Work with a partner
of same ability

Count controlled loops

GIRL COMPLETION CHALLENGE

All the point in direction blocks have been accidentally set to –90 degrees which is point left.
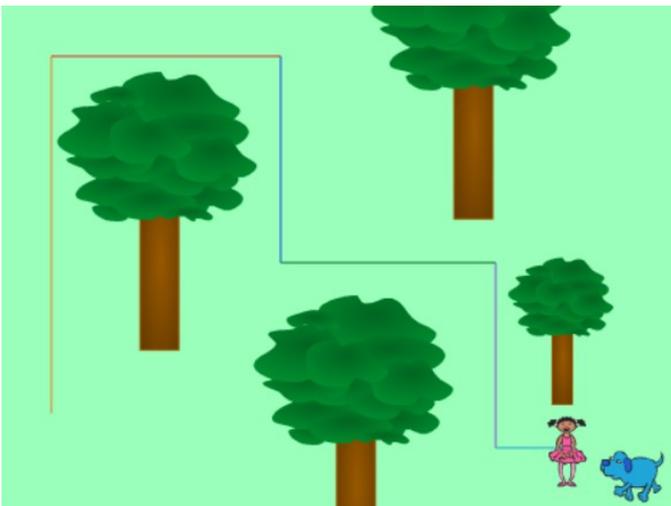
Underline all the pointing parts of the algorithm on the right.

Circle all the count controlled loops and their contents on the right.

Read the algorithm on the right to work out what the correct direction should be.

Change the code to the correct directions

The girl should walk in this path if you have changed it correctly.

Girl program algorithm
Start in the bottom left of the screen (use x, y)
Rub out old lines
Start drawing (pen down)
Point up (0 degrees)
Girl tells user what she is doing
Pen colour to orange
Loop 250 times
    Walk one step
Girl calls for puppy
Point right (90 degrees)
Pen colour to red
Loop 160 times
    Walk one step
Say something about dog liking trees
Point down (180 degrees)
Pen colour to blue
Loop 145 times
    Walk one step
Say something cute
Point right (90 degrees)
Pen colour to green
Loop 150 times
    Walk one step
Point down (180 degrees)
Think something about dog being naughty
Pen colour purple
Loop 130 times
    Walk one step
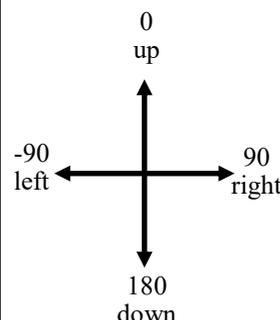Point right (90 degrees)
Pen colour light blue
Loop 50 times
    Walk one step
Say something at the end

Direction finder

0
up

-90
left

90
right

180
down

Name

Work with a partner
of same ability

USE (Run the code and answer the questions. Don't make any changes)

Look at the code inside the Girl

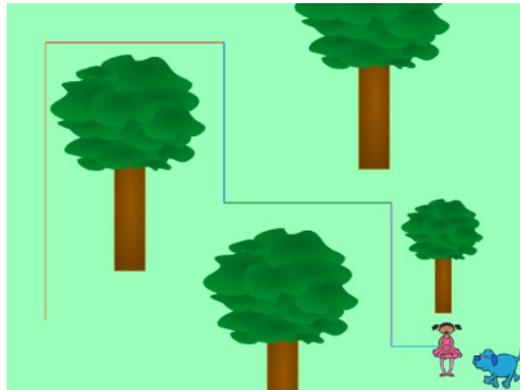**Girl Sprite Questions**

1, Which block starts the code?

2, What is the first thing the girl says?

Count controlled loop

repeat 3

3, How many count controlled loops are there?

4, How many times will the first **move 1 step** code block be run when the program has started? HINT What is it inside?

5, What is the smallest count controlled loop?

6, Each loop draws a line. Draw a line to connect the loop to its coloured line.

7, Which block changes
the girls direction?

repeat 250
move 1 steps

repeat 50
move 1 steps

repeat 130
move 1 steps

Look at the code inside the Dog

Dog Sprite Questions

8, Why does the dog wait until the Girl arrives?

9, Which blocks get repeated 20 times?

Now mark your **USE** work using the answer sheep

Name

Start Scratch and load
dogchase

MODIFY Questions (Run the code and make changes)
1, Can you make the Girl say something different when she finally finds the dog?
What did you change?

2, Can you make the Girl bump into the dog at the end?
What did you change?

3, Can you make the dog say something after the girl bumps into him?
What code did you add? HINT Wait until touching…..

4, Can you make the dog go twice as fast but still only go the same distance?
What did you change? HINT You will need to make two changes

Now mark your **USE** work using the answer sheep

Name

Count controlled loops

CREATE INSIDE (Choose one or more of these to make)

1, Design and program your own route through the trees for the girl to take. Keep the code and modify it. Draw your new route on the picture below.

2, Add another character to the woods that the girl meets. Program the character to do or say something when the girl touches them.

3, Program the large tree to say or do something when the girl touches it.

4, Draw a spider sprite that drops out of a tree using the pen command as its web. Drag the sprite to its start position and drag out a go to x and y block so the spider always starts in the same position (initialisation).

CREATE NEW (Do this if you have time or make it at home)
Design and make your own moving animation using count controlled loops. Draw a picture below to help you plan it.

My idea	My design

Name

USE (Run the code and answer the questions. Don't make any changes)

Look at the code inside the Girl

Girl Sprite Questions

1, Which block starts the code?

When green flag clicked (1 mark)

2, What is the first thing the girl says?

Where is my dog? (1 mark)

3, How many count controlled loops are there?

6 (they are called repeat loops in Scratch) (1 mark)

4, How many times will the first **move 1 step** code block be run when the program has started? HINT What is it inside?

250 as it is inside a loop (1 mark)

5, What is the smallest count controlled loop?

Repeat 50 (1 mark)

6, Each loop draws a line. Draw a line to connect the loop to its line.

7, Which block changes the girls direction?

Point in direction (1 mark)

1 mark for each correct arrow (max 3 marks)

Dog Sprite Questions

8, Why does the dog wait until the Girl arrives?

Wait until touching girl (1 mark)

9, Which blocks get repeated 20 times?

Next costume & wait 0.3 secs (1 mark for both max 2 marks)

MODIFY Questions (Run the code and make changes)

1, Can you make the Girl say something different when she finally finds the dog?

What did you change?

Change say there you are to something else (1 mark)

2, Can you make the Girl bump into the dog at the end?

What did you change?

Change repeat 50 loop to a higher number (1 mark)

3, Can you make the dog say something after the girl bumps into him?

What code did you add? HINT Wait until touching…..

Add a wait until touching dog section and then a say command after this (1 mark)

4, Can you make the dog go twice as fast but still only go the same distance?

What did you change?

Change repeat 130 to repeat 65 and increase move 2 steps to move 4 steps (1 mark)

Change repeat 120 to repeat 60 and increase move 1 steps to move 2 steps (1 mark)

(other correct answers are available)