

Sasso, carta, forbice: alla scoperta delle variabili

Benvenuti!



Stefano Dal Cin
Responsabile marketing



5 appuntamenti imperdibili

- 5 tra i massimi esperti italiani di didattica, robotica, elettronica e coding alle scuole del primo ciclo
- Anche se non potrai partecipare in diretta, iscrivendoti ti assicurerai di ricevere le **videoregistrazioni** e poterne **fruire in differita** in qualsiasi momento
- [Link di iscrizione unico](#) a tutti gli appuntamenti



Dove trovare Codey Rocky



Codey Rocky

Codice: 329535

Codice MEPA: 329535CS

1x Codey Rocky
1x dongle Bluetooth



Codey Rocky con guide didattiche

Codice: 329535

Codice MEPA: 329535CS

1x Codey Rocky
1x Guida didattica per l'insegnante
1x Quaderno dello studente
1x dongle Bluetooth



Guida per l'insegnante

Codice: 327170

Quaderno dello studente

Codice: 327171

Pacchetto guida e quaderno

Codice: 335896

Dove trovare Codey Rocky



Codey Rocky Half Class Pack

Codice: 327172

Codice MEPA: 327172CS

6x Codey Rocky

6x dongle Bluetooth

1x Guida didattica per l'insegnante

1x Quaderno dello studente

1x scatola in plastica resistente

Accessori per la ricarica



Codey Rocky Class Pack

Codice: 327579

Codice MEPA: 327579CS

12x Codey Rocky

12x dongle Bluetooth

1x Guida didattica per l'insegnante

1x Quaderno dello studente

2x scatole in plastica resistente

Accessori per la ricarica

Makeblock Italia – Gruppo ufficiale Facebook



Makeblock Italia

Gruppo Pubblico · 689 membri



Per raccogliere tutti gli educatori italiani, genitori e studenti interessati a Makeblock, CampuStore e Makeblock hanno unito le forze e creato un **gruppo Facebook** chiamato **“Makeblock Italia”**



Sasso, carta, forbice: alla scoperta delle variabili



Emanuele Micheli

Vice-presidente di Scuola di Robotica

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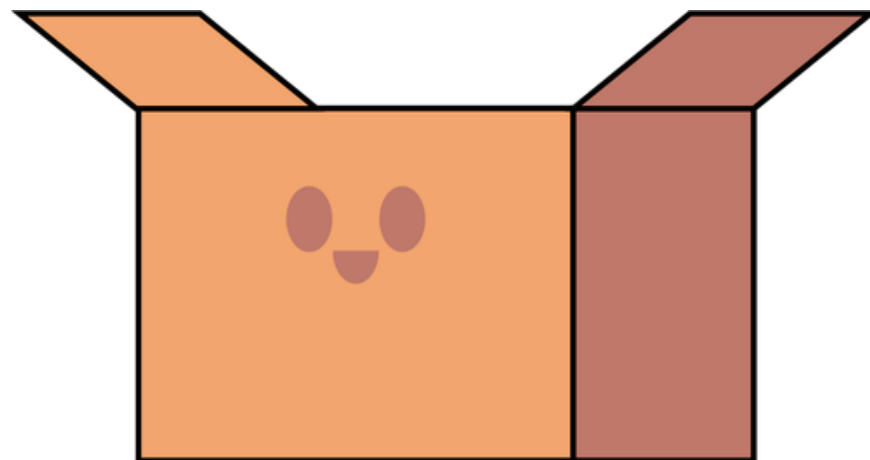
Riepilogo

- Condizionali
- Funzioni

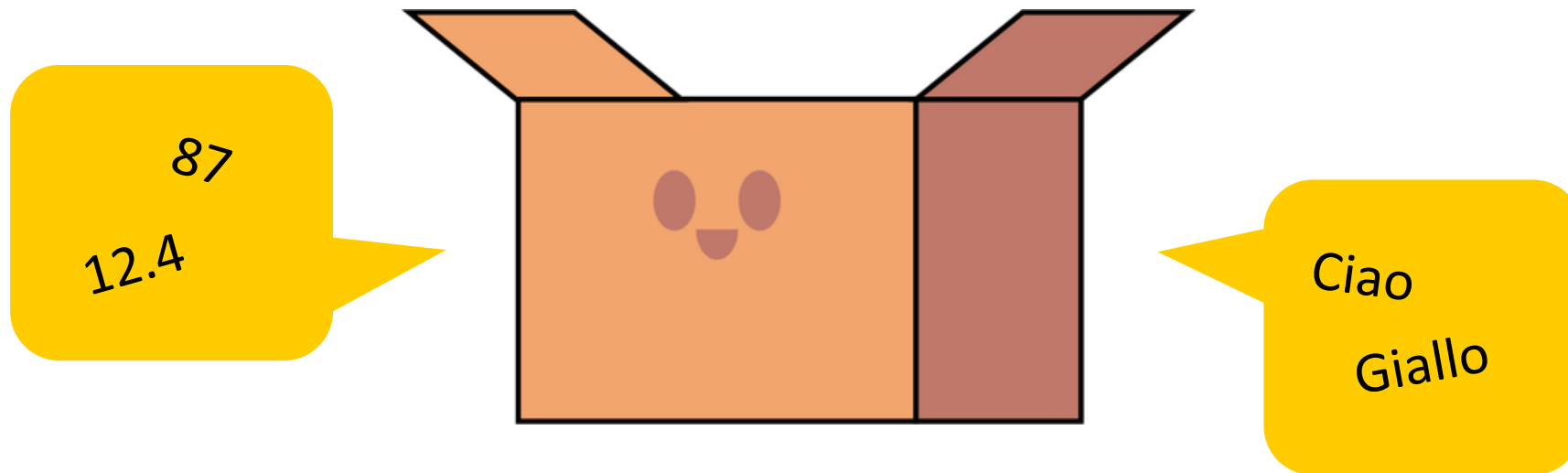




Coding: Variabili



In programmazione, una **variabile** è un contenitore che contiene informazioni che possono essere cambiate.



Queste informazioni possono essere **numeri** o **testo**.

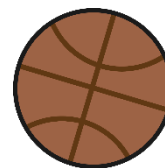
Happy Team		Creative Team	
0	6	1	0

Pensate ad una partita di pallacanestro. Il tabellone contiene il punteggio di due squadre in una partita.

Happy Team		Creative Team	
0	6	1	0

Sul tabellone, ogni squadra rappresenta una variabile.

Happy Team		Creative Team	
0	6	1	3



Quando la squadra Creative fa un canestro da 3 punti, il valore sul tabellone (la variabile) viene sostituito da un nuovo valore.

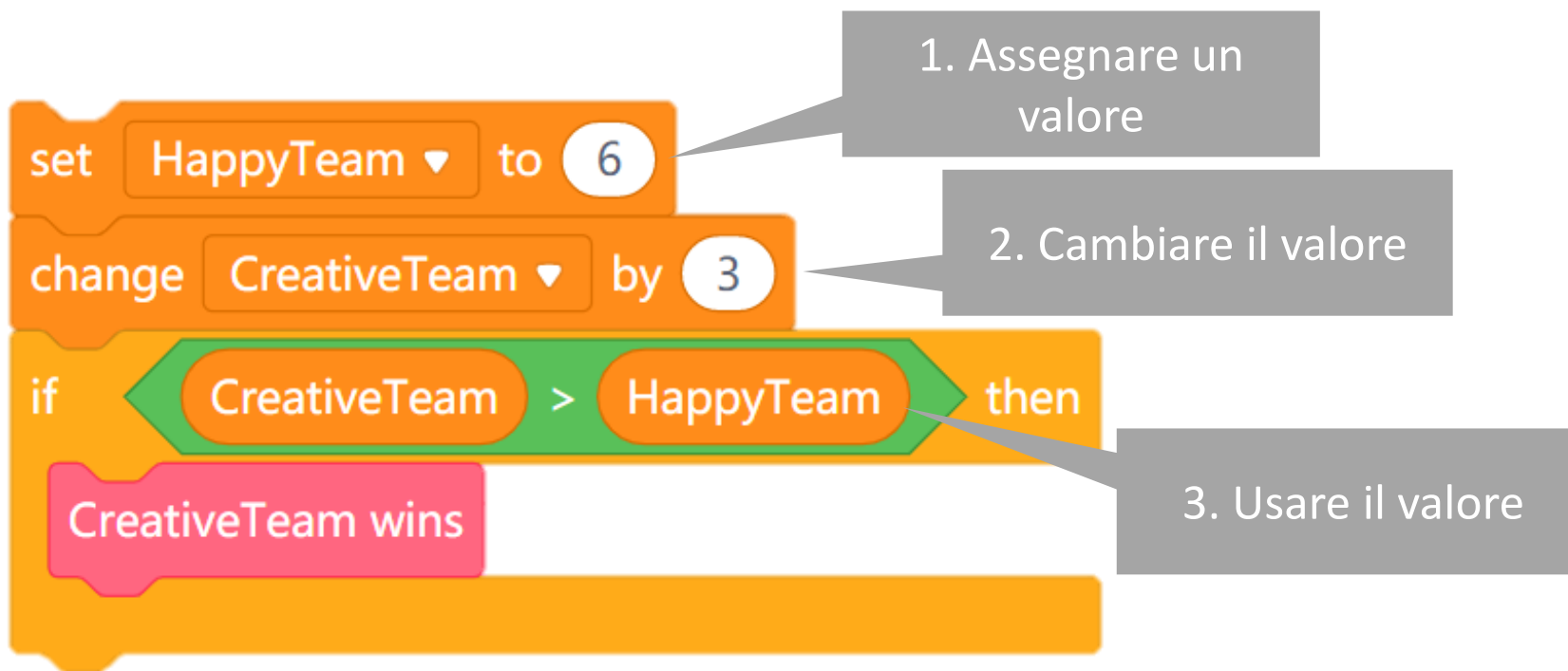
HappyTeam

Happy Team		Creative Team	
0	6	1	3

CreativeTeam

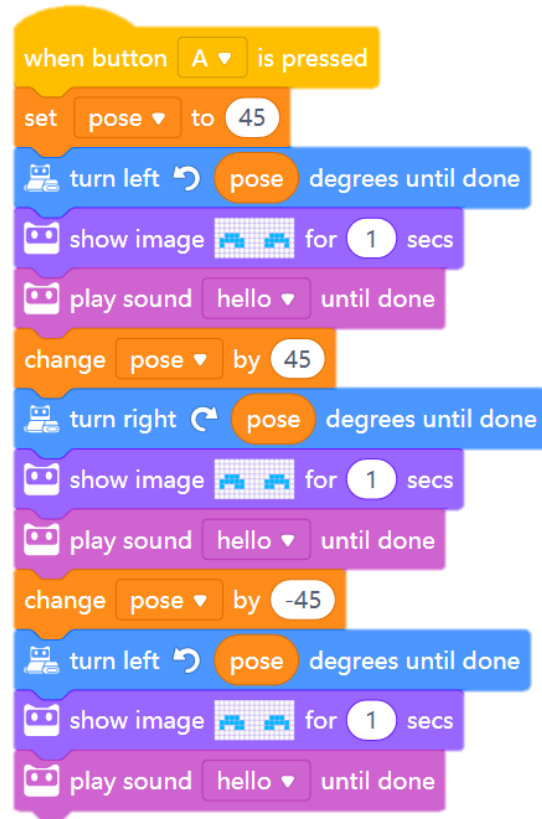
E' importante che i nomi delle variabili siano semplici.

Le Variabili hanno 3 caratteristiche principali:



Esempio di programma 1

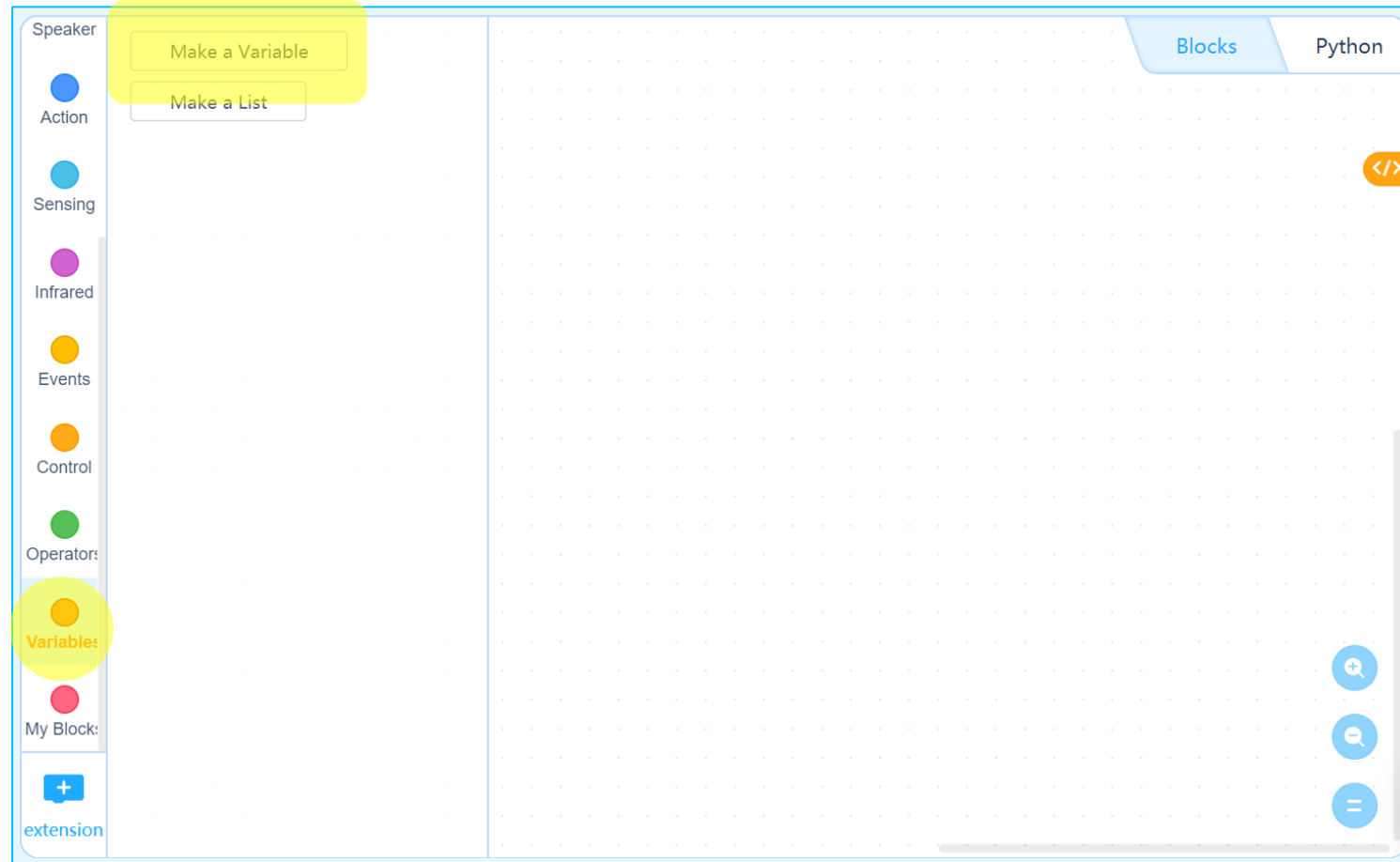
Codey Rocky saluta il pubblico.



```
when button A is pressed
  set pose to 45
  turn left pose degrees until done
  show image [Codey Rocky] for 1 secs
  play sound hello until done
  change pose by 45
  turn right pose degrees until done
  show image [Codey Rocky] for 1 secs
  play sound hello until done
  change pose by -45
  turn left pose degrees until done
  show image [Codey Rocky] for 1 secs
  play sound hello until done
```

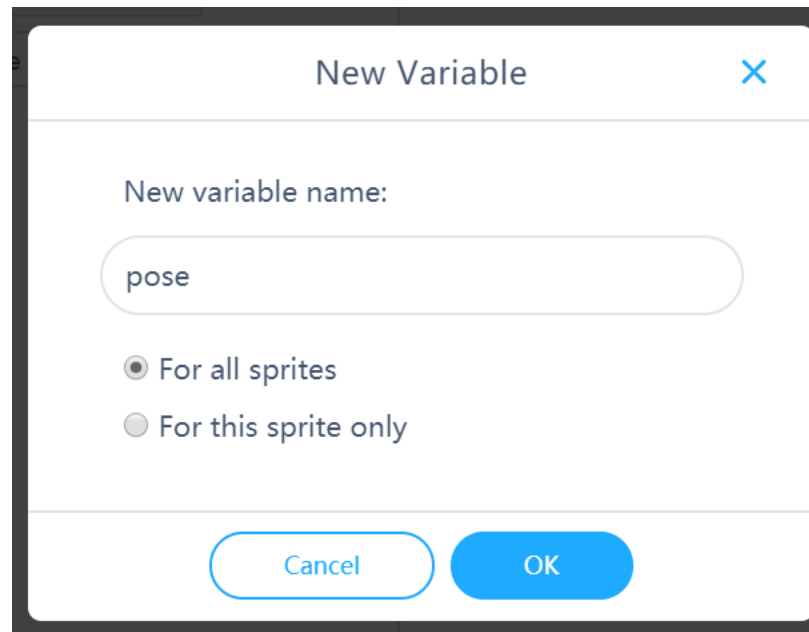
The image shows a sequence of Scratch code blocks for Codey Rocky. It starts with a yellow 'when button A is pressed' block. This is followed by an orange 'set pose to 45' block. Then a blue 'turn left pose degrees until done' block. Next is a purple 'show image [Codey Rocky] for 1 secs' block, followed by a purple 'play sound hello until done' block. This is followed by an orange 'change pose by 45' block, a blue 'turn right pose degrees until done' block, a purple 'show image [Codey Rocky] for 1 secs' block, a purple 'play sound hello until done' block, an orange 'change pose by -45' block, a blue 'turn left pose degrees until done' block, a purple 'show image [Codey Rocky] for 1 secs' block, and finally a purple 'play sound hello until done' block.

Iniziare creando una variabile



Assegnare un nome semplice

Questa variabile verrà usata per ruotare la posizione di Codey Rocky per salutare il pubblico, come se fosse su un palcoscenico.



New Variable

New variable name:

pose

For all sprites

For this sprite only

Cancel OK

Fissare la posizione iniziale di Codey Rocky

The screenshot displays the Makeblock Codey Rocky programming environment. On the left, a sidebar contains various block categories: Speaker, Action, Sensing, Infrared, Events, Control, Operator, Variables (highlighted with a yellow circle), and My Block. The main workspace is divided into two tabs: 'Blocks' and 'Python'. The 'Blocks' tab is active, showing a sequence of blocks on the left side of the workspace:

- Make a Variable** (grey block)
- pose** (orange block, checked)
- set pose to 0** (orange block, highlighted in yellow)
- change pose by 1** (orange block)
- show variable pose** (orange block)
- hide variable pose** (orange block)
- Make a List** (grey block)

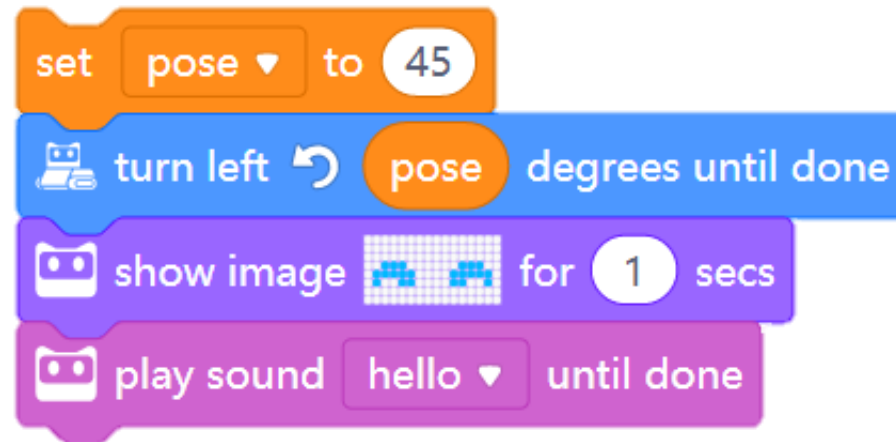
On the right side of the workspace, two blocks are connected:

- set pose to 45** (orange block)
- turn left pose degrees until done** (blue block)

At the bottom right of the workspace, there are three circular icons: a search icon, a refresh icon, and a pause icon.

Programmare il saluto

Codey Rocky prima girerà a sinistra, poi a destra, per poi tornare al centro.



Cambiare la posizione di Codey Rocky per guardare a destra

The screenshot displays the Makeblock Scratch-like programming environment. On the left, a sidebar contains various block categories: Speaker, Action, Sensing, Infrared, Events, Control, Operators, Variables (highlighted with a yellow circle), and My Block. The main workspace is divided into two tabs: 'Blocks' and 'Python'. The 'Blocks' tab is active, showing a script on a grid background. The script consists of the following blocks: 'set pose to 45' (orange), 'turn left pose degrees until done' (blue), 'show image [robot icon] for 1 secs' (purple), 'play sound hello until done' (yellow), and 'change pose by 45' (yellow). The 'change pose by 45' block is highlighted with a yellow background. The 'Variables' category in the sidebar is also highlighted with a yellow circle.

Finire il programma ed aggiungere il blocco Azione

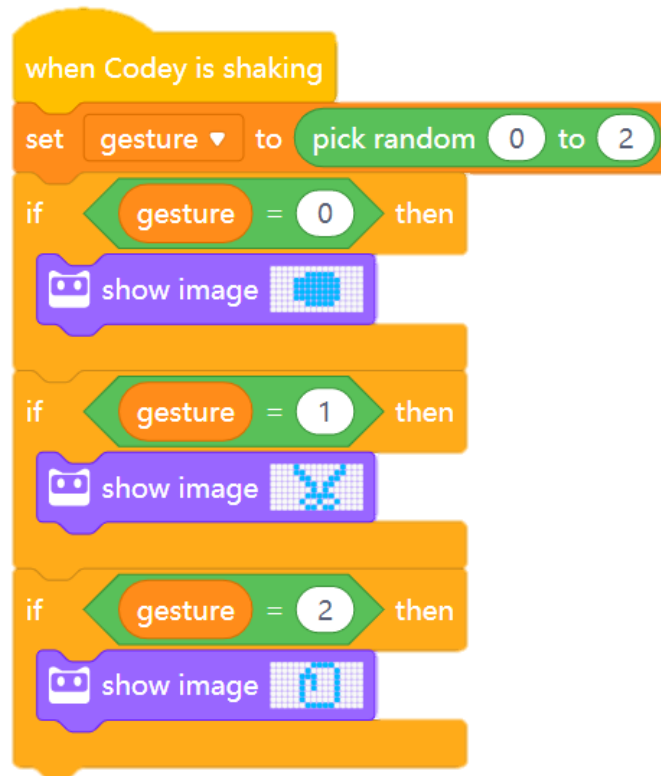
The screenshot displays the Makeblock programming environment. On the left, a sidebar lists various block categories: Speaker, Action, Sensing, Infrared, Events, Control, Operator, Variables, and My Block. The main workspace shows a script for a robot, starting with a yellow 'when button A is pressed' block. The script consists of the following blocks in sequence:

- set pose to 45
- turn left pose degrees until done
- show image [robot icon] for 1 secs
- play sound hello until done
- change pose by 45
- turn right pose degrees until done
- show image [robot icon] for 1 secs
- play sound hello until done
- change pose by -45
- turn left pose degrees until done
- show image [robot icon] for 1 secs
- play sound hello until done

The script concludes with a blue 'stop moving' block. The interface includes a 'Blocks' tab and a 'Python' tab at the top right, and a search icon, a refresh icon, and a close icon at the bottom right of the workspace.

Esempi di programma 2

Sasso, carta, forbice.



```
when Codey is shaking
  set gesture to pick random 0 to 2
  if gesture = 0 then
    show image [Rock]
  if gesture = 1 then
    show image [Paper]
  if gesture = 2 then
    show image [Scissors]
```

The code is a Scratch script for a Rock, Paper, Scissors game. It starts with a 'when Codey is shaking' event block. The first block is 'set gesture to pick random 0 to 2'. This is followed by three conditional blocks: 'if gesture = 0 then' showing a rock image, 'if gesture = 1 then' showing a paper image, and 'if gesture = 2 then' showing a scissors image.

Come funziona

- Quando si agita Codey, a caso sceglie tra sasso, carta o forbice.
- Se vince Codey, premi 'A' per aggiungere un punto al suo punteggio.
- Se vinci tu, premi 'B' per aggiungere un punto al tuo punteggio.
- Se è parità, premi 'C' e il punteggio non cambia.
- Il primo a totalizzare 3 punti vince!

Per prima cosa creare le variabili

Una per la scelta del gesto, una per il punteggio di Codey, una per il tuo punteggio

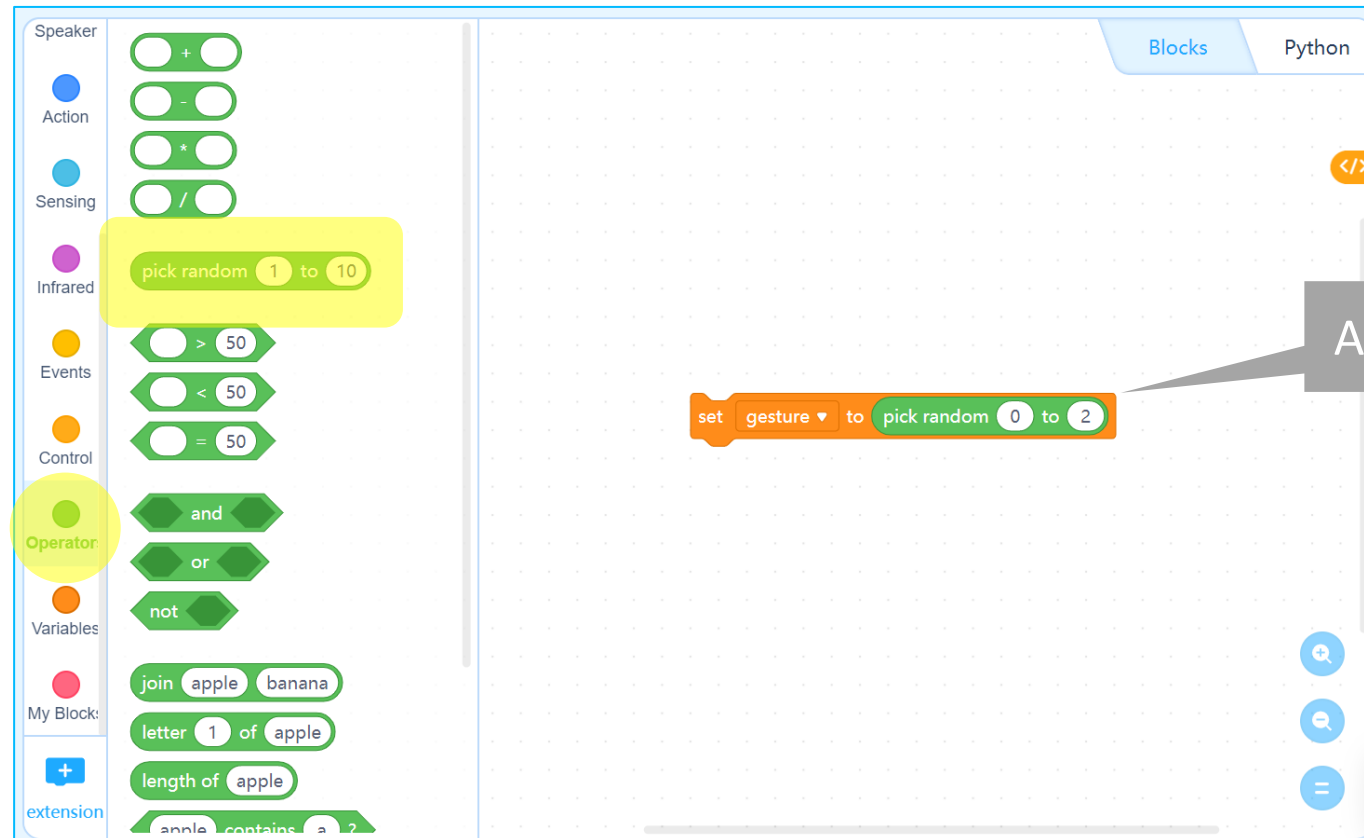
Codey

gesture

human

Definire la scelta casuale per il gesto

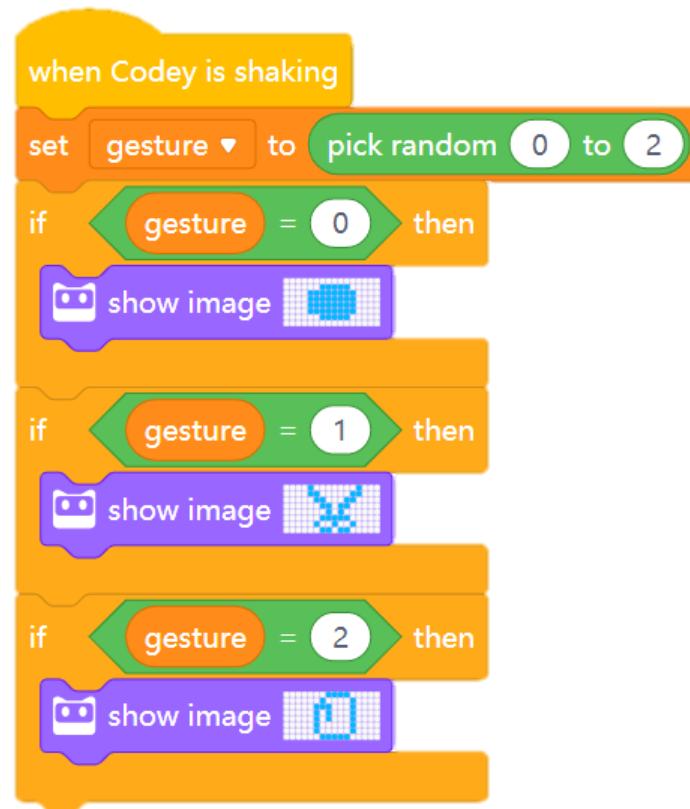
Usare il blocco 'numero a caso' per scegliere tra 3 valori casuali.



The screenshot shows the Makeblock Scratch editor interface. On the left, the 'Operator' category is highlighted in yellow, and the 'pick random' block is also highlighted. In the workspace, a script block is visible: 'set gesture to pick random 0 to 2'. A speech bubble points to the '0' in the 'pick random' block with the text 'Anche 0 è un valore!'. The interface includes a 'Blocks' tab and a 'Python' tab at the top right, and a search icon, a refresh icon, and an equals sign icon at the bottom right.

Creare una condizione per ogni valore del gesto

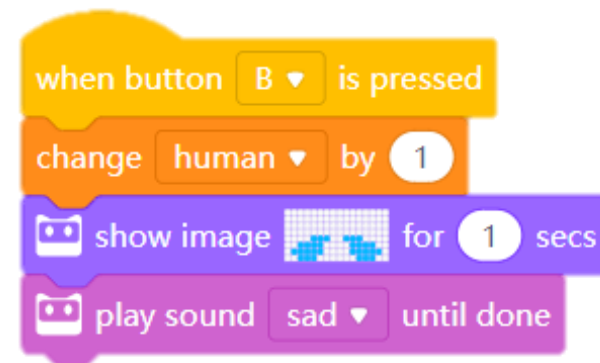
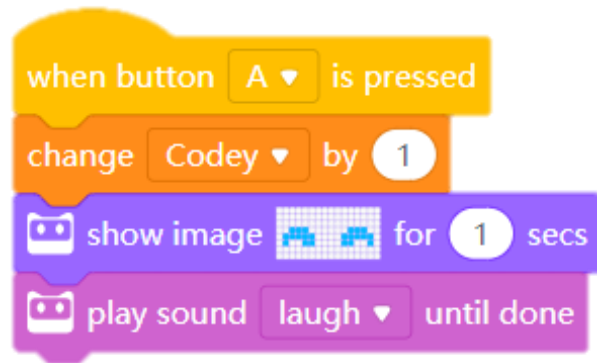
Aggiungere il blocco Azione per dare avvio a questa parte del programma.



```
when Codey is shaking
  set gesture to pick random 0 to 2
  if gesture = 0 then
    show image [robot]
  if gesture = 1 then
    show image [shopping cart]
  if gesture = 2 then
    show image [box]
```

The image shows a sequence of Scratch code blocks. It starts with a yellow 'when Codey is shaking' block. This is followed by an orange 'set gesture to pick random 0 to 2' block. Below this are three conditional blocks, each starting with 'if gesture = [value] then'. The first conditional block is for 'gesture = 0' and contains a purple 'show image' block with a robot icon. The second conditional block is for 'gesture = 1' and contains a purple 'show image' block with a shopping cart icon. The third conditional block is for 'gesture = 2' and contains a purple 'show image' block with a box icon.

In seguito, creare le istruzioni per i pulsanti



Infine, stabilire i valori iniziali delle variabili e le regole per vincere

```
when Codey starts up
  set Codey to 0
  set human to 0
  set gesture to 0
  forever
    if Codey = 3 then
      show Codey wins until scroll done
      play sound ring
      set Codey to 0
      set human to 0
    if human = 3 then
      show You win until scroll done
      play sound ring
      set Codey to 0
      set human to 0
```

Ricordate, il primo che raggiunge 3 punti vince!

Per giocare di nuovo, rimettere i punteggi a 0

Attività con Codey Rocky

- Potete trovare queste lezioni nelle guide di Codey Rocky, incluse nel kit 6 in 1 (kit per la classe)
- “Guida per l’Insegnante” e “Quaderno dello Studente”, con lezioni guidate passo-passo



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