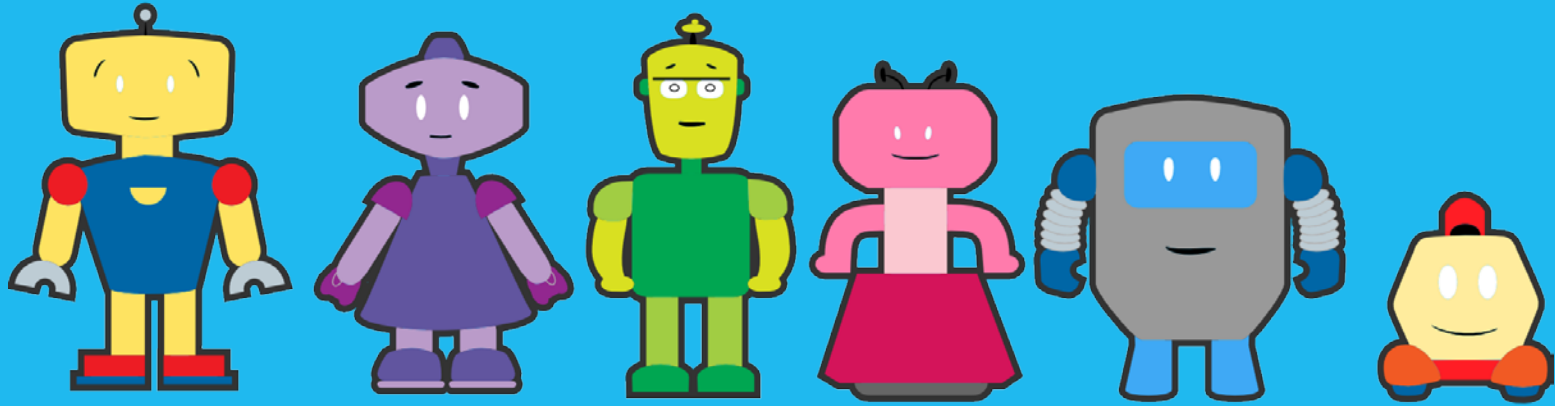




When mBot Meets a Robot

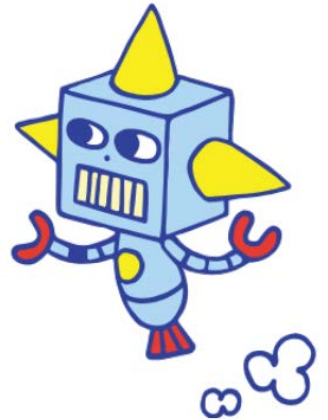
Lesson 4

Recap



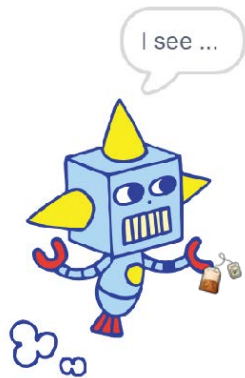
Key Concepts

- **Concept 1: Robot**
- **Discussion:** What can and would the robots do at present and in the (near) future?



Key Concepts

- **Concept 2: Programming**
- A specific order of instructions in code that tell a computer or robot what to do



define Make a cup of tea

Boil water in a pot.

Put a tea bag into a cup

Pour the hot water into the cup

Add some milk and sugar



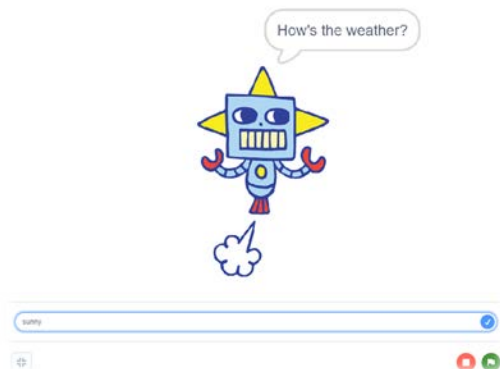
Key Concepts

- **Concept 3: I/O System**



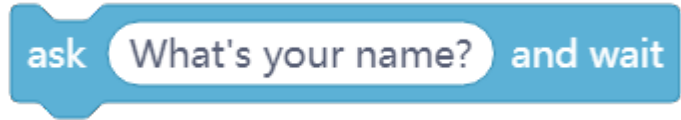
Key Concepts

- **Concept 4: User Interface and Sprite**

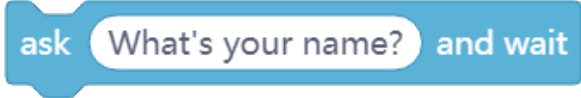


Key Concepts

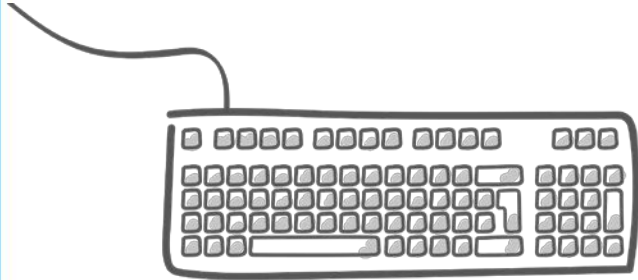
- **Concept 5: Programming Scripts**
- **Discussion:** How many types of blocks have you learnt?
What are their functions?



- **Sensing Scripts**

-  ask you questions and store your answers
The image shows a blue Scratch 'ask' block. It has a speech bubble icon on the left, the word 'ask' in a white box, a text input field containing 'What's your name?', and the words 'and wait' on the right.
-  see the brightness
The image shows a blue Scratch 'light sensor' block. It features a light sensor icon on the left, the text 'light sensor', a dropdown menu showing 'on-board' with a downward arrow, and the text 'light intensity' on the right.

- Events Scripts



when space ▾ key pressed



when  clicked



when on-board button pressed ▾

when this sprite clicked

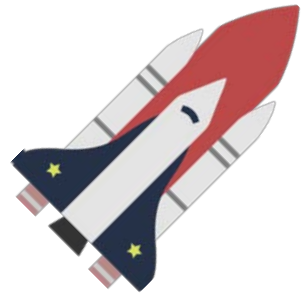
when mBot(mcore) starts up

Challenge



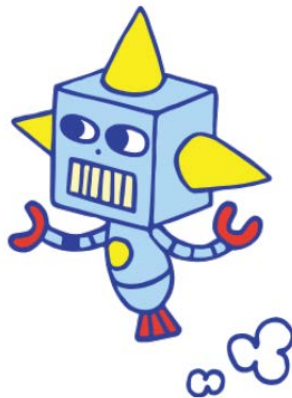
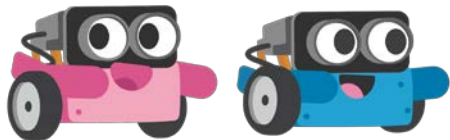
When mBot meets a robot ...

- **Imagine:** mBot were sent on your behalf to the future Robot World.
- What would happen when mBot the Representative met a robot?



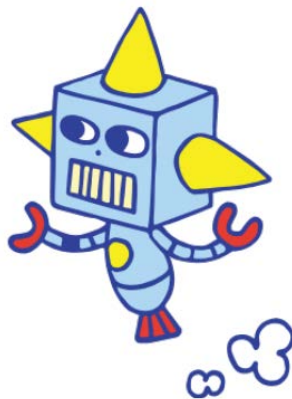
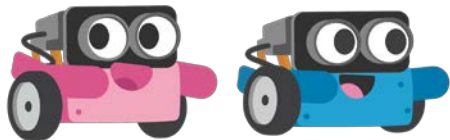
When mBot meets a robot ...

- **Draft:** Write a narrative about, e.g., what they might be talking about, or what the place would look like, etc.



When mBot meets a robot ...

- **Interpret:** Add mBot and Robot sprites and program to create the narrative in mBlock.

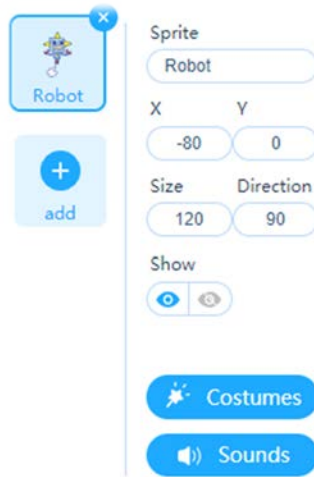


Tip 1: Switch costumes

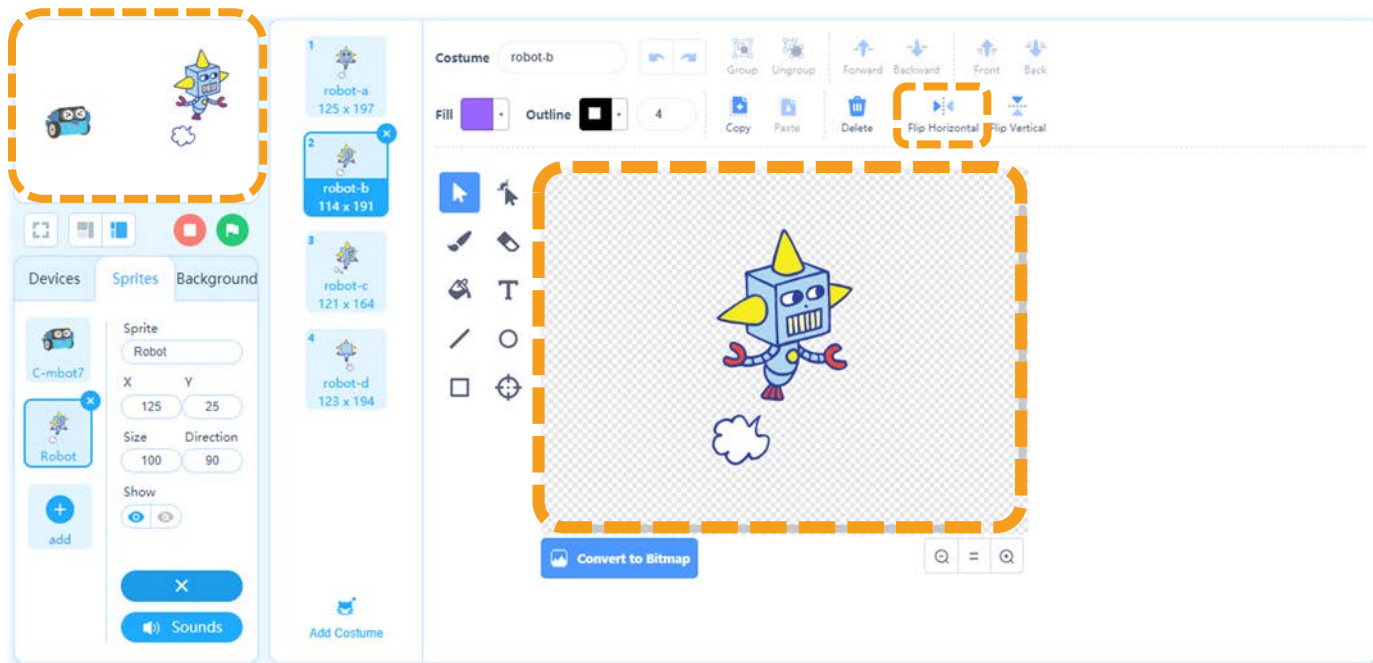
- Do you remember how to change the costume of a sprite? Which script?

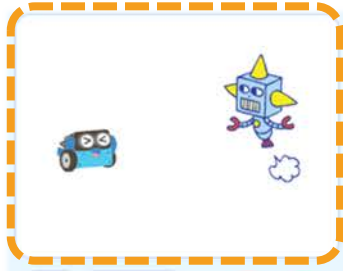
next costume

switch costume to robot-a ▼



Tip 2: Make face-to-face





Devices

Sprites

Background

C-mbot7

Robot

+

add

Sprite

Robot

X

Y

125

25

Size

Direction

100

90

Show

×

Sounds

- robot-a
125 x 197
- robot-b
114 x 191
- robot-c
121 x 164
- robot-d
123 x 194



Costume

robot-b

↶

↷

Group

Ungroup

Forward

Backward

Front

Back

Fill

Outline

4

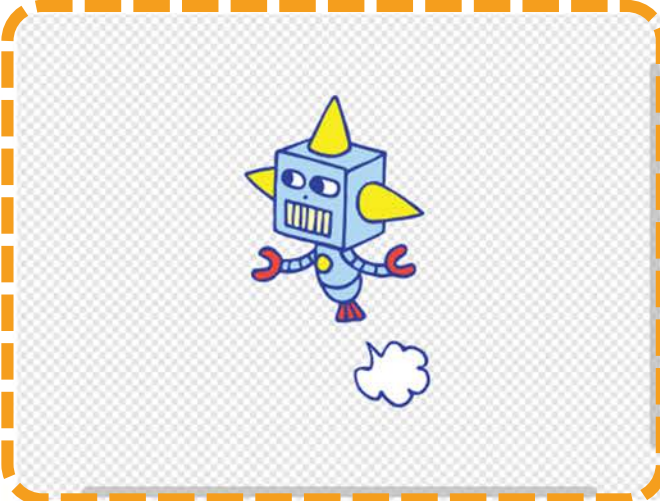
Copy

Paste

Delete

Flip Horizontal

Flip Vertical



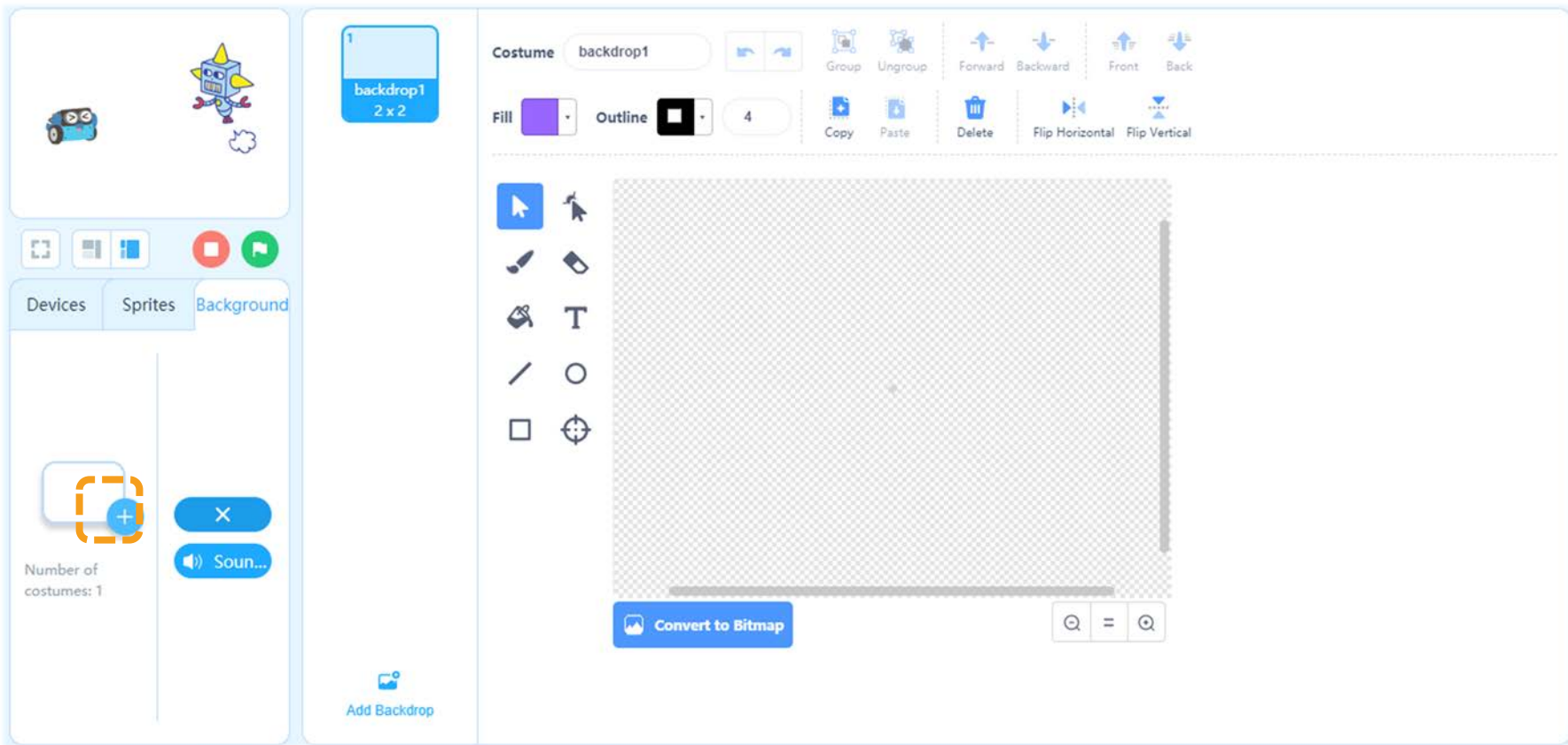
Convert to Bitmap



Try it: Flip the costume of the robot-c

Tip 3: Background the stage

- How about adding a background image in the stage?
- Do you notice the “Background” panel in the information box at the bottom?



Upload

Paint

Search

Backdrop Library

My Backdrops

All

School

Nature

City

Outdoors

Indoors

Space

Holidays



Bedroom1



Bedroom2



Bedroom3



Bedroom4



Bus station



Bus station1



Bus station2



Bus station3



Bus station4



Camp2



Camping

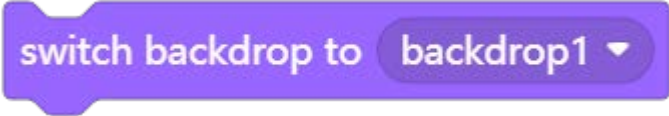
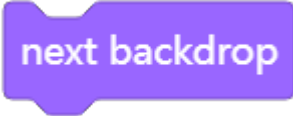


Camping1

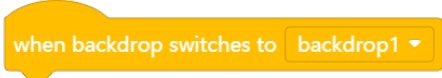
Cancel

OK

- Choose a backdrop you like and add it to the stage.
- You could also switch the backdrop by using

A purple Scratch block with a notch on the left and a bump on the right. It contains the text "switch backdrop to" followed by a dropdown menu showing "backdrop1" with a small downward arrow.A purple Scratch block with a notch on the left and a bump on the right. It contains the text "next backdrop".

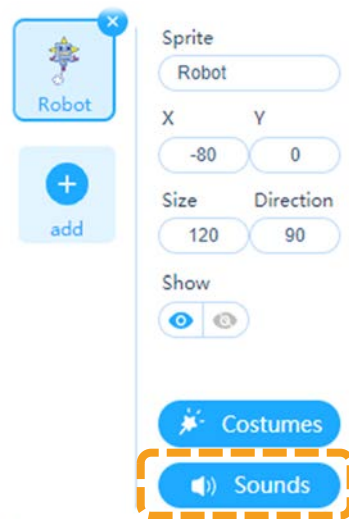
(and trigger more effects via

A yellow Scratch block with a semi-circle on the left and a bump on the right. It contains the text "when backdrop switches to" followed by a dropdown menu showing "backdrop1" with a small downward arrow.

)

Tip 4: Add some sound effects

- Add some cool or odd sound effects to make your project alive.
- It is similar to changing costumes...

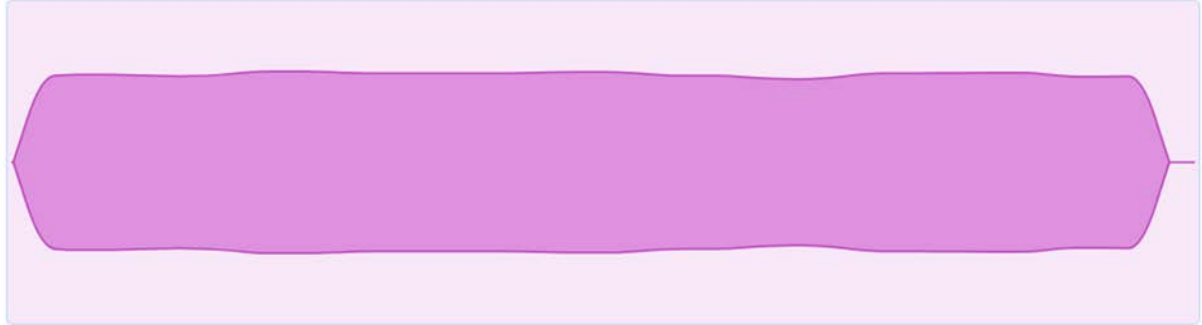


1 
computer b...
0.86

2 
buzz whir
0.82


Add Sound

Sound computer beep



Faster



Slower



Echo



Robot



Louder



Softer



Reverse

 Upload Record Search

Sound Library

My Sounds

All

Animals

Effects

Loops

Notes

Percussion

Space

Sports

Voice

Wacky



A Bass



A Elec Bass



A Elec Guitar



A Elec Piano



Afro String



A Guitar



Alert



Alien Creak1



Alien Creak2



A Minor Ukulele



A Piano



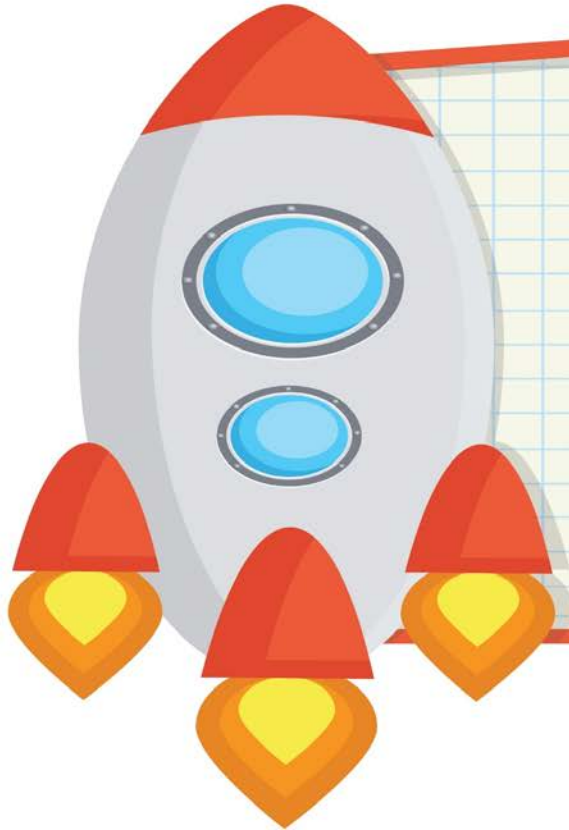
A Sax

Cancel

OK

Share





Feedback

- ✓ Cool-looking
- ✓ Coherence
- ✓ Enjoyable
- ✓ Smart

Remember to save your project and it will be reused in the future activity.

Clean Up

