Advanced Scratch

Python Libraries

JavaScript

Web Design

Java Programming

Kidoyo

K-12 Coding Program

9 Learning Paths

35+ Courses

190+ Challenges

160+ Badges

- Top Down- what skills will HS/MS students need?
- Systematic k-8 approach
- Curriculum that could be quickly and seamlessly integrated
- Professional development for teachers and continuous personalized support
- Enhance and Enrich Math- ELA- Sci
- Fun, collaborative and project based learning

Coding and Robotics

Kidoyo

What is Kidoyo?

Kidoyo is a K-12 coding program. Each RVC student grades K-5 already has a username and password. STELLAR teachers have launched our Kidoyo program and students are learning to code through games, challenges and projects. Kidoyo has a partnership with local colleges and mentors check student coding projects for authenticity.

Why Kidoyo for RVC?

Kidoyo is a comprehensive K-12 Coding Program that is easy to use, offers Professional Development/Support/Training for staff, provides interactive peer learning, mentor feedback and allows students to earn badges while learning at their own pace. Students have access to Kidoyo at home/school. Students can save and post projects and take leadership roles in class. Teachers can easily track student progress and view class reports. Kidoyo allows students to post on a message board and become interactive members of a coding community.

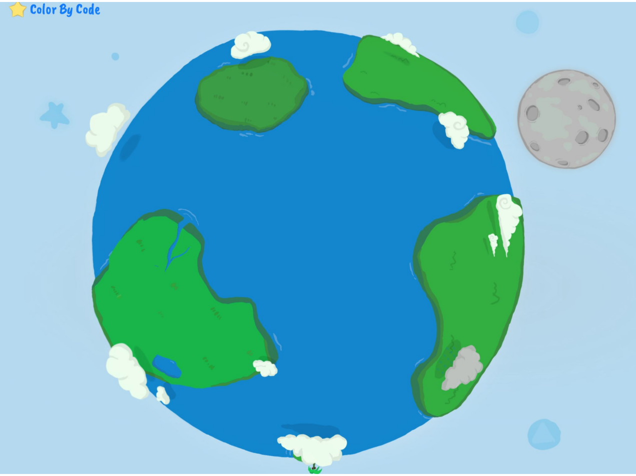
K-2 Coding

Starting in Kindergarten, students will learn to log onto their computer and navigate the Kidoyo site. While reinforcing letter, number and symbol skills, students learn to code using:

- Directionals
- Loops
- Conditionals
- X and Y Axis
- Shape rotations
- Numeracy/Counting
- Letter Recognition/Word Building

Color By Code

Color by Code is the introductory course for younger students.



Students are given a world and earn new graphics in their world based on badges and accomplishments. Students may earn boats, palm trees, forts and other cool additions.

Tutorials at every level help students learn and advance at their own pace.

Directionals

Follow the arrows and color in the square that the robot would land on.

All moves start at the robot

→←←←← = 🟥

→↓←↓↓ = 🟩

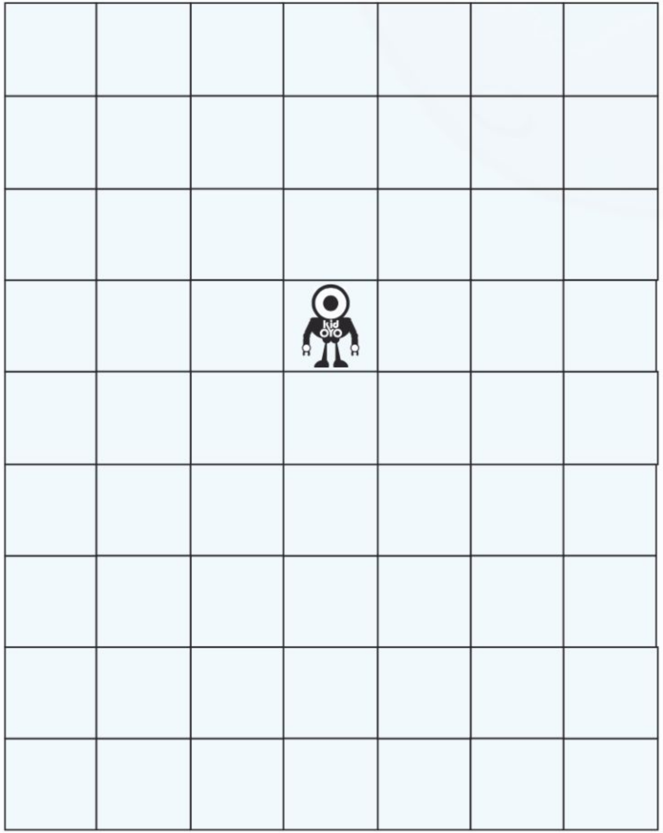
→↓↓→→ = 🟦

↑→↑→→ = 🟧

←↑↑←↑ = 🟫

→↑←→→ = 🟨

↓↓←←↓ = 🟪



Directionals

Follow the arrows and fill in the color of the square you land on.

All moves start at the robot 🤖

→ ↓ ↓ → ↓ = □

↓ ↓ ← ↑ ↑ = □

→ ↓ → → ↑ = □

↓ ↓ ← ↓ ← = □

→ ↑ ↓ ← ↓ = □

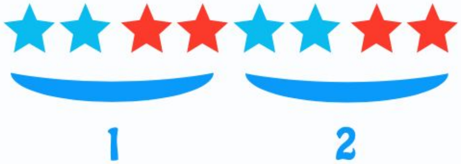
↓ ↓ ← ← ↑ = □

🟥	🟨	🟧	🟧	🟦	🟨	🟥
🟩	🟥	🟨	🟦	🟨	🟥	🟩
🟧	🟩	🟥	🟥	🟥	🟩	🟧
🟪	🟧	🟩	🟥	🟦	🟧	🟪
🟧	🟦	🟥	🤖	🟥	🟩	🟧
🟩	🟥	🟨	🟦	🟨	🟥	🟩
🟧	🟨	🟦	🟪	🟦	🟨	🟧
🟥	🟨	🟪	🟧	🟪	🟨	🟦
🟦	🟥	🟧	🟪	🟧	🟥	🟦

Repeat Loops

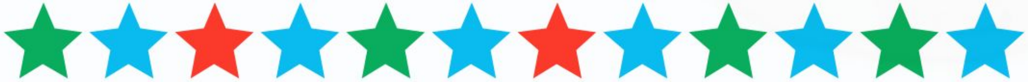
A loop is something that creates a pattern by repeating a process.

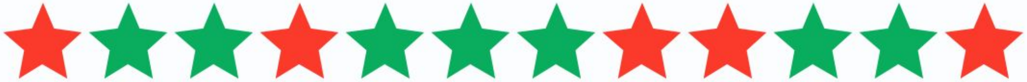
Example:

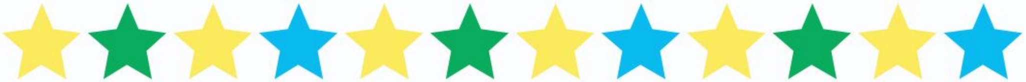


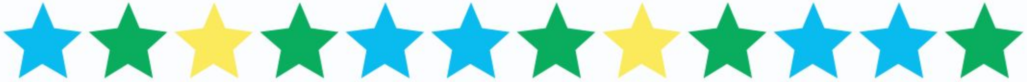
This is a loop that repeats 2 times.

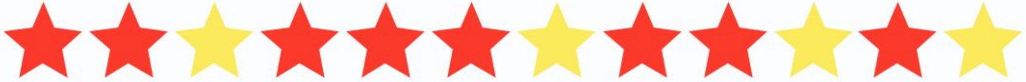
Color in the boxes in front of lines that wer e created by a loop.

□ 

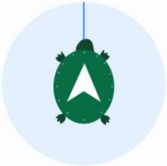
□ 

□ 

□ 

□ 

Which Direction is the Turtle Facing?



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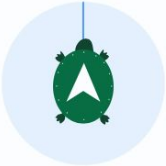

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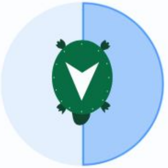

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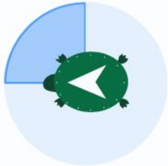

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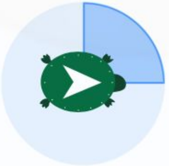

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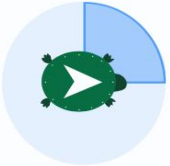

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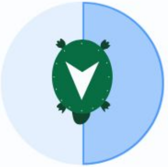

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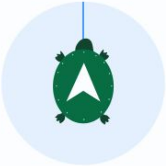

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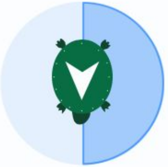

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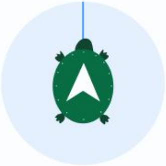
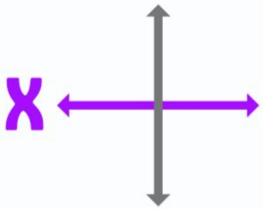


□°

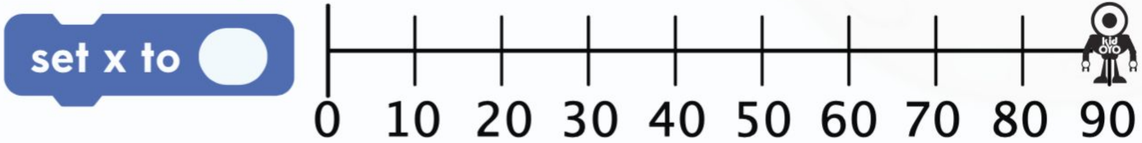
X Axis Positives

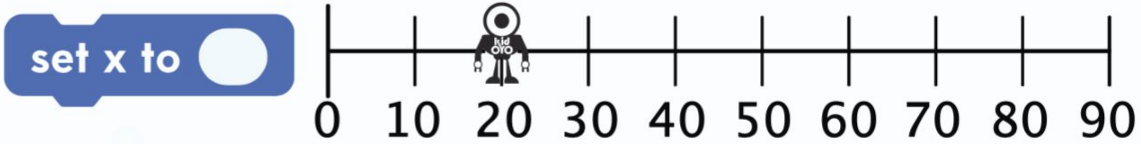


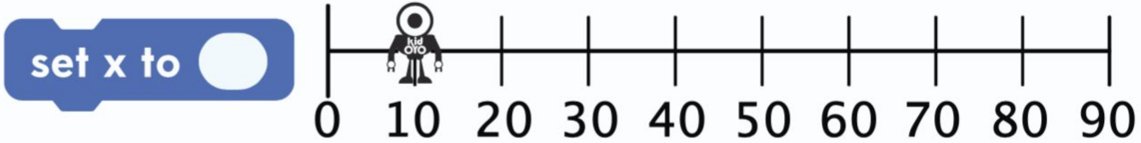
To move in a digital space, we use the X,Y grid.

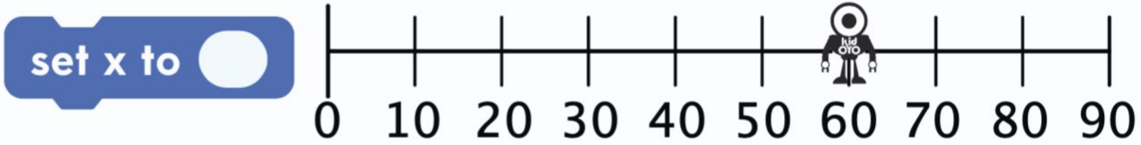
The X Axis (line) is for left-right movement.

Set the x position of OYObot to match its location on the X axis



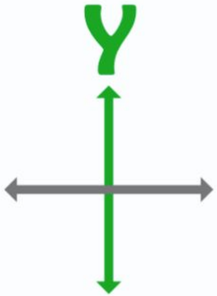






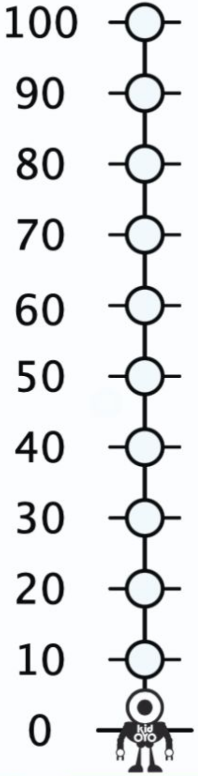
Y Axis Positives

Where will OYObot land when you change Y by the number shown?

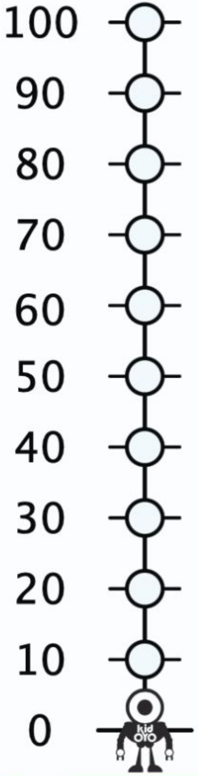


To move in a digital space, we use the X,Y grid.

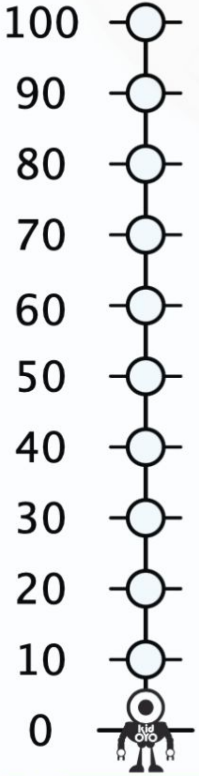
The Y Axis (line) is for up and down movement.



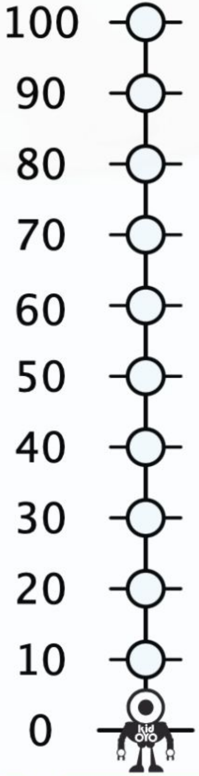
change y by 40



change y by 60



change y by 70



change y by 80

Conditional Statements

Read the statements in the boxes and check the shapes on the right.

If the condition is true, then complete the action.

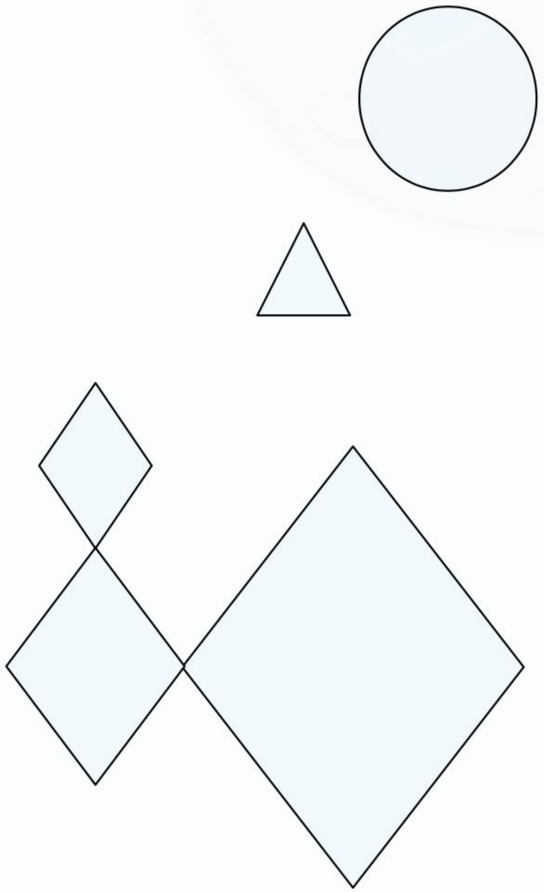
If the condition is false, then look to see if there are are more actions to complete

If the circle is smaller than all of the shapes
Then color the circle red

If the circle is touching the triangle
Then color the circle pink and the triangle blue
Else color the triangle green.

If there are more than 2 diamonds
Then color the circle brown.
Else color the diamonds yellow.

If all of the diamonds are the same size
Then color all of the diamonds purple.
Else color all of the diamonds orange.



Directionals

Directions can be given in many ways. For this activity you need repeat the directional move as many times as the number shows. Color the square the robot would land on after moving those steps.

All moves start at the robot

4 ↓ + 2 → = 🟦

2 ← + 3 ↑ = 🟥

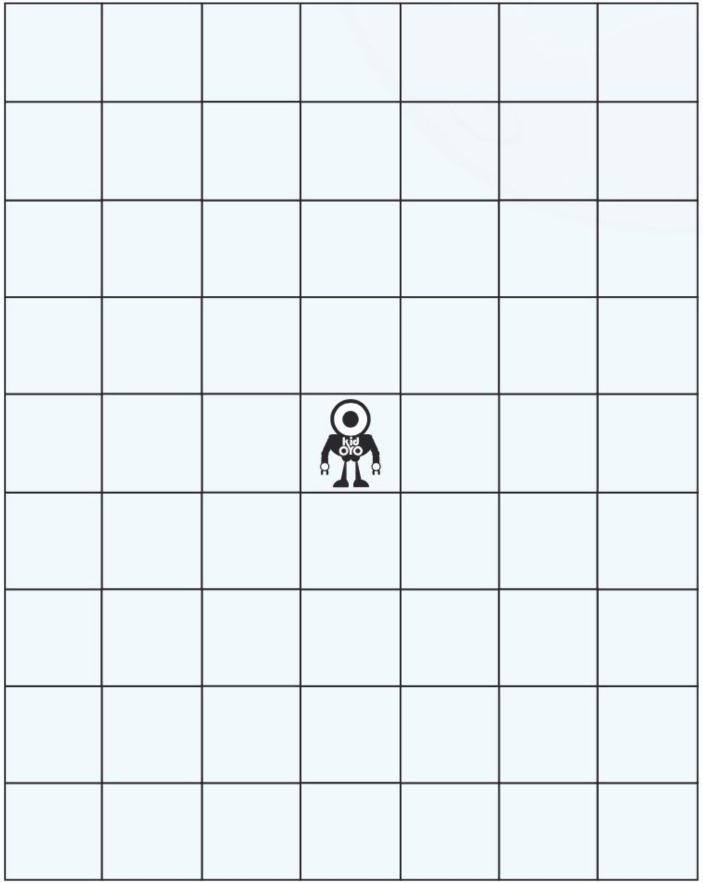
2 ↑ + 1 ← = 🟨

2 ↑ + 0 ← = 🟪

3 ← + 4 ↓ = 🟩

0 ↓ + 1 ← = 🟧

2 ← + 1 ↓ = 🟫



Directionals Mystery Words

Help OYObot find the hidden word.
Follow the arrows and fill in the letter
in the empty box to spell out the Mystery W ord

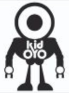
All moves start at the robot

↑ ↑ ← ← ↓ = □

↑ ↑ → → → = □

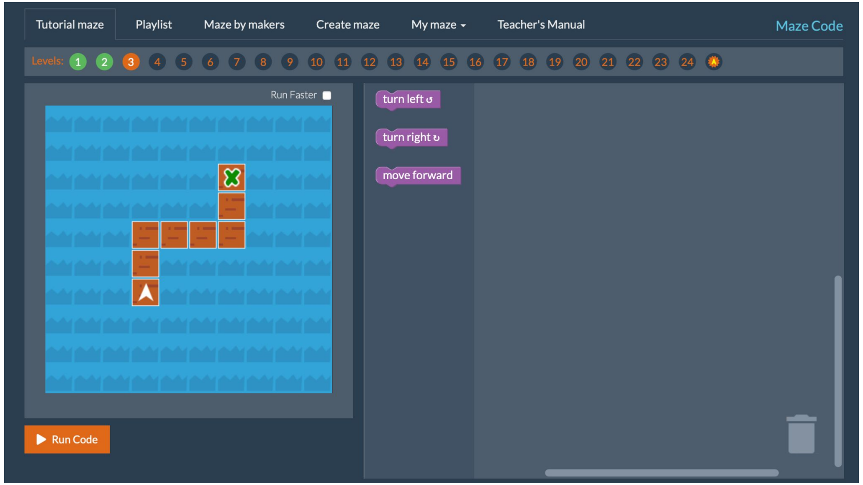
↓ ↓ ← ← ← = □

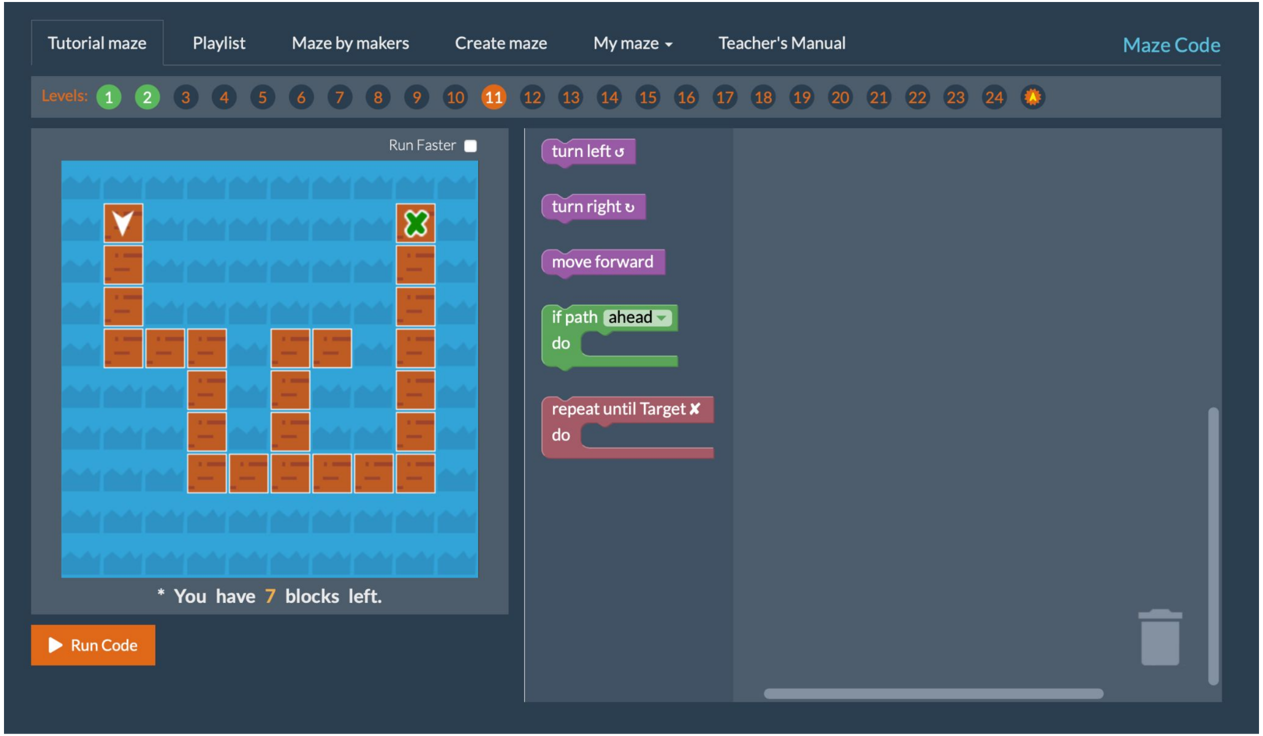
↑ → ↑ → ↓ = □

T	G	H	C	X	L	X
B	K	R	N	Q	V	Q
W	Y	C	T	X	Z	A
Y	M	X	M	S	H	J
W	O	R		Y	A	U
M	T	V	R	P	G	F
T	F	K	T	C	F	Z
X	K	V	L	E	J	T
H	F	K	C	N	L	D

MAZE Code (Grades 2-5)

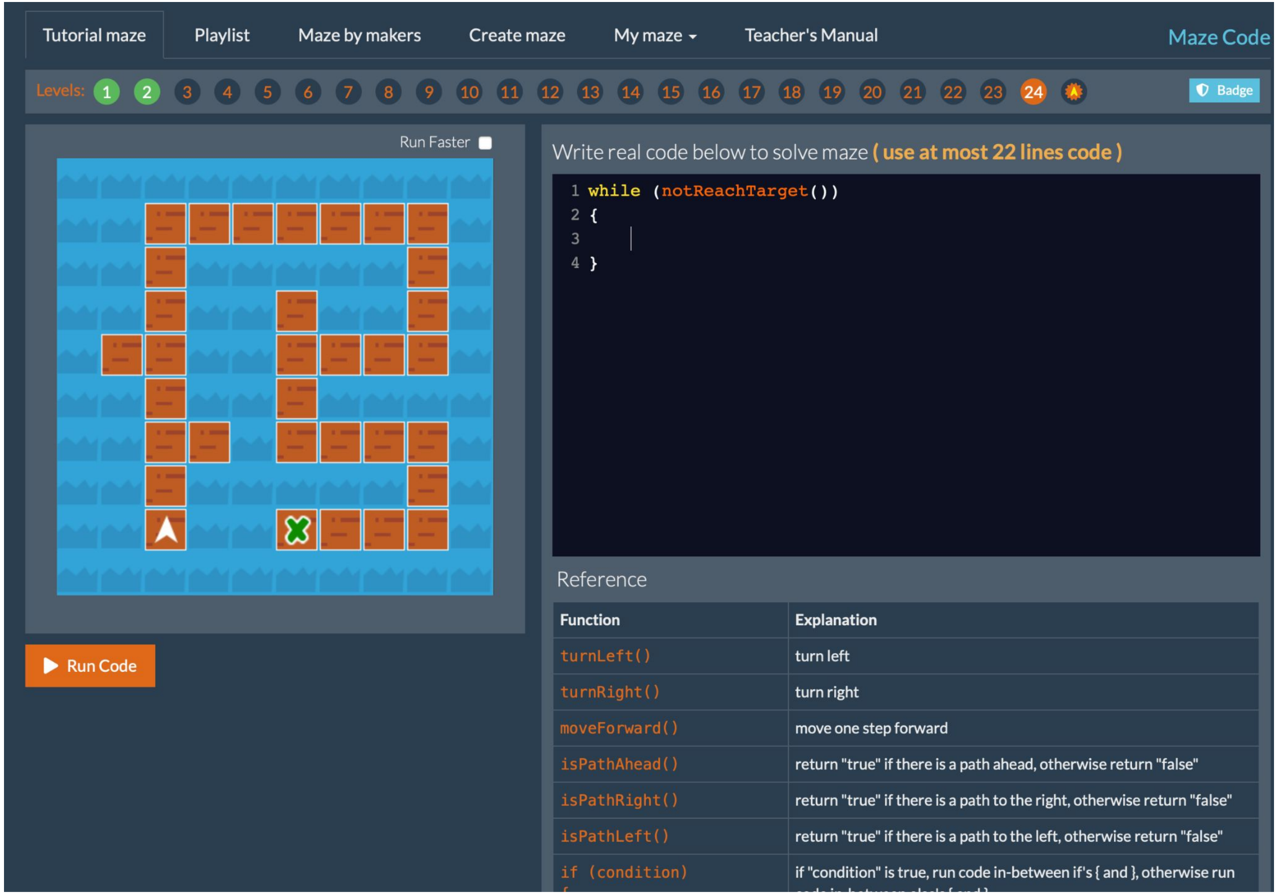
Maze Code starts students coding using block code. Students take what they learned in Code by Color and apply it to more advanced coding programs. Students learn that they can manipulate objects on the screen by writing code. Students can advance to actually typing code into the program.





* You have 7 blocks left.

Students learn simple directional block coding, advancing to repeats, loops and conditionals. Students can create their own solvable mazes and try to solve mazes created by peers.



Write real code below to solve maze (use at most 22 lines code)

```
while (notReachTarget())
{

}
```

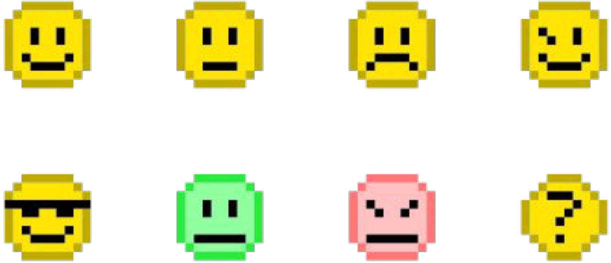
Reference

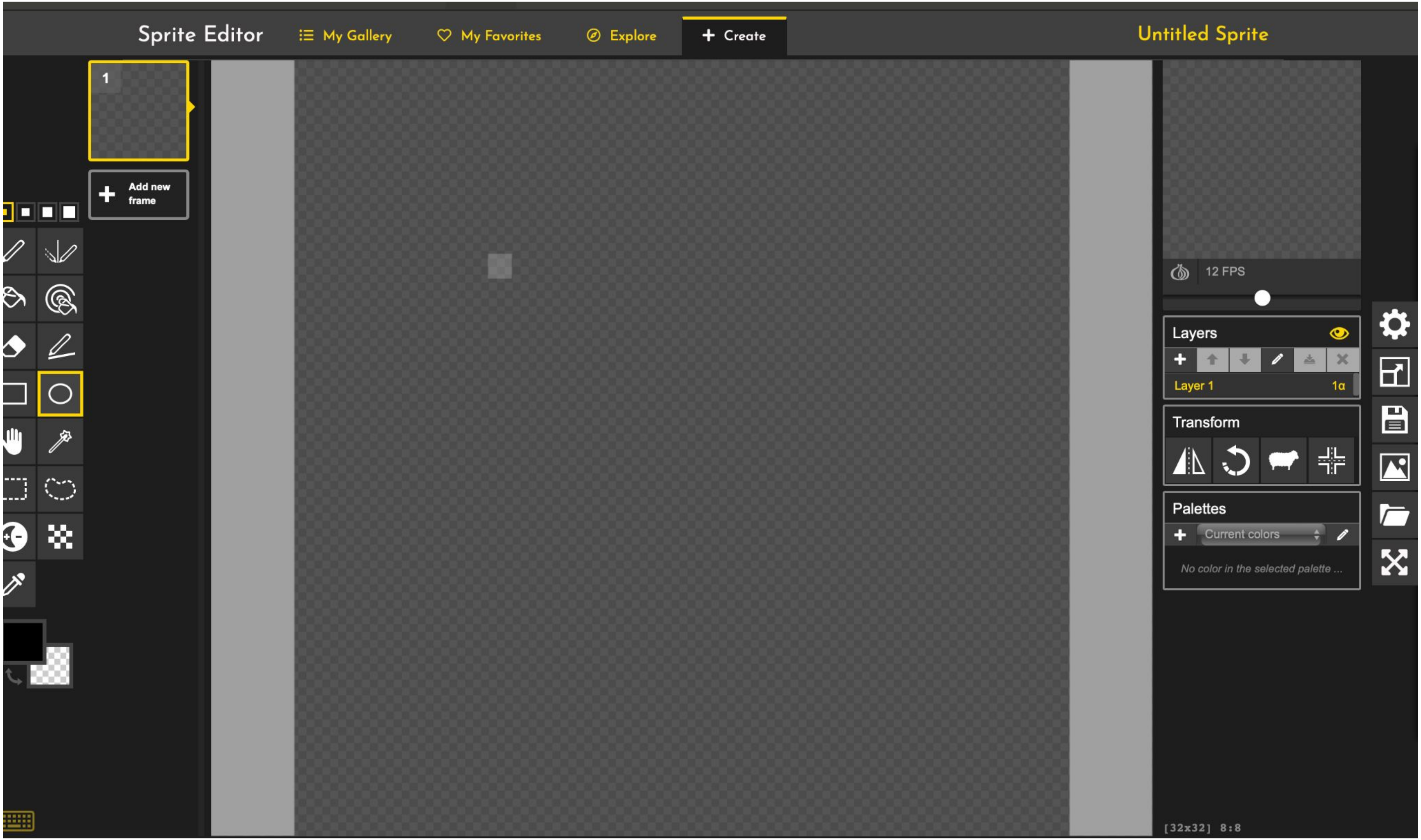
Function	Explanation
turnLeft()	turn left
turnRight()	turn right
moveForward()	move one step forward
isPathAhead()	return "true" if there is a path ahead, otherwise return "false"
isPathRight()	return "true" if there is a path to the right, otherwise return "false"
isPathLeft()	return "true" if there is a path to the left, otherwise return "false"
if (condition)	if "condition" is true, run code in-between if's { and }, otherwise run

Eventually students advanced out of block code and into written code.

Sprite Editor (Grades 3-5)

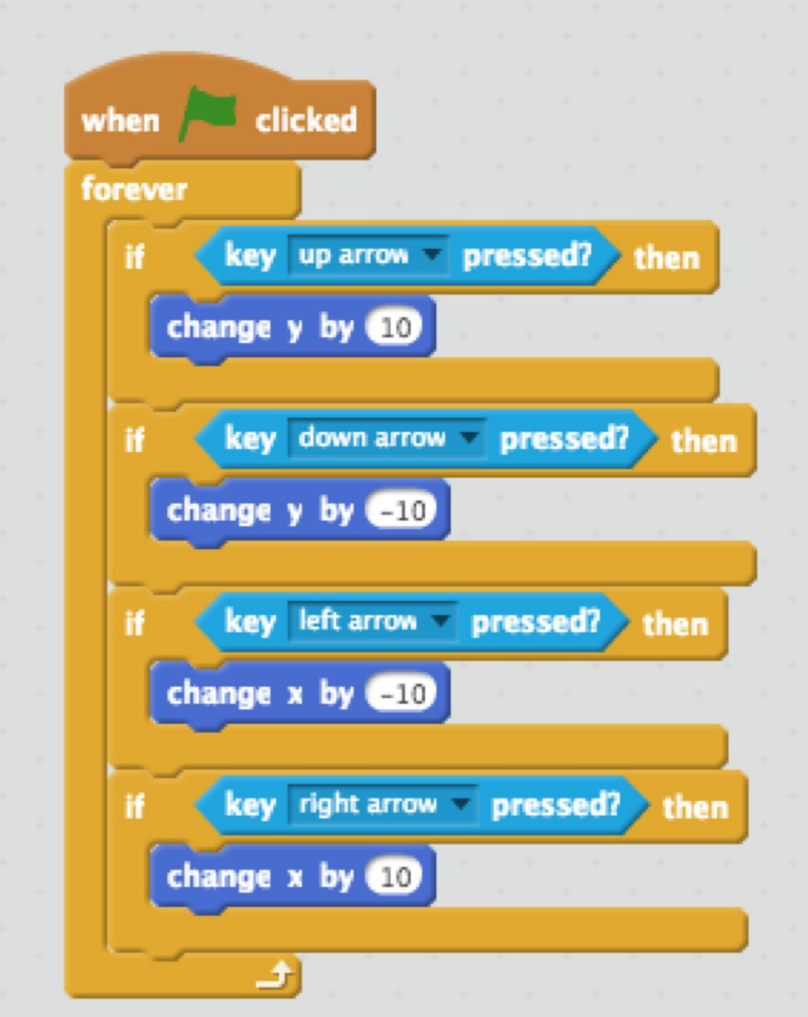
Students use Sprite Editor to create their own Sprites or graphics (pixel art). Students can code and animate their Sprites and create backgrounds. Students can share their work and others can build on what they created. Using these Sprites as building blocks, skies the limit with what students can create and control.




Sprite Editor
My Gallery
My Favorites
Explore
Create
Untitled Sprite
1
Add new frame
12 FPS
Layers
Layer 1
1α
Transform
Palettes
Current colors
No color in the selected palette ...
[32x32] 8:8

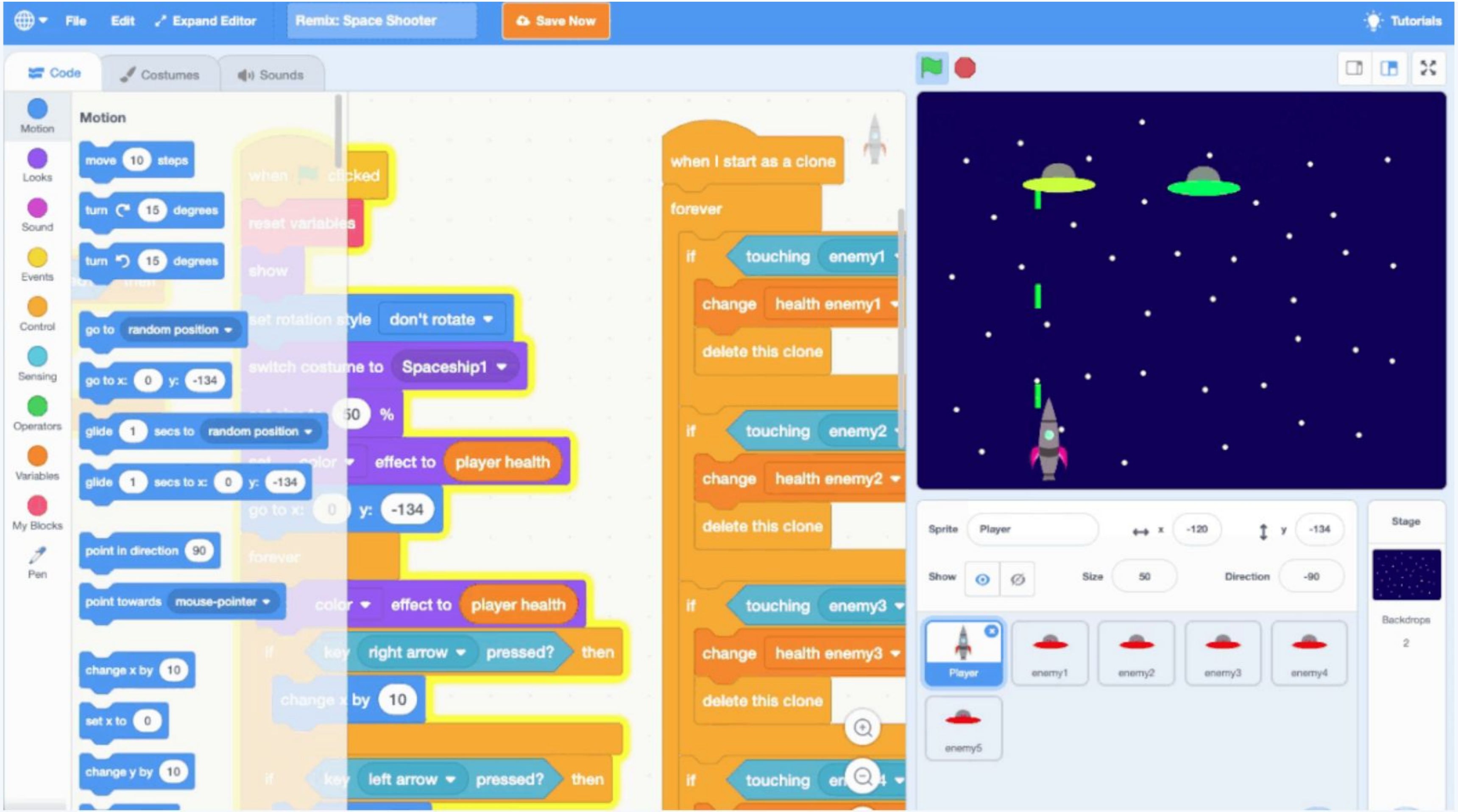
Hatch! (Grades 4-5)

Hatch is an app within KidOYO that is similar to Scratch. Students can think creatively and work collaboratively on various challenges. It is visually appealing and students will be successful in programing their own interactive stories, games, and animations with the ability to share their creations with others in our own private KidOYO online community. Hatch! Is project based learning that fosters creativity, collaboration, planning and troubleshooting.



```
when ⚑ clicked
forever
    if key up arrow pressed? then
        change y by 10
    if key down arrow pressed? then
        change y by -10
    if key left arrow pressed? then
        change x by -10
    if key right arrow pressed? then
        change x by 10
```

Students can import projects made in Sprite Editor to incorporate them into their Hatch! projects.   Block Code is used to animate and move Sprites on the coding platform.



```
when 🏁 clicked
reset variables
show
set rotation style don't rotate
switch costume to Spaceship1
set size to 50 %
set color effect to player health
go to x: 0 y: -134
forever
    set color effect to player health
    if key right arrow pressed? then
        change x by 10
    if key left arrow pressed? then
```

```
when I start as a clone
forever
    if touching enemy1
        change health enemy1
        delete this clone
    if touching enemy2
        change health enemy2
        delete this clone
    if touching enemy3
        change health enemy3
        delete this clone
    if touching en 4
```

Sprite: Player x: -120 y: -134
Show: Size: 50 Direction: -90