties and values

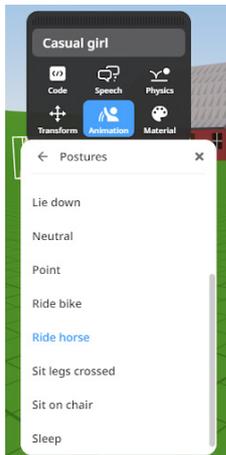
When you click or tap on one of the options from the navigation area, you will be given different coding block options from each type (e.g., Transform, Actions, etc). You will then drag the coding block that you wish to use to the programming area.

For example, if you want your object to move forward, you can use one of the move blocks from 'Transform'. Drag the block to the programming area and attach it to the 'When Play clicked' block like this:

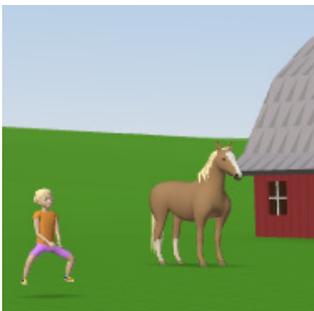
Can't find your object in the coding blocks in CoBlocks? Remember to enable it in CoBlocks!

Attach an object to another

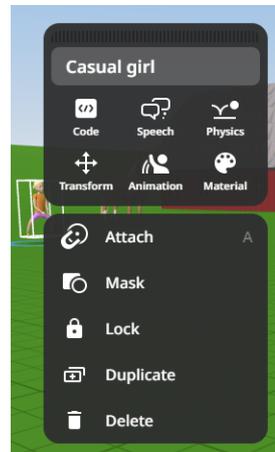
01 In this example we will attach this girl to the horse. The first thing you need to do is to make sure your first object is in the right position. In this case, you need to double click on the girl to bring up your 'Animation' option and select 'Postures' then select 'Ride horse':



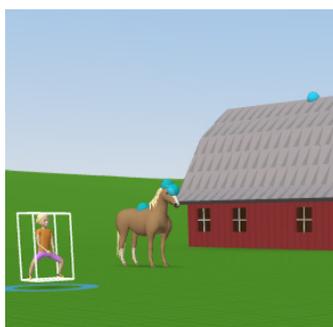
02 You will then see that the girl would look like it's sitting on a horse in the air like this:



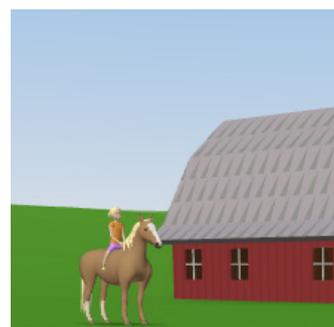
03 You will need to double click/tap on the girl again and find the 'Attach' option:



04 You will then see blue dots in various areas of your CoSpace world:



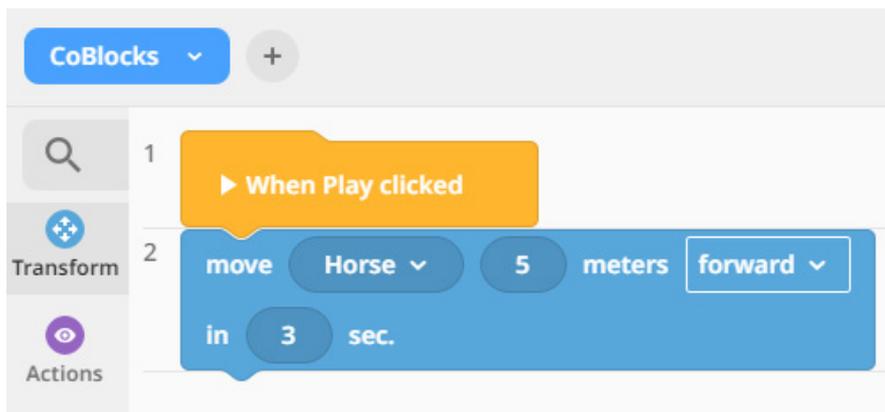
05 Click on blue dots at the back of the horse to get the girl to ride the horse:



Moving an attached object

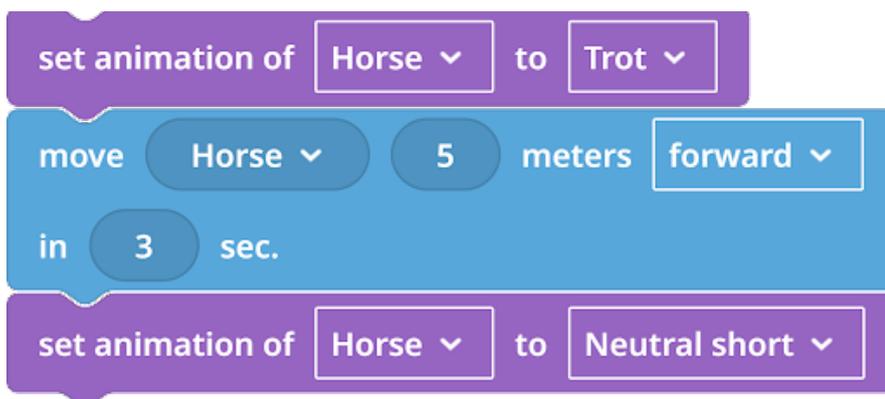
In the first coding example, you saw that the girl will move forward. Since the girl is now attached to the horse, you will need to deactivate the code of the girl moving forward. Otherwise, your girl will end up looking like she's floating forward without the horse.

In order to move an attached object, you need to code the object that the first object was attached to. In this case, you need to code the horse to move forward instead.



To avoid making your horse look like it's floating forward, you can also change its animation from 'neutral' to 'trot', 'run' or 'walk', depending on what you wish for it to do.

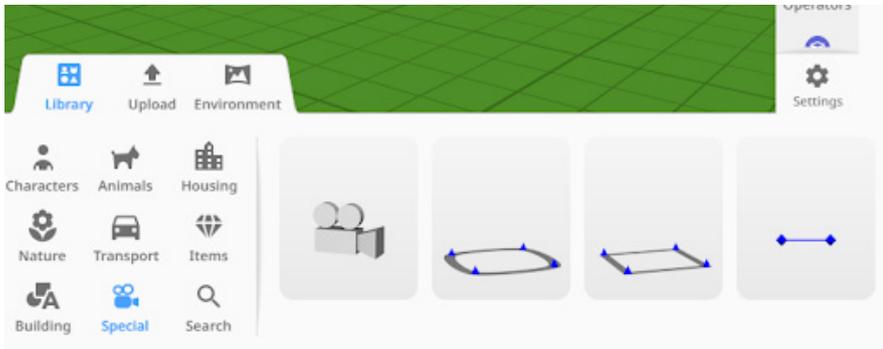
If you have a 'Pro' account, you can change the animation in CoBlocks, so it can start off as 'neutral' then just add 'trot' in the code like this before the movement block and change the animation back to 'neutral' again after it moves:



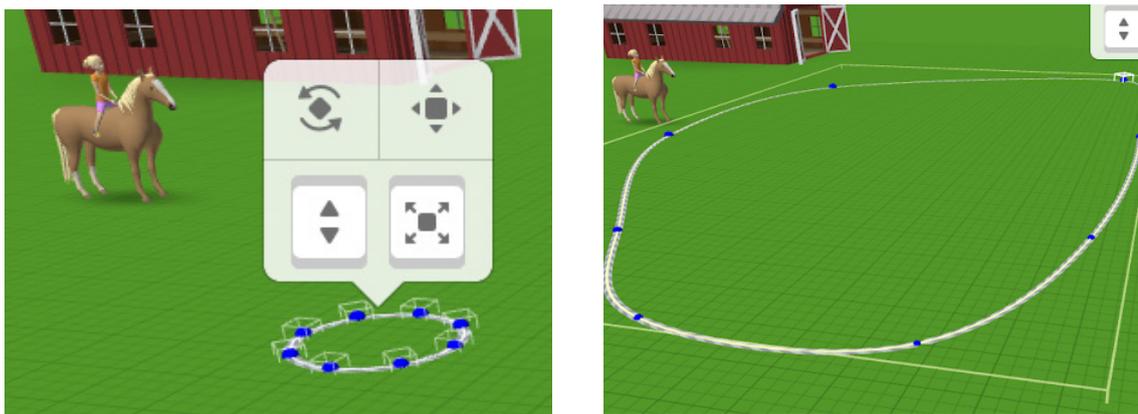
Please note: Basic accounts won't be able to change animation in CoBlocks.

Moving objects on a path

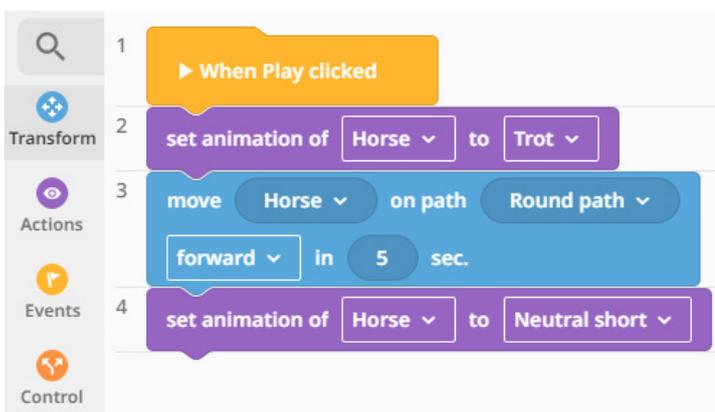
You can code your objects to go in different directions. But, one way to simplify the code is to code it to move on a path. To do this, go to the Library and select 'Special'. Here, you'll find the camera option and three types of paths - round, square, and line.



Select and drag one of the paths on to your CoSpace environment. You can adjust the path by moving the blue nodes (dots) to a location you want.

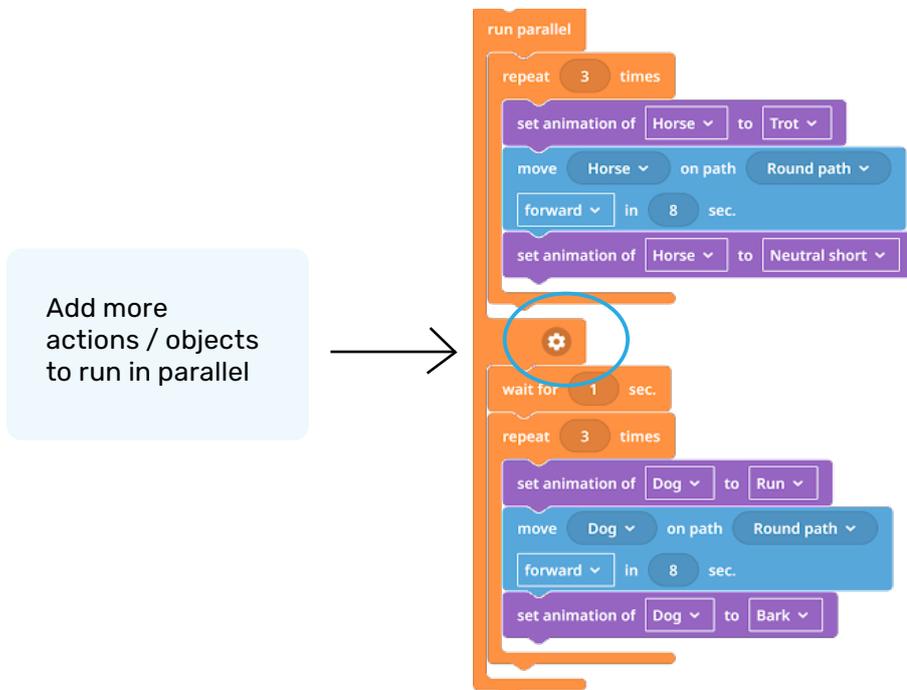


Once you're happy with the placement of your path, go to CoBlocks and find the 'move on path' coding block under 'Transform'. Select the object you wish to move on the path and select your path. You can then change the direction and set the time.



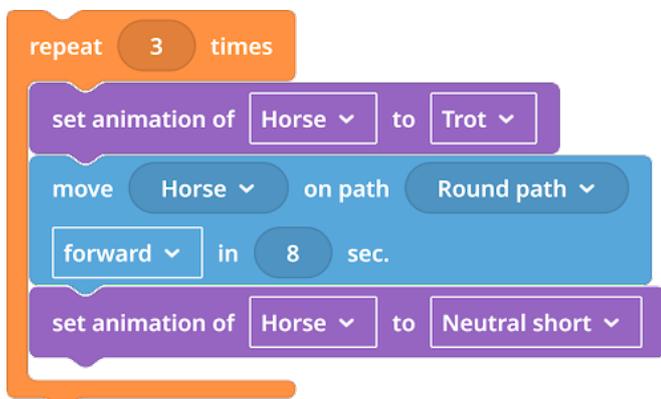
Making things move at the same time

When you want to have more than one thing to move in your scene, you can use the 'Run Parallel' block under the 'Control' section. For example, you can have a dog chasing the girl on a horse while they're moving on the path.



Repeating actions

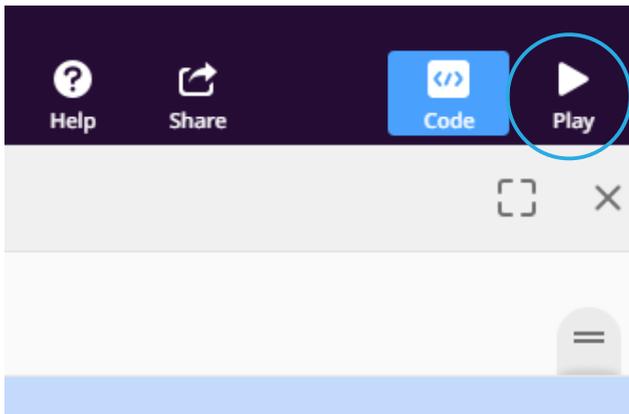
If you want your object to repeat actions, you can add a loop block from the 'Control' section. For example, you want the girl on a horse to move around the round path three times, you will then use this code:



There are also other types of loop or repeat blocks with different conditions.

Testing your code

To make sure that your code is doing what you want it to do, you can always click or tap on 'Play'. Debug your code as needed. There are many other functions that you can add to your CoSpaces builds, including interactive features (e.g., quizzes, games, etc). Explore some of these features in CoSpaces and see how this brings your world to life!



Support

We're here to help you get the most out of your lesson plans and tutorials. If you have any issues or questions, please get in touch.

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