Author: Rana Dajani

5 ST GRADE

3.0

SCRATCH PACK
CODING PROJECTS

```
when 🚩 clicked
set rotation style  all around ▾
repeat  10
  move  10  steps
  turn ↻  15  degrees
  go to  random position ▾
  if on edge, bounce
```

start blocks

key any ▾ pressed?

when this sprite clicked

start blocks

and

say I love to ...   say

Creative Coding Book for Kids

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NEW SCRATCH - GRADE 5

Lesson **01** Introduction to Scratch

Lesson **02** Board Games

Lesson **03** Paint Trails

Lesson **04** Tricky Cups

Lesson **05** Where's Waldo

Lesson **06** Apples Basket

Lesson **07** Snake Game

Lesson **08** Motion Pixels

Lesson **09** Hangman

Lesson **10** Rolling Background

Lesson **11** Gravity Pull

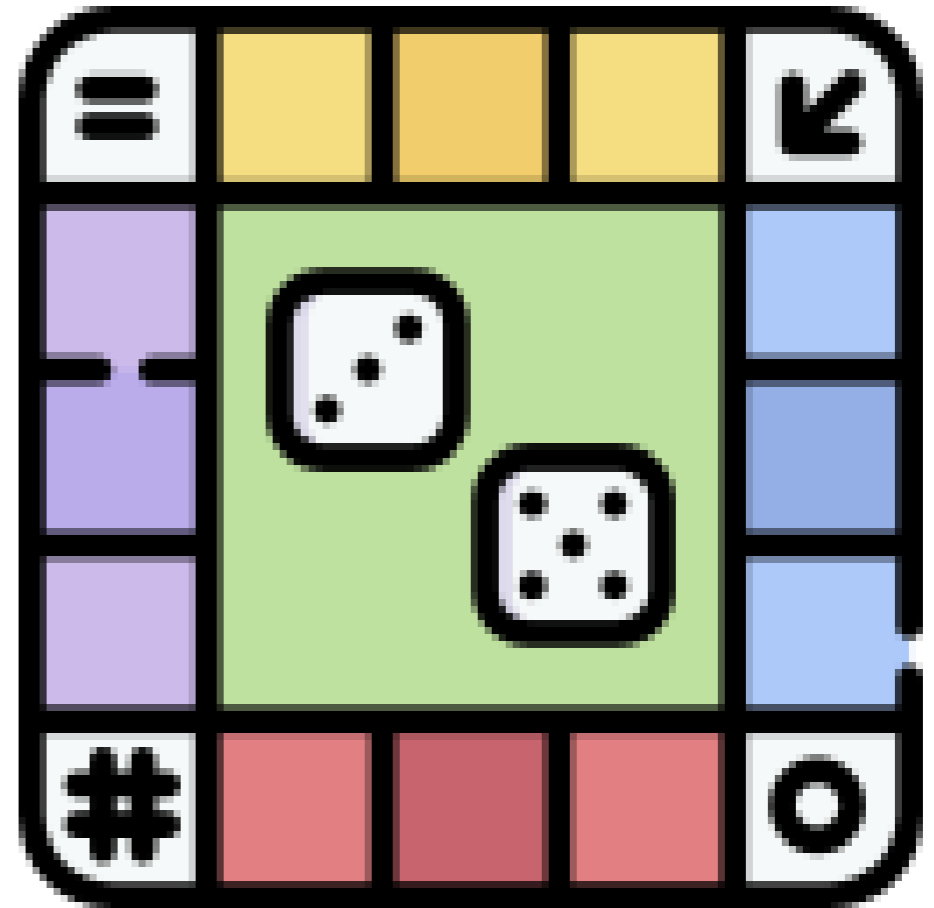Lesson **12** Switching Platforms

Lesson **13** 3D Simulation

Lesson **14** Make an Advertisement (Open Project)

Lesson **15** Music Application (Open Project)

Lesson 2
Board Games

By Rana Dajani

BOARD GAMES

1 ▶ Add your characters

2 ▶ Choose a background

3 ▶ Create a plan to follow

PLAN
1
2 3
2 4

Create a board game!

- Set up all the board positions into lists (x positions + y positions) using pen blocks
- Show a random dice costume when it's clicked
- Move the player the number of the dice costume in addition to the steps it already moved

- decide the initial characteristics of your characters you want to start with
- figure out how to set up the board positions into lists (x positions + y positions) using pen blocks
- figure out how to change the dice costume randomly when the dice is clicked
- figure out how to move the player character the number of the dice costume in addition to the steps it already moved
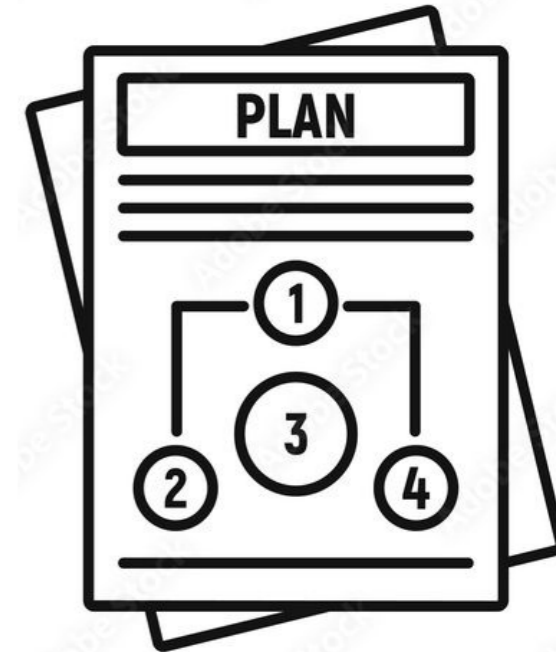
BOARD GAMES

Think about the order

```
not
```

4 ▶ Drag all the code blocks that you think you will need to the script area

When the set up message is received, the player character is used as a pen that always goes to the mouse pointer. When the mouse is down, the pen is put down and that position's coordinates are save into lists (x positions + y positions). The loop is always checking if the length of the list is greater than 32 (the number of board positions) to put the player in its start position.

```
when flag clicked
go to x: -205 y: -140
switch costume to 5

when this sprite clicked
switch costume to pick random 1 to 6
wait 1 seconds
broadcast play
```

When the dice is clicked, a random costume is chosen then message play is sent to the player character

```
when I receive set up
erase all
delete all of x positions
delete all of y positions
set pen size to 20
set pen color to ( )
forever
    go to mouse-pointer
    if mouse down? then
        pen down
        wait 0.5 seconds
        add x position to x positions
        add y position to y positions
    pen up
    if length of x positions = 32 then
        go to x: 185 y: -95
        erase all
        stop this script
```

```
when flag clicked
go to x: 185 y: -95
set moves to 0
if not (length of x positions = 32) then
    broadcast set up
```

The setup is only done once at the start of the program

```
when I receive play
set moves to (costume # of Dice) + moves
if moves > 31 then
    set moves to 32
glide 0.5 secs to x: (item moves of x positions) y: (item moves of y positions)
```

When the play message is received, the player character uses a moves variable that saves the dice costume number in addition to any previous moves taken. Then the player moves to the position of the number of moves from the x and y positions lists. If the moves are more than 31 then the moves should be 32.

Modify your program to continue the board games rules

Hint: figure out how to continue your programming to check if the player lands on a ladder block it will move up it to the top of ladder block or if it lands on a snake tail end block it will move down to the head block