Grade 3 Late Assessment - Teacher Resource

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Front Matter

This assessment includes 6 items from two CT topics (3 Sequencing items; 3 Repetition). Four items (#2, #3, #5, and #6) use images of the Scratch interface and/or Scratch blocks.

Each item has an exemplar response(s) and a scoring guide and/or rubric included (and when applicable, other information to help with interpreting student responses). The scoring guidance and rubrics were developed by our project to assist in coding and interpreting student responses, and are explicitly focused on using student responses to make inferences about the relevant knowledge, skills, and abilities that we identified from the learning trajectories and built into our item design process. As such, other end users of these assessment instruments may choose to adapt the scoring guidance and/or rubrics to match their purposes and students.

One of the items (#5) has an associated rubric which is included in the items' details.

Items

#01

Meta-data

- Item code: S.05.a
- Trajectory: Sequencing

Item

In Problems 1, circle True or False.
1) When building a script in Scratch you can put blocks in any order without changing what the script does.

- **True**
- **False**

Exemplar response(s)

False

Scoring Guidance

- True=0
- False= 1

Rubric(s)

None

#02

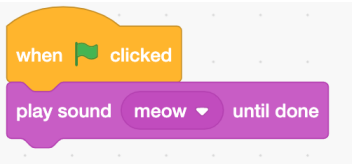
Meta-data

- Item code: R.03.a
- Trajectory: Repetition

Item

2) Circle the script that will play the “meow” sound twice and then stop.

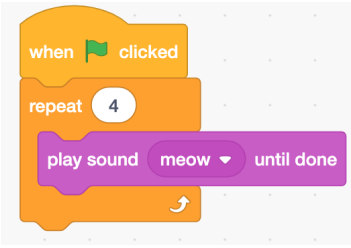
A.



Alt Text Description: [A script displays blocks in the following order:

1. Event block: when the green flag is clicked
2. Sound block: plays sound “meow” until done]

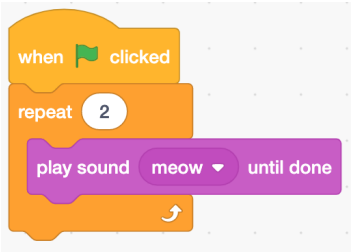
B.



Alt Text Description: [A script displays blocks in the following order:

1. Event block: when the green flag is clicked
2. Control block:
    a. This repetition loop control block, which repeats 4 times, contains one block
        i. Sound block: plays sound “meow” until done]

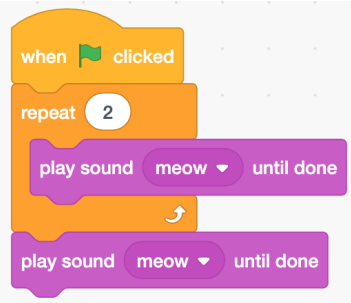
C.



Alt Text Description: [A script displays blocks in the following order:

1. Event block: when the green flag is clicked
2. Control block:
    a. This repetition loop control block, which repeats 2 times, contains one block
        i. Sound block: plays sound “meow” until done]

D.



Alt Text Description: [A script displays blocks in the following order:

1. Event block: when the green flag is clicked
2. Control block:
    a. This repetition loop control block, which repeats 2 times, contains one block
        i. Sound block: plays sound “meow” until done
3. Sound block: plays sound “meow” until done]

Exemplar response(s)

C

Scoring Guidance

- "C" = 1;
- any other choice = 0

Rubric(s)

None

#03

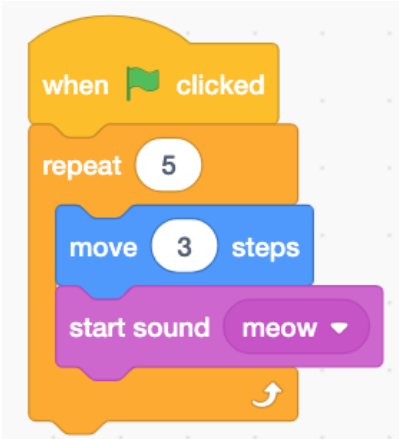
Meta-data

- Item code: R.07.c
- Trajectory: Repetition

Item

3)

This script is for the cat sprite.



Alt Text Description: A script displays blocks in the following order:

1. Event block: when the green flag is clicked
2. Control block:
    a. This repetition loop control block, which repeats 5 times, contains two blocks
        i. Motion block: moves 3 steps
        ii. Sound block: plays sound “meow”]

a. When you click the green flag, how many steps will the cat take?

A. 3 steps
B. 5 steps
C. 8 steps
D. 15 steps

b. When you click the green flag, how many times will the sound “meow” play?

A. 3 times
B. 5 times
C. 8 times
D. 15 times

Exemplar response(s)

a) 15 steps
b) 5 times

Scoring Guidance

- Scored in two parts (Part a: "D" = 1; Part b: "B" = 1).

Rubric(s)

None

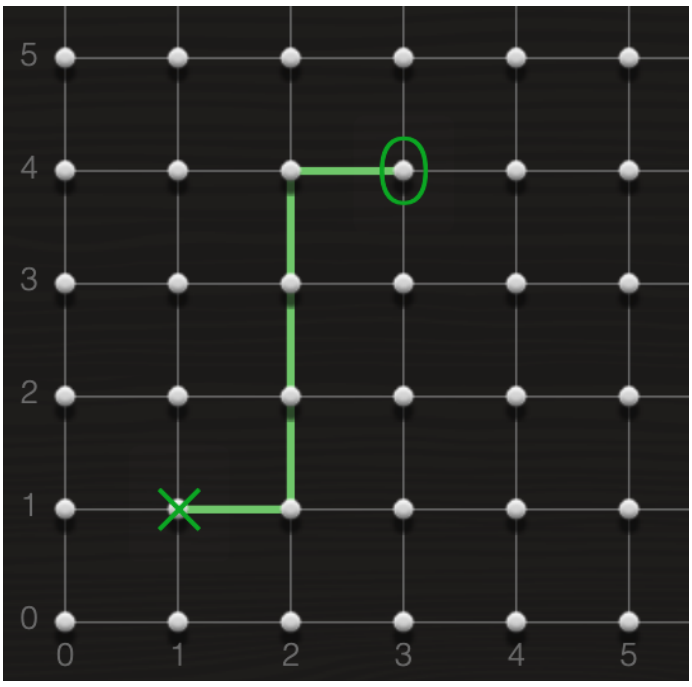
#04

Meta-data

- Item code: S.12.a
- Trajectory: Sequencing

Item

4) Pretend you are standing at the **X**. Write instructions for moving along the path from the **X** to the **O**.



Your instructions:

Alt Text Description:

[Displays a 6 by 6 dot grid, with both the X and Y axes labeled 0 to 5. Two symbols are overlaid on the grid and a path between them is highlighted. There is an “X” at coordinates (1,1) and a circle at coordinates (3, 4). The highlighted path from the “X” to the circle is as follows: (1,1) to (2,1), to (2,4), then to (3,4).]

Exemplar response(s)

Answers might vary in how students describe their directions, but should somehow indicate the correct order and direction of movement.

Example 1:

1. Move 1 dot right
2. Move 3 dots up
3. Move 1 dot right

Example 2:

1. Turn right
2. Move forward 1
3. Turn left
4. Move forward 3
5. Turn right
6. Move forward 1

Scoring Guidance

- must provide directions (including number of steps) to move from the X to the circle = 1
- incorrect/incomplete directions (and/or steps) = 0

Rubric(s)

None

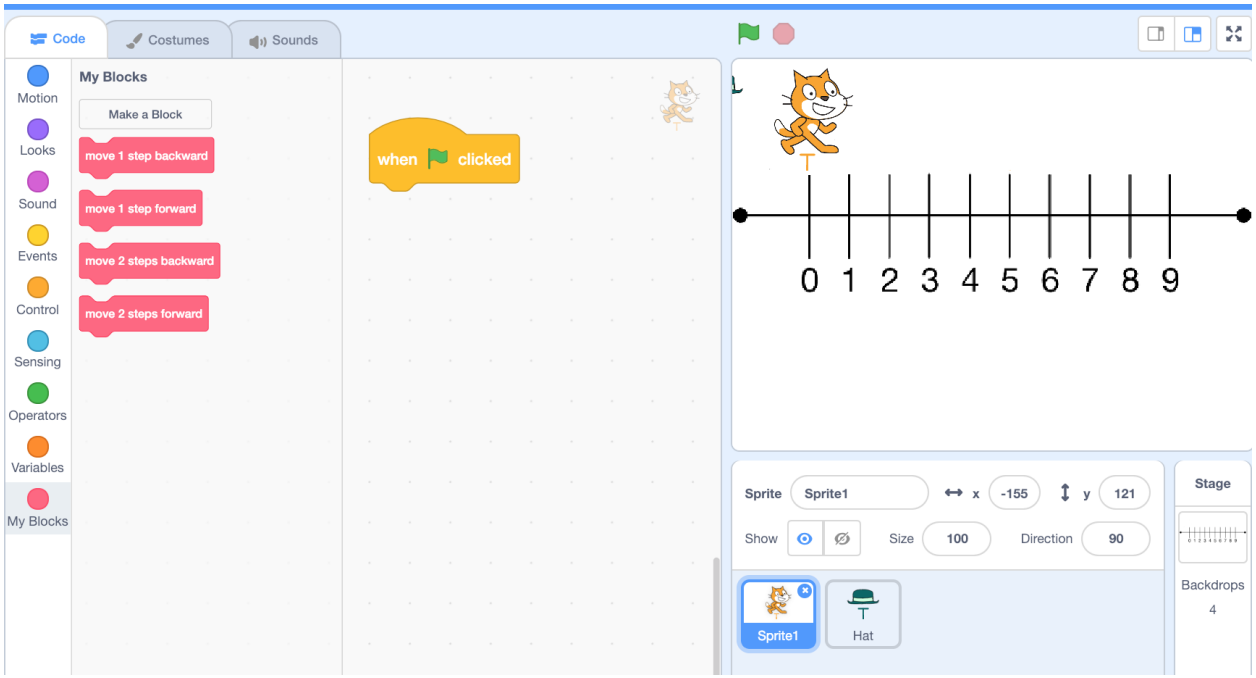
#05

Meta-data

- Item code: S.01.a
- Trajectory: Sequencing

Item

5)



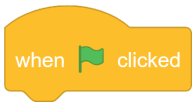
Alt Text Description: [A Scratch environment displays the following independent blocks in the "Make a Block" section:

- move 1 step backward
- move 1 step forward
- move 2 steps backward
- move 2 steps forward

In the workspace section a "when the green flag is clicked" event block is displayed. In the stage section a number line ranging from 0 to 9 with a cat on position 0 is displayed.]

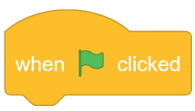
Create 2 different scripts (sets of instructions) to move the cat so that he stops at 5 on the number line. **Use only the blocks shown above.** Write or draw your scripts in the boxes.

Script A



Alt Text Description: ["when the green flag is clicked" event block]

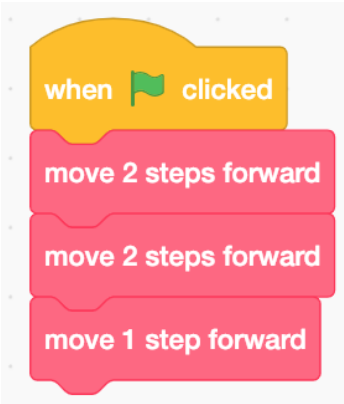
Script B



Alt Text Description: ["when the green flag is clicked" event block]

Exemplar response(s)

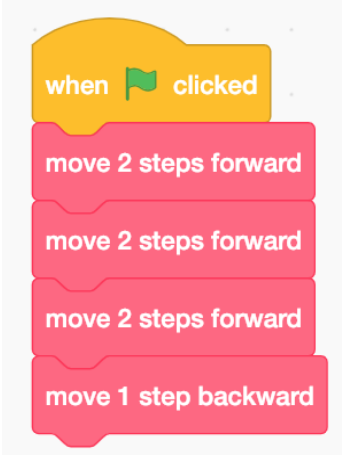
Script A



Alt Text Description: [A script displays blocks in the following order:

1. Event block: when the green flag is clicked
2. move 2 steps forward
3. move 2 steps forward
4. move 1 step forward]

Script B



Alt Text Description: [A script displays blocks in the following order:

1. Event block: when the green flag is clicked
2. move 2 steps forward
3. move 2 steps forward
4. move 2 steps forward
5. move 1 step backward]

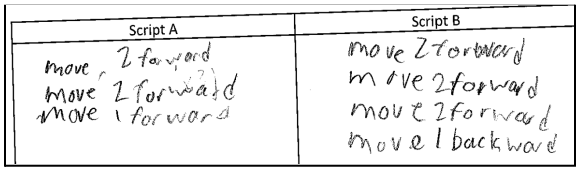
Note: Any combination of forward and backward steps is acceptable as long as the cat stops at 5.

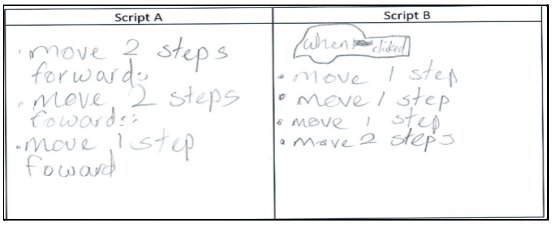
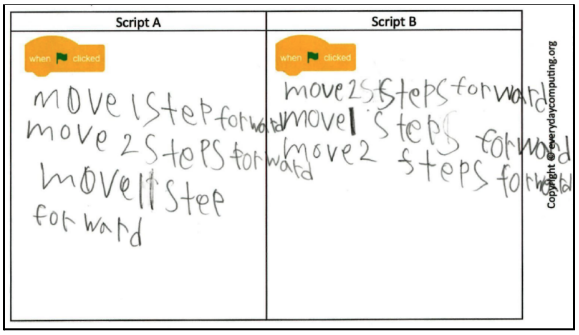
Scoring Guidance

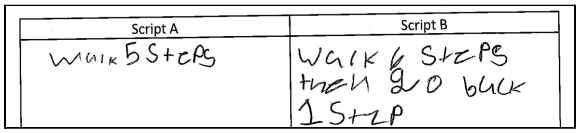
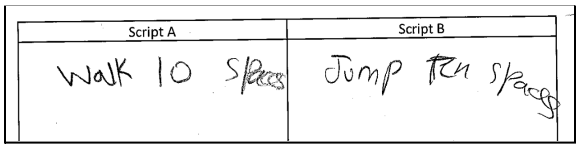
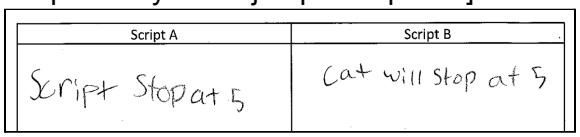
See Rubric

Rubric(s)

This rubric focuses on two important features of this item that relate back to this item's design principles: (1) did the students use the given blocks to achieve the intended outcome and (2) did the students show two different code blocks that would both produce the same intended outcome? The rubric creates different levels of performance based upon those two features.

Score	Description	Example
3	Provides 2 correct ways to get to 5 using the **given*** blocks	 Alt Text Description: [The student writes responses for Script A and Script B. They provide the following steps for Script A:

		• Move 2 forward • Move 2 forward • Move 1 forward They provide the following steps for Script B: • Move 2 forward • Move 2 forward • Move 2 forward • Move 1 backward]  Alt Text Description: [The student writes responses for Script A and Script B. They provide the following steps for Script A: • Move 2 forward • Move 2 forward • Move 1 forward They provide the following steps for Script B: • When flag is clicked • Move 1 step • Move 1 step • Move 1 step • Move 2 steps]
2	Provides 1 way to get to 5 with the **given*** blocks [Clarification: The students' 2nd way might be correct (but using not given blocks), or might be incorrect (using either given or not given blocks) or might be blank.]	 Alt Text Description: [The student writes responses for Script A and Script B. They provide the following steps for Script A: • Move 1 step forward • Move 2 steps forward • Move 1 step forward They provide the following steps for Script B: • Move 2 steps forward • Move 1 step forward

		• Move 2 steps forward]
1	Provides 2 correct ways to get to 5 using blocks that are **not given***	 Alt Text Description: [The student writes responses for Script A and Script B. For Script A they write: walk 5 steps. For Script B they write: walk 6 steps then go back 1 step]
0	Shows incorrect block usage (cat will not reach Step 5), or provides only 1 way to get to 5 with blocks that are **not given***	 Alt Text Description: [The student writes responses for Script A and Script B. For Script A they write: walk 10 spaces. For Script B they write: jump ten spaces]  Alt Text Description: [The student writes responses for Script A and Script B. For Script A they write: script stops at 5. For Script B they write: cat will stop at 5]

Note. “Given block” means that the student is constrained to using commands that move the cat either 1 or 2 steps, in either a forward or backward direction.

- ***Given blocks** define a limited number of steps and directions. Valid options are 1 step backward; 1 step forward; 2 steps backward; 2 steps forward.
- ***Non-given blocks** would be other blocks (e.g., “repeat 5 times”) or blocks that do not use the defined number and direction (e.g., “move 5 steps forward”).

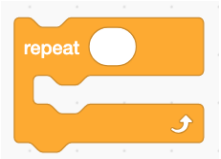
#06

Meta-data

- Item code: R.01.c
- Trajectory: Repetition

Item

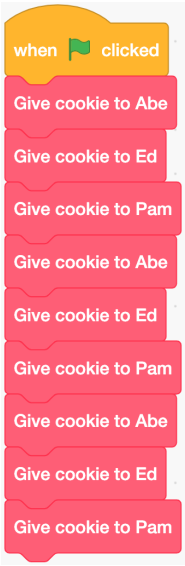
6) Eve has 9 cookies to give away to her friends Abe, Ed, and Pam. She wants to give each friend an equal number of cookies. Eve wrote a script for how to give away the cookies.



Alt text description: [a repeat loop block].

Modify Eve's script. Use a **repeat** block at least once.

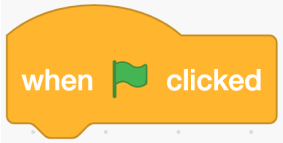
Eve's Script:



Alt text description: [A script displays blocks in the following order:

1. Event block: when the green flag is clicked
2. Give cookie to Abe
3. Give cookie to Ed
4. Give cookie to Pam
5. Give cookie to Abe
6. Give cookie to Ed
7. Give cookie to Pam
8. Give cookie to Abe
9. Give cookie to Ed
10. Give cookie to Pam]

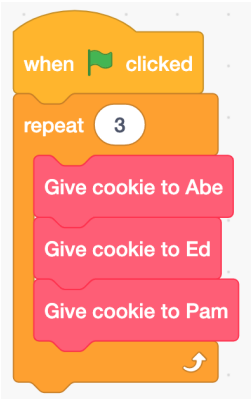
Your Script:



Alt text description: [Event block: when the green flag is clicked]

Exemplar response(s)

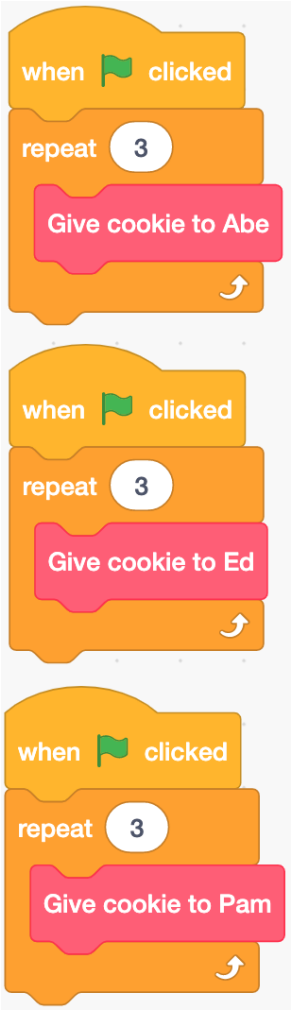
Example 1



Alt text description: [A script displays blocks in the following order:

1. Event block: when the green flag is clicked
2. Control block:
    a. This repetition loop control block, which repeats 3 times, contains three blocks
        i. Give cookie to Abe
        ii. Give cookie to Ed
        iii. Give cookie to Pam]

Example 2



Alt text description: [three separate scripts that display as in the following order:

Script 1:

1. Event block: when the green flag is clicked
2. Control block:
    a. This repetition loop control block, which repeats 3 times, contains one block
        i. Give cookie to Abe

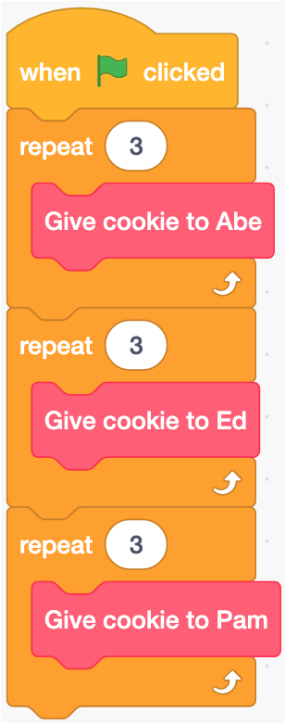
Script 2:

1. Event block: when the green flag is clicked
2. Control block:
    a. This repetition loop control block, which repeats 3 times, contains one block
        i. Give cookie to Ed

Script 3:

3. Event block: when the green flag is clicked
4. Control block:
    a. This repetition loop control block, which repeats 3 times, contains one block
        i. Give cookie to Pam]

Example 3



Alt text description: [A script displays blocks in the following order:

1. Event block: when the green flag is clicked
2. Control block:
    a. This repetition loop control block, which repeats 3 times, contains one block
        i. Give cookie to Abe
3. Control block:
    a. This repetition loop control block, which repeats 3 times, contains one block

        i. Give cookie to Ed
4. Control block:
    a. This repetition loop control block, which repeats 3 times, contains one block
        i. Give cookie to Pam]

Scoring Guidance

- Similar to exemplar =1
- Incorrect way = 0
- Must use "repeat 3 times" instruction

Rubric(s)

None