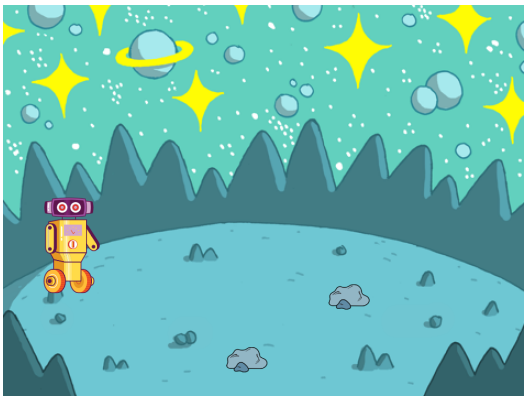
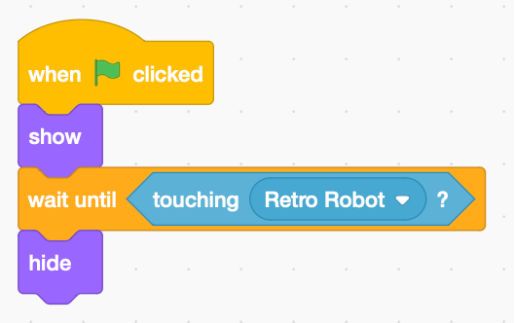
Mars Rover



Register/login at
https://scratch.mit.edu

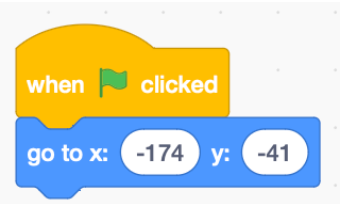
*Make the Mars rover collect rocks with a **List** of directions.*

1) Choose a robot **sprite,** a suitable planet **background**, and a rock **sprite**.
2) When the robot touches a rock, it picks it up (hides it).
   Add this code to the rock.



Clicking the green flag shows the rocks and places the rover at the start position.

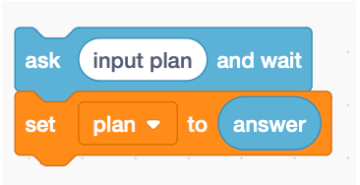
3) Place the robot at a suitable start position, add the **start** block and **go to x,y** to the robot. The x,y position is where you placed the robot.



*The plan is a list of instructions to move the robot **u** (up) **d** (down) **l** (left) **r** (right).*

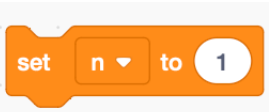
4) **Make a List** called **plan** for the robot plan.

5) Add robot code to **ask** for the input plan and **set plan to the answer**.



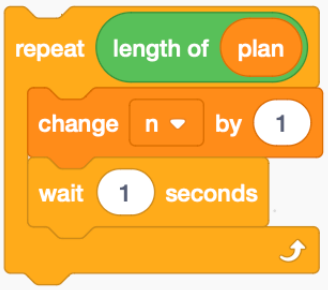
Input a plan like "ddddddrrrrruuuurrrrr" to move the robot and collect rocks. Use a loop to work through the List.

6) **Set a loop variable to 1**, for the first List item.

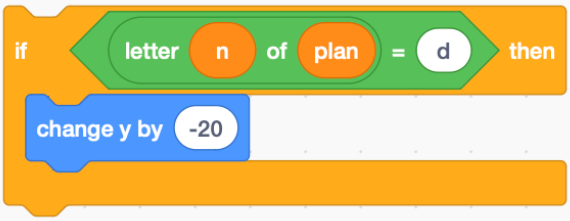


7) Add a loop that **repeats** for the **length of** the **plan**.

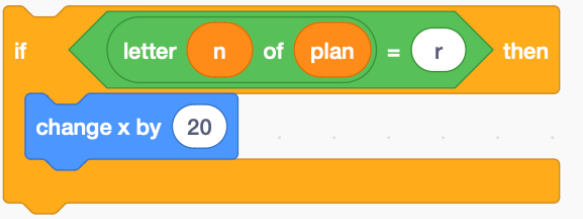
8) Inside the repeat loop, **change n by 1** each time around, and **wait** a second.



9) The **first** thing it should do **inside** the loop (before **change n**) is move the robot in the direction given by **letter n of the plan**. **If** this is **equal(=)** to **d** then **change y** negatively to move down.



10) Check for **r** (right) and **change x** positively **if** it finds it.



*Run your code with the **green flag**,*
***d** and **r** might be enough to collect one rock.*

Duplicate the rock.
*Do you need to add code for **u** (change y positively) or **l** (change x negatively) instructions now?*

Save** your code with a good name. **File > Save now