

# Reference Guide for using CoBlocks in



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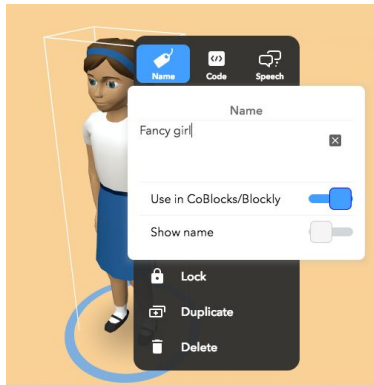
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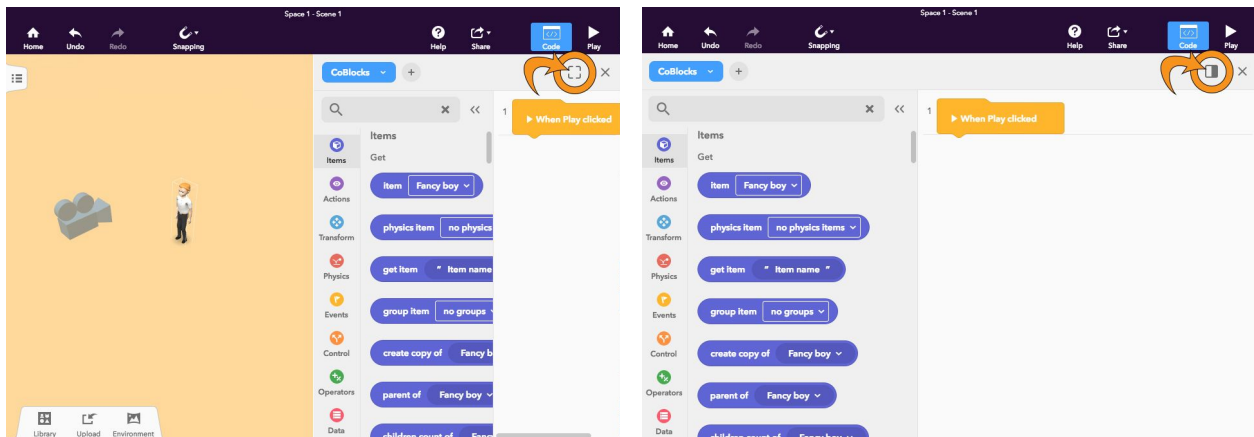
## Before you get started



Before working in CoBlocks, be sure to go into the **name settings** of all your items and turn on "**Use in CoBlocks**".

You can open the inspector by double tapping the item.

If the coding space gets too small, you can always **expand** the coding editor to **full-screen**. Click the **window-toggle-button** to turn it half-screen or full-screen.



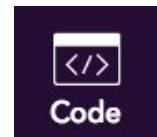
When creating events on items, remember that only **one event per type** (click, hover, collision) is **allowed on an item** at any given time.



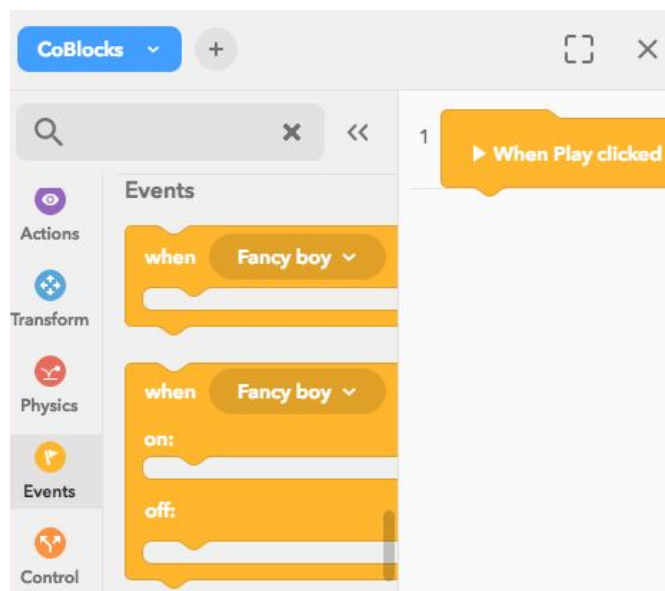
*Only the second click event of this item will happen. The first is ignored.*

## Moving left, right, forward, backward

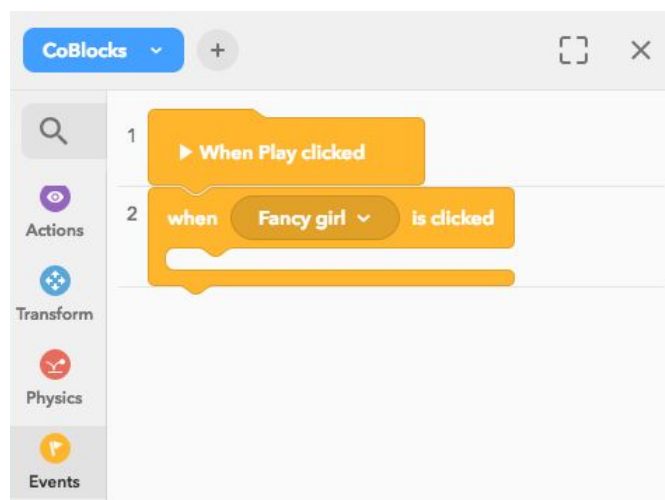
If you haven't created a CoBlocks script before, open the code editor by pressing the **Code** button in the toolbar at the top. Choose **CoBlocks** as your scripting language.



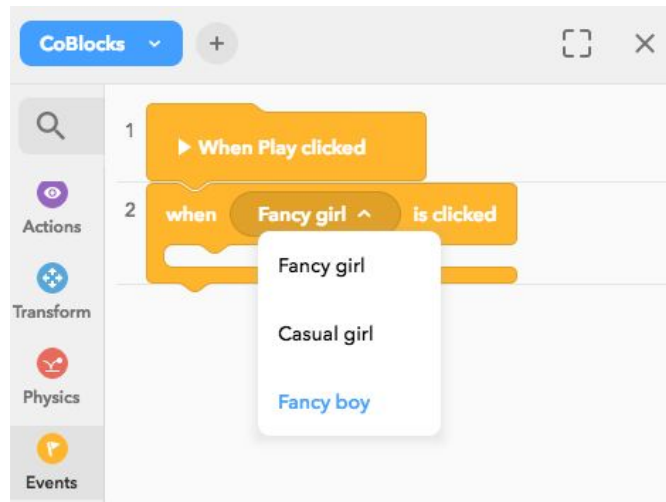
Click **Events** in the toolbox on the left.



Click and drag the yellow **'when item is clicked'** CoBlock from the toolbox and drag it into the workspace.



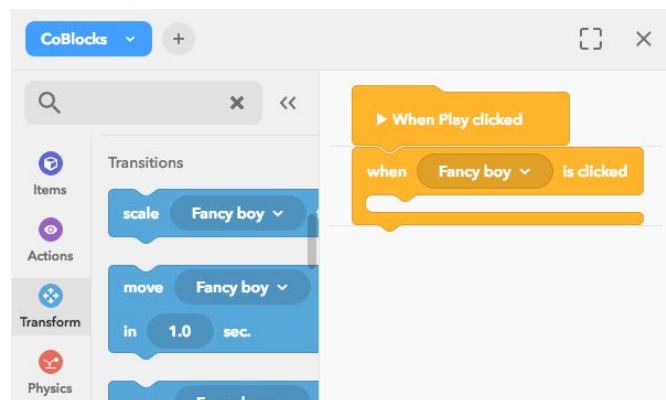
Click the **down arrow**, and then **select the item** you want to activate.



Next, click **Transform** in the **toolbox** and scroll to the **Transitions** category.

Choose simple transitions (“move item \_\_ meters...” ) or more complex ones (using x, y, z coordinates).

Click and drag the CoBlock you want to use into your workspace



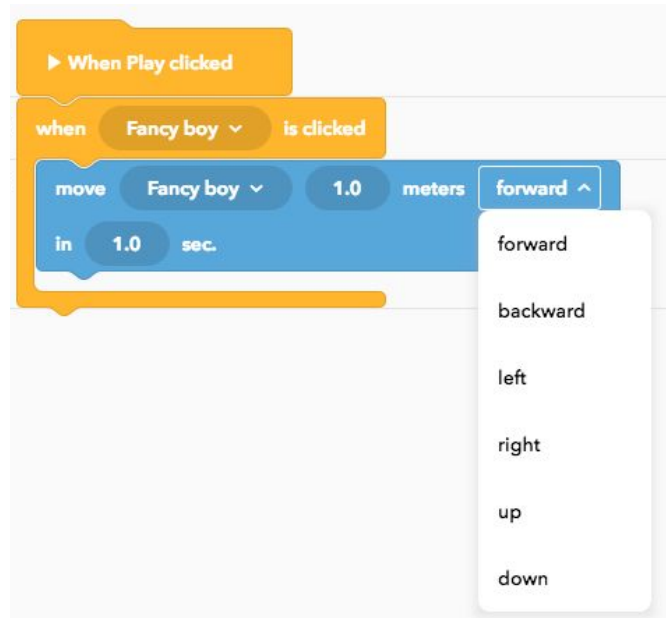
Line up the **blue CoBlock** inside of the **yellow CoBlock**.

A black line will be visible under the **connector bump**. Place your blue CoBlock there so they connect.



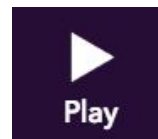
Use the dropdown arrow to select the item you want to move and the direction of the movement.

Type in the number of meters the item should travel and the speed in seconds.



Click **Play** to test your item.

When you click on the item, watch the movement happen.

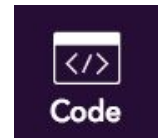


### 1.1 Alternatives

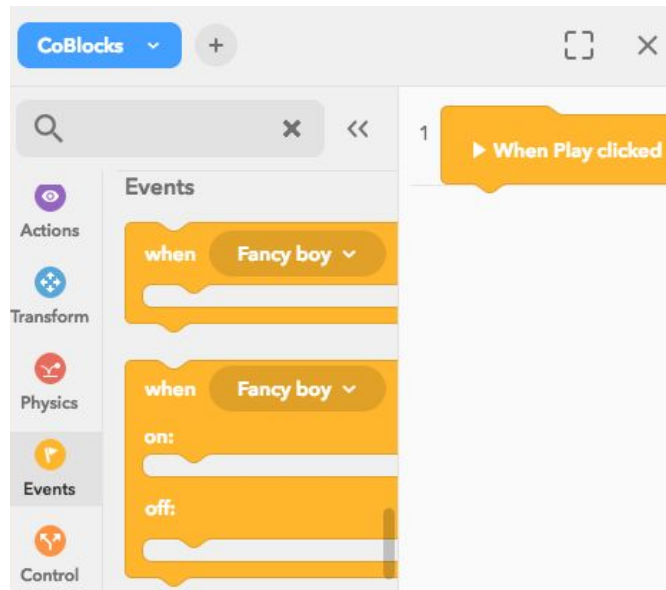
- If you want the item to move when the cursor hovers, choose the **Hover** CoBlock.
- If you want to add an action when you item bumps into another item, add a **Collision** CoBlock.
- Include more than one action by connecting more purple CoBlocks inside the **Activate** CoBlock.

## Creating a color change

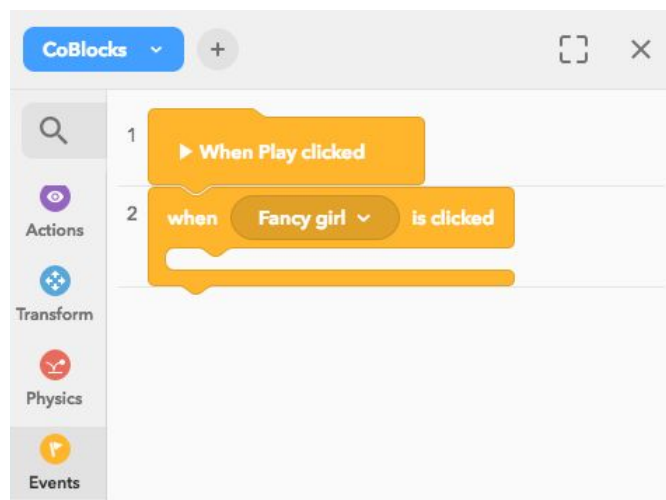
If you haven't created a CoBlocks script before, open the code editor by pressing the **Code** button in the toolbar at the top. Choose **CoBlocks** as your scripting language



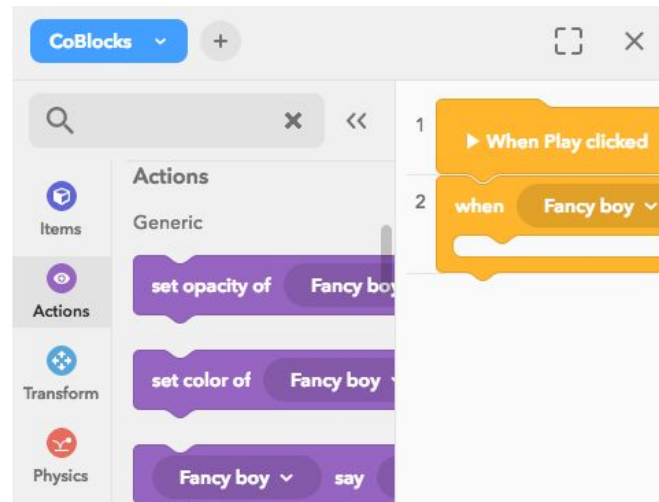
Click **Events** in the toolbox on the left.



Click and drag the yellow **'when item is clicked'** CoBlock from the toolbox and drag it into the workspace.



Click **Actions** in the menu on the left.



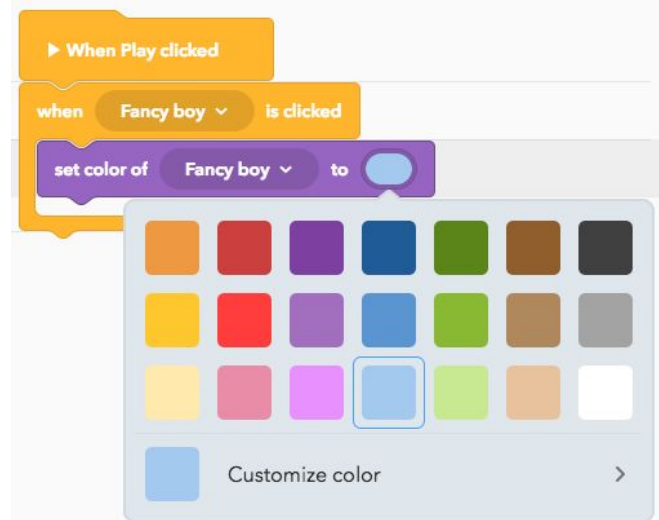
Click and drag the purple **'set color'** CoBlock into your workspace

Line up the **purple CoBlock** inside of the **yellow CoBlock**.



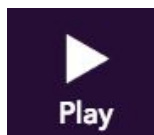
A black line will be visible under the **connector bump**. Place your purple CoBlock there so they connect.

Click the **down arrow**, and then select the item you want to change color.



Click the **color bubble** and then select which color you want to use.

Click **Play** to test your code.  
When you click on the item, watch the color change.





## 2.1 Alternatives

If you want the item to change color each time it is clicked, add extra **'when item clicked'** CoBlocks inside the original CoBlock.

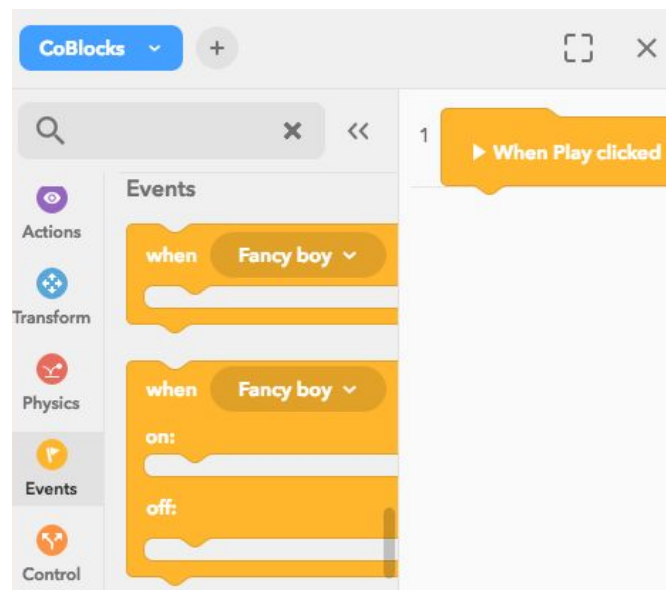


# Adding pop-up speech bubbles

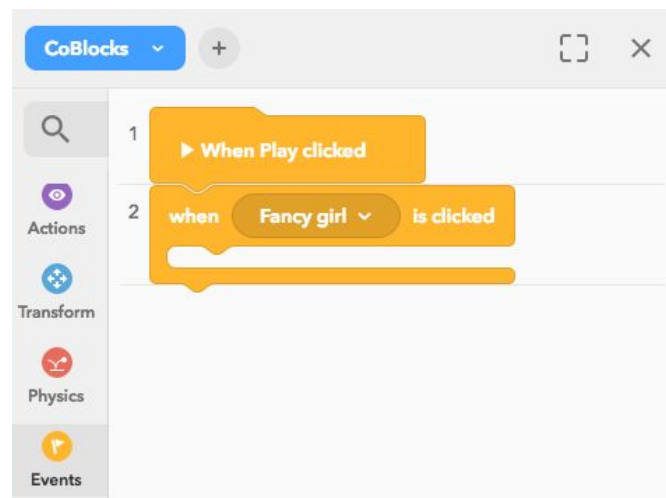
If you haven't created a CoBlocks script before, open the code editor by pressing the **Code** button in the toolbar at the top. Choose **CoBlocks** as your scripting language



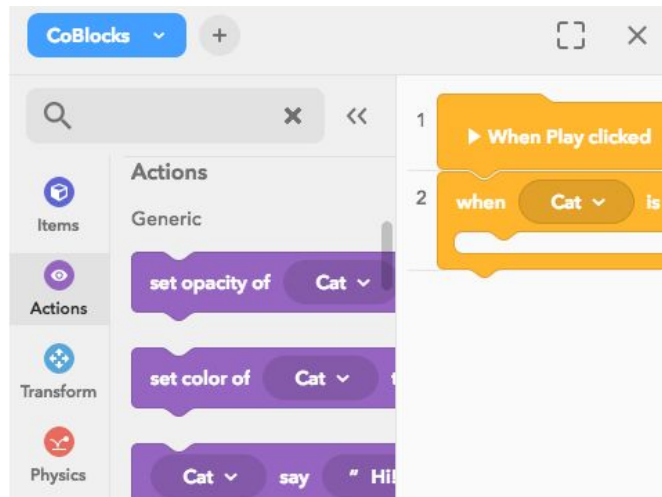
Click **Events** in the toolbox on the left.



Click and drag the yellow **'when item is clicked'** CoBlock from the toolbox and drag it into the workspace.



Click **Actions** in the menu on the left.

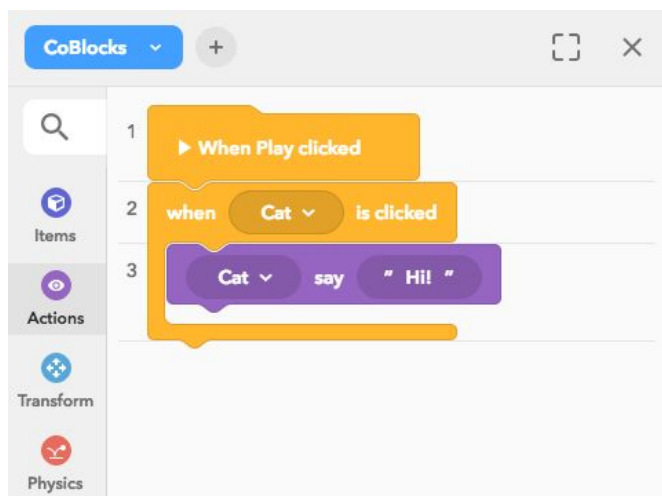


Click and drag the purple **'say'** or **'think'** CoBlock into your workspace.

Line up the purple CoBlock **inside of the yellow CoBlock**.

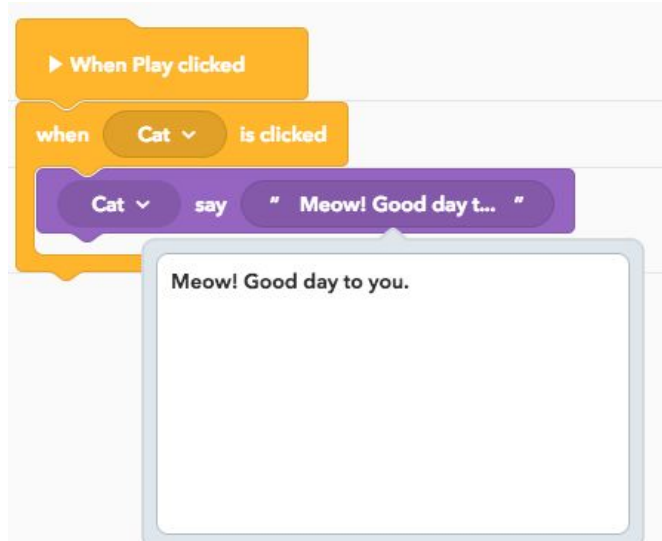
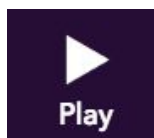
A black line will be visible under the **connector bump**. Place your purple CoBlock there so they connect.

Click the down arrow, and then select the item you want to speak.



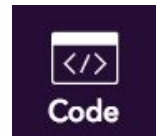
Click on the text and type the words you want spoken.

Click **Play** to test your object. When you click on the object, watch the speech bubble pop up.

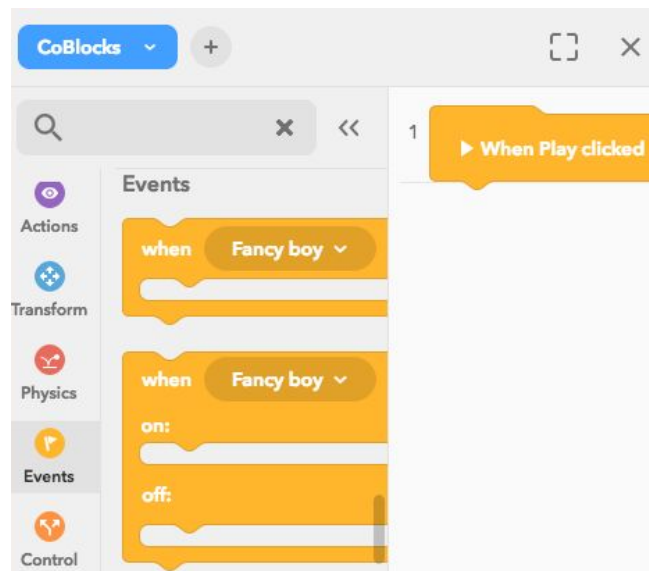


## Adding pop-up fact panels

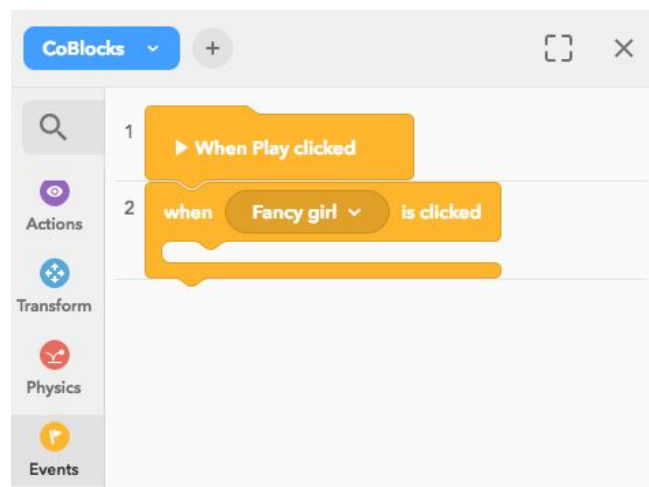
If you do not have created a CoBlocks script before, open the code editor by pressing the **Code** button in the toolbar at the top. Choose **CoBlocks** as your scripting language



Click **Events** in the toolbox on the left<sup>a</sup>



Click and drag the yellow '**when item is clicked**' CoBlock from the toolbox and drag it into the workspace.



Click **Actions** in the menu on the left.

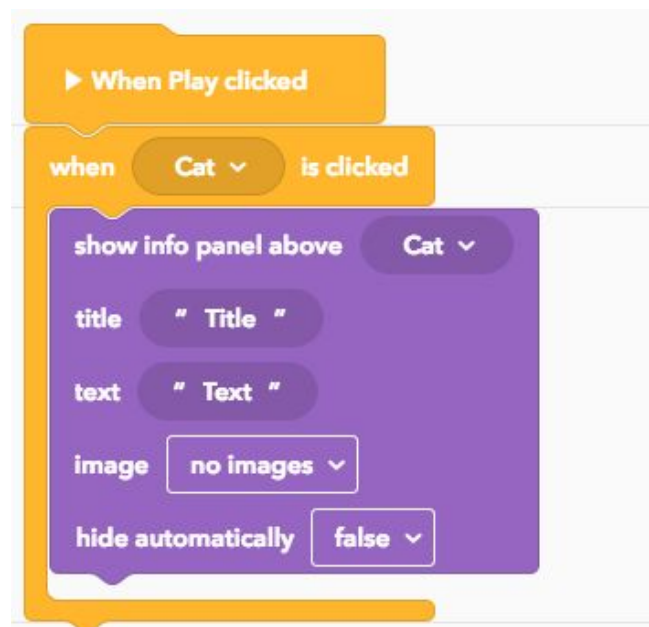
Click and drag the purple **'show info panel'** CoBlock into your workspace

Line up the **purple CoBlock** inside of the **yellow CoBlock**.

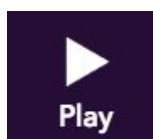
A black line will be visible under the **connector bump**. Place your purple CoBlock there so they connect.

Click on the **title** and type the topic of the panel.

Click on **text** and type the information you want included.



Click **Play** to test your code.  
When you click on the item,  
watch the info panel pop up.



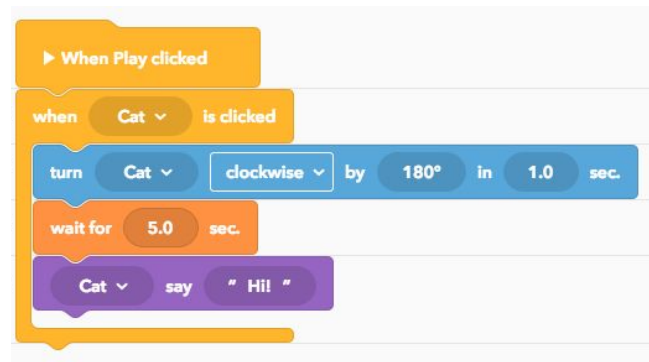
## Setting a timer to events

Click **Control** in the **toolbox** and scroll to the **Other** category.

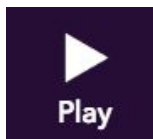
Click and drag the orange **'wait'** CoBlock into your **workspace**.

Connect the **'wait'** CoBlock above the action you want delayed.

Type the number of seconds to delay the action.



Click **Play** to test your code.  
When you click on the item, watch for the delayed action.



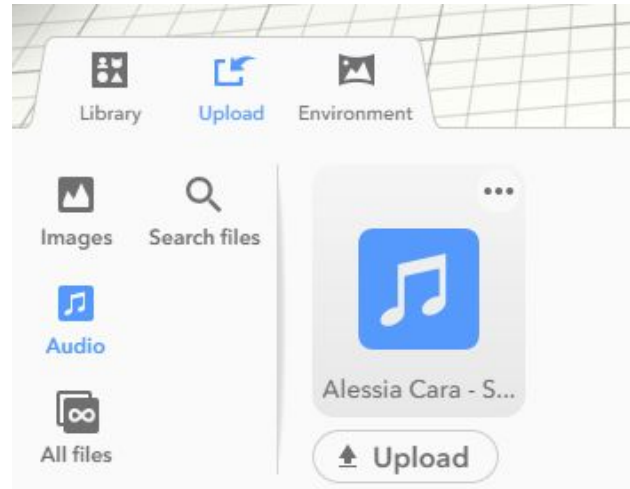
# Activating Sound

Click **Upload** on the bottom tab.

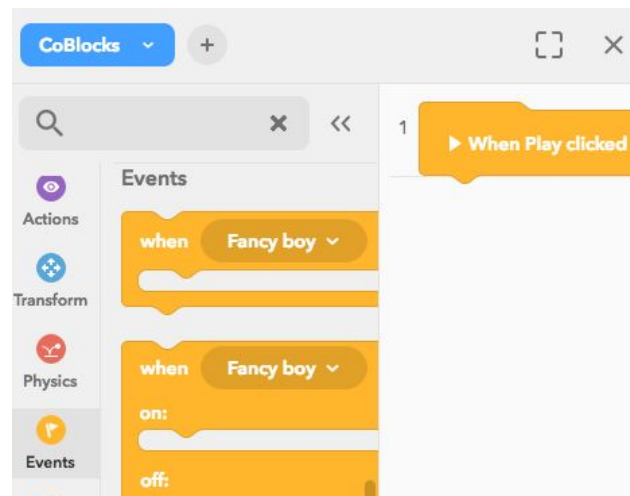
Click **Audio**.

Click **Upload** at the bottom of the menu.

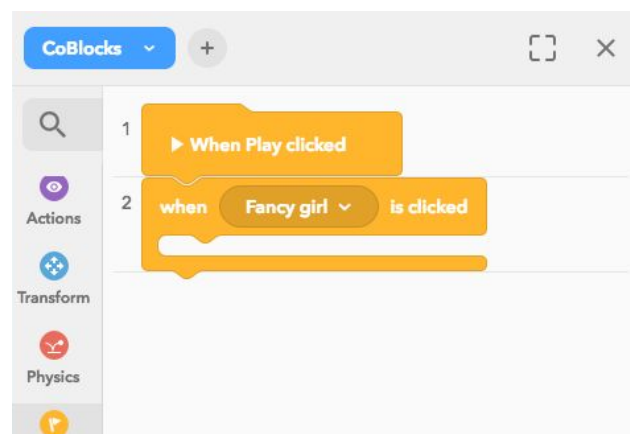
Choose an **mp3** from your downloads menu, then click **Open**. This will load it into the **Upload** tab.



Click **Events** in the toolbox on the left.



Click and drag the yellow **'when item is clicked'** CoBlock from the **toolbox** and drag it into the **workspace**.



Click **Actions** in the toolbox on the left.

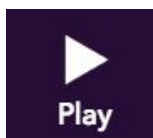
Click and drag the purple **'play sound'** CoBlock into your workspace

Line up the **purple CoBlock** inside of the **yellow CoBlock**. A black line will be visible under the **connector bump**. Place your purple CoBlock there so they connect.

If you have more than one sound uploaded, click the down arrow, and then select the item you want to activate.



Click **Play** to test your item.  
When you click on the item, listen for your sound.





## Multiple actions at once

Click **Control** in the toolbox and scroll to the **Other** subcategory

Click and drag the orange **'run parallel'** CoBlock into your workspace.

Place the **'run parallel'** CoBlock into an event CoBlock.

Place the task you want to happen at the same time in the top and bottom part



Click **Play** to test your item.

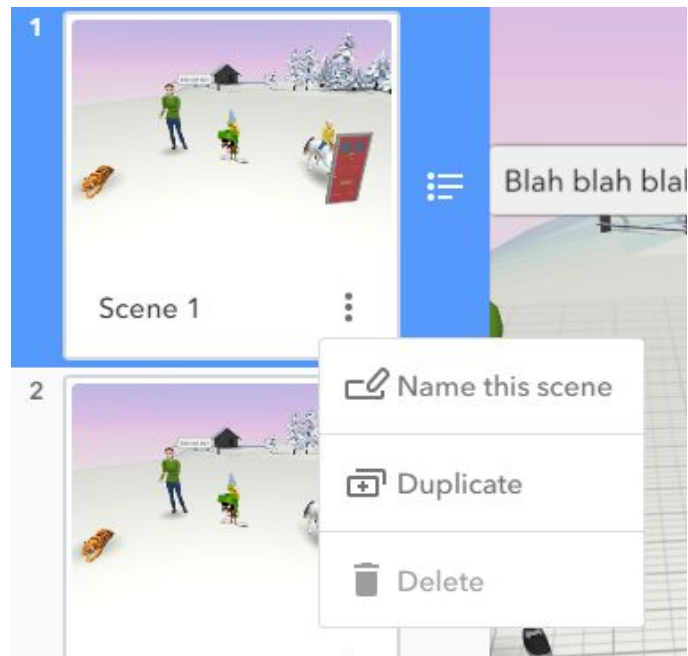
When you click on the item, watch for the actions to occur at the same time.



## Switch to a new scene

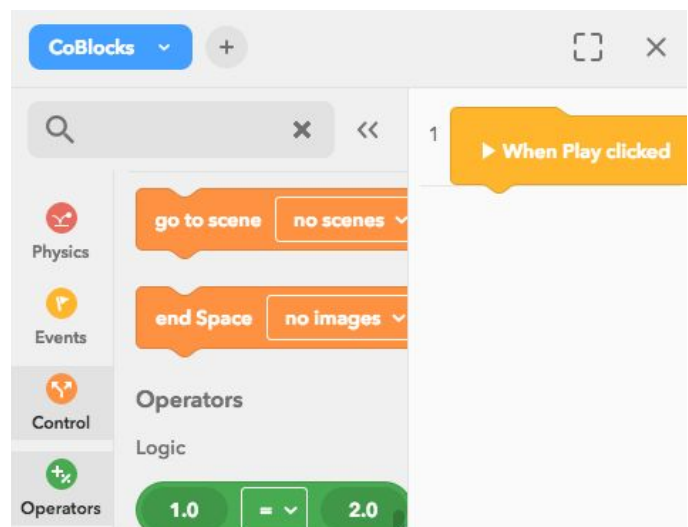
Click on the three dots on the thumbnail for your scene to name it.

Be sure to **label every scene**.



Click **Control** in the toolbox and scroll to the **Other** subcategory

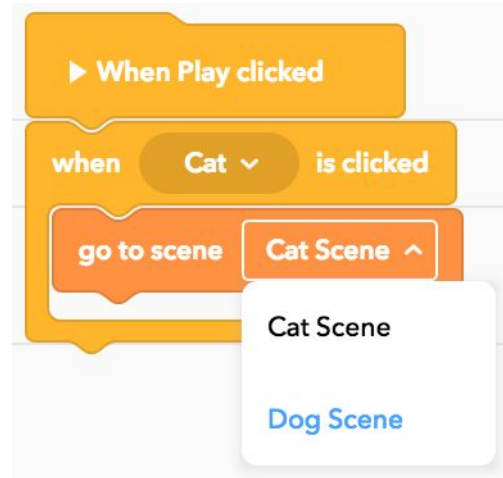
Click and drag the orange **'go to scene'** CoBlock into your workspace



Place the **'go to scene'** CoBlock at the end of your code where the scene change should occur.

Be sure to place it into an event CoBlock!

Click the down arrow on the **'go to scene'** CoBlock to select the scene you wish to jump to.



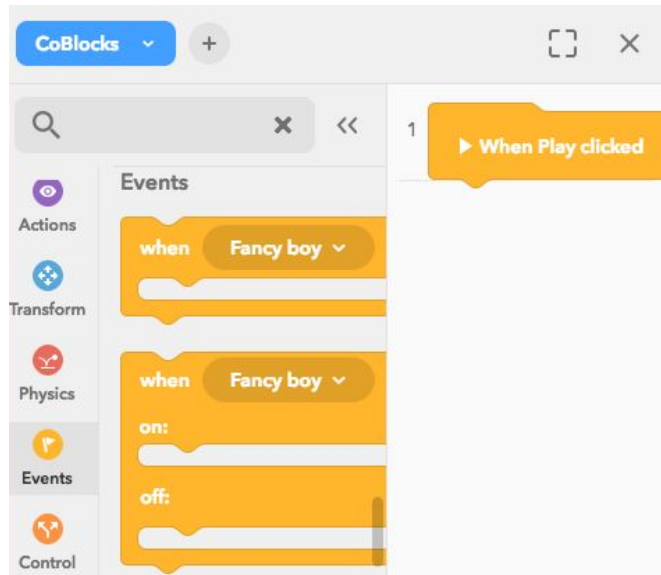
Click **Play** to test your item.

Watch for the the scene to change at the right time.

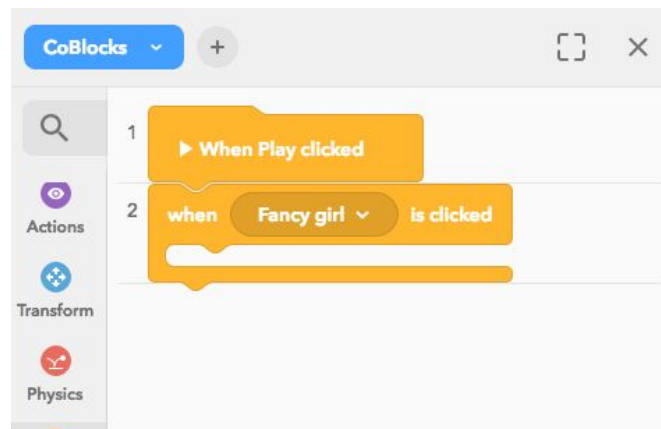


## Keeping score

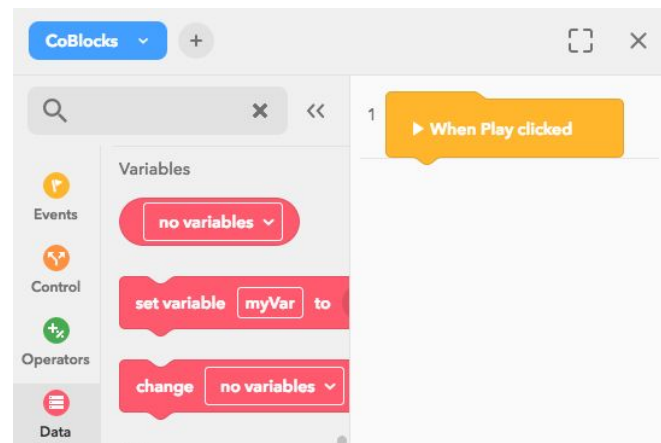
Click **Events** in the toolbox on the left.



Click and drag the yellow '**when item is clicked**' CoBlock from the toolbox and drag it into the workspace.



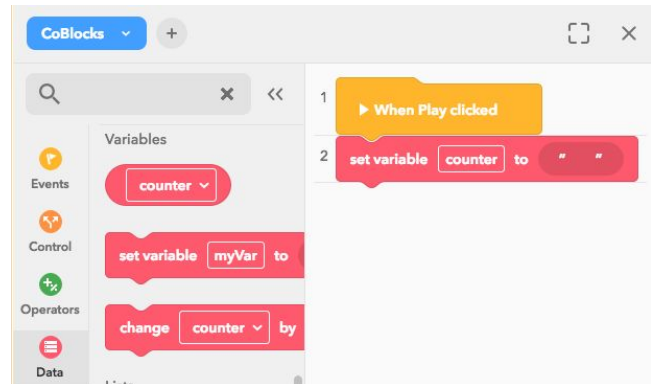
Click **Data** in the toolbox and scroll to the **Variables** subcategory



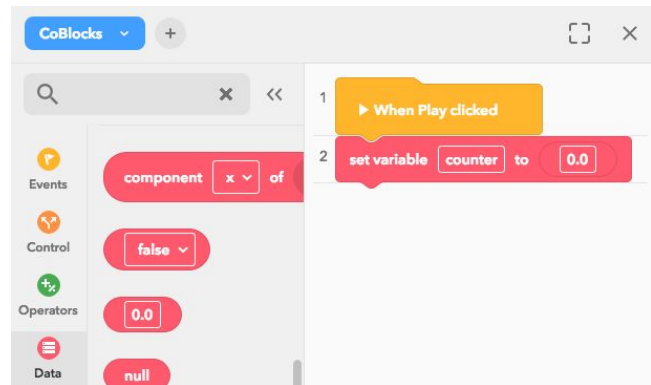
Drag the **'set variable'** CoBlock into the workspace.

Click on **myVar** and give your variable a new name.

It will pop up as round CoBlock in the **Variables** subcategory now



Drag the **Number CoBlock (0.0)** from the **Values** subcategory and place it into your **'set variable'** CoBlock



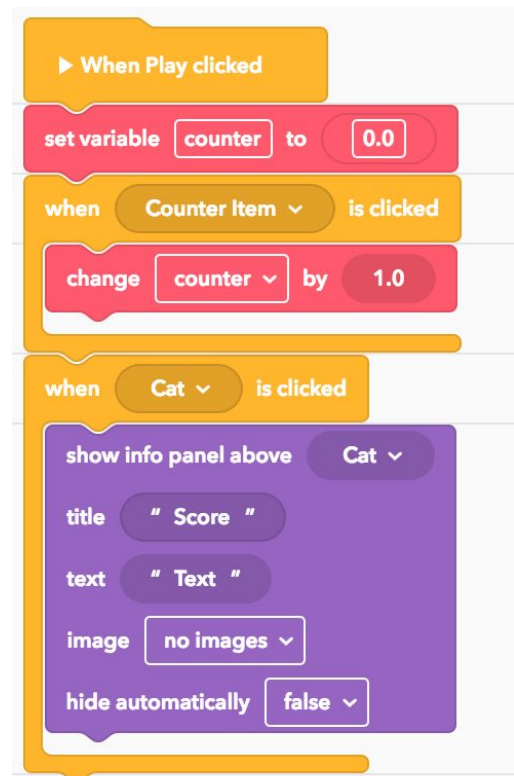
Find the **'change variable'** CoBlock.

Drag and drop it into a **click event CoBlock**.

If you have more score variables, select the one you want to increase

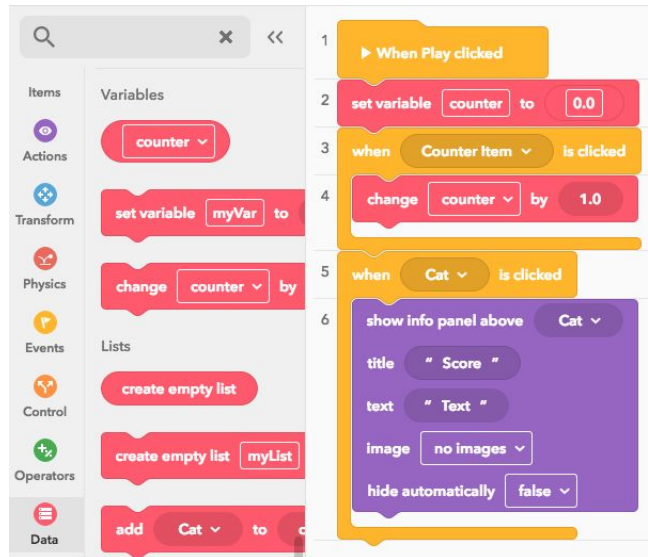
Create a pop-up panel (see [Adding pop-up fact panels](#))

Type a title in the pop-up panel (it should indicate that this is a score).

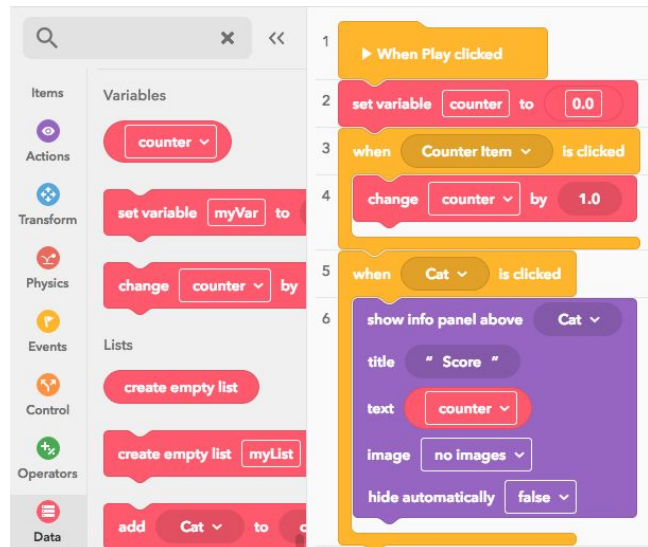


Find the **Variable CoBlock**.

It has the same name as the variable name you defined (here: counter)

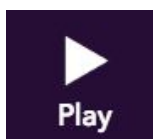


Drag the **Variable CoBlock** into the text field of the 'show info panel' CoBlock



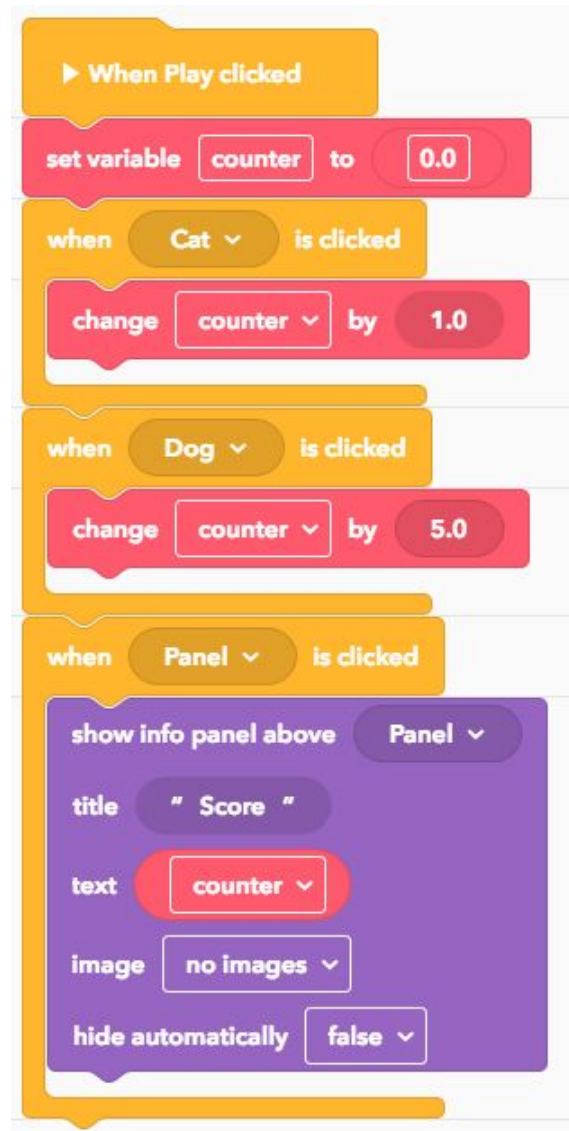
Click **Play** to test your item.

Click your item a few times, then check the panel for you score.



You can change the counter variable with different items.

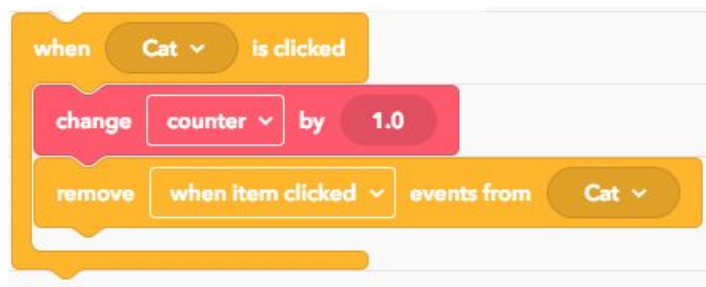
This example calculates the total score for items clicked.



```

    ▶ When Play clicked
      set variable counter to 0.0
      when Cat is clicked
        change counter by 1.0
      when Dog is clicked
        change counter by 5.0
      when Panel is clicked
        show info panel above Panel
          title " Score "
          text counter
          image no images
          hide automatically false
  
```

To make items only **clickable once**, you can use the **'remove events'** CoBlock after the event happens.



```

    when Cat is clicked
      change counter by 1.0
      remove when item clicked events from Cat
  
```