CoSPACES EDU

Transform

Move, scale, and turn items

Transitions

BASIC

move [my item ∨] [1] meters [forward ∨] in [1] sec.

turn [my item ∨] [clockwise ∨] by [180°] by [1] sec.

stop transition of [my item ∨]

PRO

move [my item ∨] on path [my path ∨] in [5] sec.

move [my item ∨] to x: [0] y: [0] z: [0] in [1] sec.

Operators

Use math and logic

Logic

PRO

[1] [= ∨] [10]

[false ∨] [and ∨] [false ∨]

not [false ∨]

test [false ∨] if true [1] if false [2]

Math

PRO

[1] [+ ∨] [1]

random integer from [0] to [100]

CoBlocks overview

👁 Actions

Perform item actions, display panels, play sound and music

Generic

- my item ⌄ say " Hi! "
- my item ⌄ think " Hm... "
- set color of my item ⌄ to ⬭
- set opacity of my item ⌄ to 100 %
- show info panel with title " Title "
  text " Text "
  image my image ⌄

🚀 Physics

Add physics simulation to your items

Simple

- push my physics item ⌄ forward ⌄ with velocity 1
- push my physics item ⌄
  to my physics item ⌄
  with velocity 1
- push my physics item ⌄
  to x: 0 y: 0 z: 0
  with velocity 1
- push my physics item ⌄
  to direction x: 0 y: 0 z: 0
  with velocity 1

Control

Use if statements and loops

Loops

repeat `1` times

forever

repeat for `i` from `1` to `10` with step `1`

repeat `while ⌄` `false ⌄`

for each `element` in `my variable ⌄`

break out of loop

Data

Create values and variables

Values

`false ⌄`

`0`

`π ⌄`

null

random color

color of `my item ⌄`

color with `100` `0` `0`

Items

Modify and create items

Modify

add child [my item ▾] to [my item ▾]

attach [my item ▾] slot [Top ▾] to [my item ▾] slot [Top ▾]

detach [my item ▾] from parent

delete [my item ▾]

delete all children of [my item ▾]

add physics to [my item ▾]

remove physics from [my item ▾]

MERGE Cube

Program unique MERGE Cube interactions

Actions

place [my item ▾] of [Top ▾] cube side

set opacity of cube to [100] %

set cube inside visible [true ▾]

Events

when cube is clicked

run only once [false ▾]

turn [my item ▾] [clockwise ▾] **by** (180°)
with radius (1) **meters in** (1) **sec.**

turn [my item ▾] [clockwise ▾]
origin **x:** (0) **y:** (0) **z:** (0) [local ▾]
direction **x:** (0) **y:** (0) **z:** (1) [local ▾]
angle (90°) **in** (1) **sec.**

scale [my item ▾] **by** (2) **in** (1) **sec.**

turn [my item ▾] [clockwise ▾]
around axis **x:** (0) **y:** (0) **z:** (1)
in (90°) **in** (1) **sec.**

Scale

PRO **set scale of** [my item ▾] **to** (2)

scale of [my item ▾]

Position

PRO **set position of** [my item ▾]
to **x:** (0) **y:** (0) **z:** (0)

position of [my item ▾]

distance between [my item ▾] **and** [my item ▾]

random number from (0) **to** (1)

constrain (1) **from** (1) **to** (100)

(0) **is** [even ▾]

(0) **divisable by** (3)

remainder of the division (0) **by** (2)

[round ▾] (0)

round (0) **to** (2) **decimals**

[square root ▾] (0)

[sin ▾] (0)

[sum ▾] **of list** [my variable ▾]

⏵ Events

Create item and click events

Input

BASIC **when** [my item ▾] **is clicked**

PRO **when** [my item ▾] **is hovered**
on:
off:

show quiz panel with question " question "
" answer 1 "
" answer 2 "
correct answer 1 ▾
when correct

when incorrect

show choice panel with question " question "
when " answer 1 " selected

when " answer 2 " selected

set animation of my item ▾ to don't animate ▾

my item ▾ say " Hi! " for 2 seconds

my item ▾ think " Hm... " for 2 seconds

set text of my text item ▾ to "   "

switch to camera my camera item ▾

Sound

BASIC

play sound my sound ▾
wait until finished false ▾

stop sound my sound ▾

spin my physics item ▾ forward ▾ with velocity 1

set physics blocks duration to 0.5 sec

Values

PRO

local ▾ velocity of my item ▾

local ▾ angular velocity of my item ▾

Properties

PRO

restrict my physics item ▾ movement ▾ to axis X on ▾ Y on ▾ Z on ▾

set my physics item ▾ static on ▾

set my physics item ▾ collisions with other items on ▾

set my physics item ▾ friction to 0

set my physics item ▾ weight to 1 kg

set my physics item ▾ bounciness to 0

set gravity pull to 0.5

set physics speed to 1

If
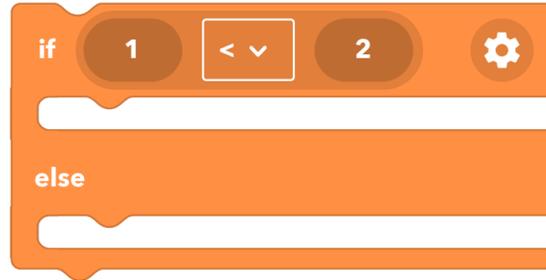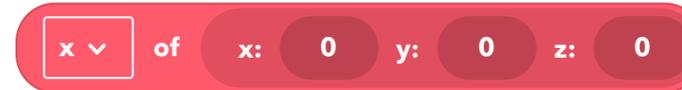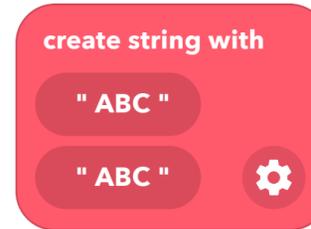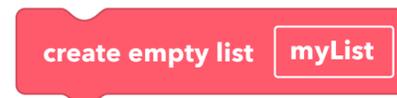
if [1] [< ▾] [2]

if [1] [< ▾] [2] ⚙

else

Other

wait for [1] sec.

restart scene

run parallel
⚙

run separately

go to scene [my scene ▾]

end CoSpace [my image ▾]

set scene navigation [false ▾]

blend color 1 ◯
color 2 ◯
ratio [0.5]

" [ABC] "

create string with
[" ABC "]
[" ABC "] ⚙

x: [0] y: [0] z: [0]

[x ▾] of x: [0] y: [0] z: [0]

length of [my variable ▾]

Variables

set variable [myVar] to [" "]

set CoSpace property [" key "] to [" value "]

CoSpace property [" key "]

change [my variable ▾] by [1]

[my variable ▾]

Lists

create list ⚙

create empty list [myList]

create item [Capsule ▾] at x: 0 y: 0 z: 0 with " Item name "

set name of [my item ▾] to " Item name "

Get

BASIC

item [my item ▾]

group item [my group ▾]

PRO

camera [my camera item ▾]

path item [my path item ▾]

text item [my text item ▾]

text 3D item [my text item ▾]

video item [my video item ▾]

is video item [my video item ▾] playing?

physics item [my physics item ▾]

get item " Item name "

name of [my item ▾]

create copy of [my item ▾]

parent of [my item ▾]

children count of [my item ▾]

child with index 0 of [my item ▾]

create item [Capsule ▾] at x: 0 y: 0 z: 0 with " Item name "

when cube is hovered on:

off:

run only once [false ▾]

when [Top ▾] cube side is looked at on:

off:

run only once [false ▾]

remove [when cube clicked ▾] events from cube

when cube turned [up ▾]

run only once [false ▾]

Values

PRO

[Top ▾] cube side

visible cube side

Rotation

PRO

set direction of **my item ▾**
to   x: `0`   y: `0`   z: `0`

turn **my item ▾** to look at **my item ▾**

turn **my item ▾** to look at   x: `0`   y: `0`   z: `0`

direction of **my item ▾**

when **up ▾** key is **pressed ▾**

Collision

PRO

when **my item ▾** collides with **my item ▾**
enter:

exit:

when **my item ▾** collides with **anotherItem**
enter:

exit:

Web

PRO

when **my item ▾** is clicked
show YouTube video   **" URL "**

when **my item ▾** is clicked
open link   **" URL "**

Other

PRO

remove **when item clicked ▾** event from **my item ▾**

Last updated: May 2021

Video

play video **my video item** ⌄
wait until finished **false** ⌄

stop video **my video item** ⌄

pause video **my video item** ⌄

Advanced

set ⌄ **local** ⌄ velocity of **my physics item** ⌄
to x: 0 y: 1 z: 0

set ⌄ **local** ⌄ angular velocity of **my physics item** ⌄
to x: 0 y: 1 z: 0

Functions

Create your own CoBlocks

return from function

return 1

add my item ⌄ to my variable ⌄

insert my item ⌄ at index 0 to my variable ⌄

delete item 0 from my variable ⌄

replace item 0 of my variable ⌄ with my item ⌄

item 0 of my variable ⌄

get item 0 of my variable ⌄ and remove

index of my item ⌄ in my variable ⌄

my variable ⌄ contains my item ⌄ ?

Debug

// Comment