Toy Give Away App
PRIMM Page 1
Don't load Scratch
Work with a partner

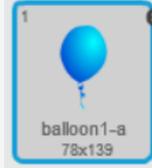**Count-Controlled-Loop**

```
repeat 3
```

Beachball
```
when this sprite clicked
go to x: -37 y: -1
point in direction 0
repeat 4
    move 20 steps
    wait 0.5 secs
    move -20 steps
    wait 0.5 secs
```

Balloon Costumes
```
when this sprite clicked
go to x: -53 y: 77
switch costume to balloon1-a
repeat 3
    next costume
    wait 1 secs
```

balloon1-a 78x139
balloon1-b 78x139
balloon1-c 78x139

Bowtie
```
when this sprite clicked
set size to 160 %
go to x: 64 y: -14
point in direction 90
set size to 240 %
repeat 100
    turn 15 degrees
point in direction 90
set size to 160 %
```
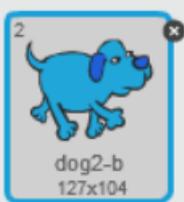
Dog Costumes
dog2-a 127x110
dog2-b 127x104
```
when this sprite clicked
go to x: 43 y: 48
point in direction -90
repeat 20
    switch costume to dog2-a
    wait 0.3 secs
    switch costume to dog2-b
    wait 0.3 secs
```
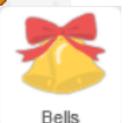
Bells
```
when this sprite clicked
go to x: 143 y: 43
point in direction 80
repeat 5
    turn 20 degrees
    play sound large cowbell
    wait 1 secs
    turn 20 degrees
    play sound large cowbell
    wait 1 secs
```

Reading Code

1, How many count controlled loops can you spot in the programming above?

2, Which loop repeats the most? Which loop repeats the least?

3, Which loop doesn't have a pause inside the loop?

Predicting

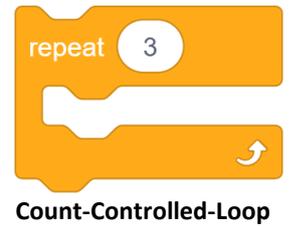Read the code carefully with your partner section by section. Write down what you predict it will do.

Beachball	Balloon	Bowtie	Bells	Dog

Name

code-it.co.uk

Toy Give Away App
PRIMM Page 2
Start Scratch and load toygiveaway

repeat 3
Count-Controlled-Loop

Run the code
Play toygiveaway a few times.
Did you predict the outcomes?
Mark your reading code and prediction matches on page 1 using the answer sheep.

Investigate (Run the programs lots of times but don't change the code)
Look at the code inside **balloon** and answer these questions.
1, When the sprite is clicked, how many times will next costume be run?

Balloon

2, How long is there between each costume change?

3, Complete the sequence that could replace the code inside the balloon loop.
next costume, wait 1 secs, next costume,

Look at the code inside the **bowtie** and answer these questions.
4, Which direction is the bowtie pointing before it spins? (number of degrees)

Bowtie

5, What is the largest percentage % the bowtie grows to?

Look at the code inside the **beachball** and answer these questions.
6, When the sprite is clicked how many times does it wait for 0.5 seconds?

Beachball

7, What direction does –20 move the ball, up or down?

Now mark the investigate questions using the answer sheep

Modify (Make small changes to the code)
1, Adapt the code to make the **dog** walk slower. Describe what you changed.

2, Adapt the code to make the **bell** swing in a wider arc. Describe what you changed.

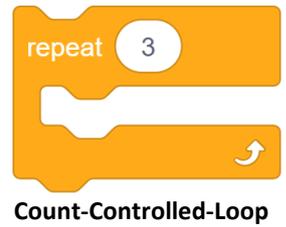3, Make the **bowtie** spin slower. Describe what you changed.

4, Make the **balloon** change through all the colours twice. Describe what you changed.

5, Make the **beachball** bounce higher. Describe what you changed.

Now mark the modify questions using the answer sheep

Name

Work with a partner
of same ability

repeat   3

Count-Controlled-Loop

Make easier choice (Choose one or more of these ideas first)

1, Look for another toy sprite to add to the table. Decide what the toy is going to do. Adapt one of the ideas from **toygiveaway** such as moving up-down, rotating, changing costumes, playing a sound etc to program the toy to do something when clicked on.

2, Find two character that have multiple costumes (not all sprites have multiple costumes). Animate them to look like they are moving for a short period of time using a count controlled loops.

Make harder choice (Choose one or more of these ideas second)

1, Make your own scene with sprites that do something when they are clicked. You must use count controlled loops as part of each sprites programming.

2, Make a sprite move around the screen using multiple count controlled loops, the move steps and the point in direction blocks.

3, Make your own program that uses count controlled loops.

Use the space below to plan

Self & Teacher Assessment
Pupils draw a line to show how far you understand and can use count controlled loops.
Pupils put a large dot on the line if you have programming evidence to prove it and write the name of the saved scratch document next to it. Tell your teacher.
Teachers highlight any dots you have checked personally.

	Understand concept and can write everyday algorithm using it	Can modify it and answer questions about it	Can use it independently within the genre it was taught in	Can use it independently outside of the genre it was taught in
Count controlled Loops Line starts here →				

Name

(genre= type of programming it is. The genre of this program is an interactive animated scene)
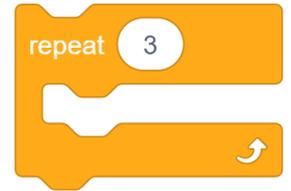
repeat 3

Count-Controlled-Loop

Reading Code

1, How many count controlled loops can you spot in the programming above?

5 (1 mark)

2, Which loop repeats the most? Which loop repeats the least?

Most Bowtie 100 times (1 mark) Least Balloon 3 times (1 mark)

3, Which loop doesn't have a pause inside the loop?

Bowtie (1 mark)

Predicting

Read the code carefully with your partner section by section. Write down what you predict it will do. (1 mark for each correct prediction maximum 5 marks)

Beachball	Balloon	Bowtie	Bells	Dog
Move up and down	Change colour of the balloons	Spin or rotate right	Move from side to side and play sound	Look like it is walking

Toy Give Away App
PRIMM Page 2 Answer Sheep
INVESTIGATE
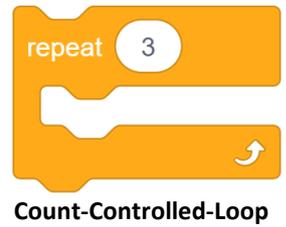
Count-Controlled-Loop

Investigate (Run the programs lots of times but don't change the code)
Look at the code inside balloon1 and answer these questions.
1, When the sprite is clicked, how many times will next costume be run?
3 times (1 mark)
2, How long is there between each costume change?
1 second (1 mark)
3, Complete the sequence that could replace the code inside the balloon loop.
next costume, wait 1 secs, next costume, wait 1 secs, next costume, wait 1 secs (1 mark)
Look at the code inside the bowtie and answer these questions.
4, Which direction is the bowtie pointing before it spins? (number of degrees)
90 degrees (pointing right) (1 mark for mention of 90 degrees)
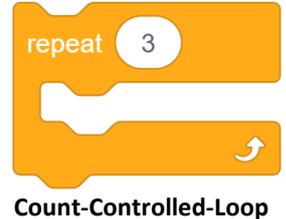5, What is the largest percentage % the bowtie grows to?
240% (1 mark)
Look at the code inside the beachball and answer these questions.
6, When the sprite us clicked how many times does it wait for 0.5 seconds?
8 times (1 mark)
7, What direction does –20 move the ball, up or down? Down (1 mark)

Toy Give Away App
PRIMM Page 2 Answer Sheep
MODIFY

Count-Controlled-Loop

Modify (Make small changes to the code)
1, Adapt the code to make the **dog** walk slower. Describe what you changed.
Increase both waits to numbers larger than 0.3 (1 mark)
2, Adapt the code to make the **bell** swing wider. Describe what you changed.
Change the turn right and turn left degrees to numbers larger than 20 (1 mark)
3, Make the bowtie spin slower. Describe what you changed.
Reduce the amount of turn to less than 15 degrees (1 mark)
4, Make the balloon change through all the colours twice. Describe what you changed.
Increase the number of repeats to 6 (1 mark)
5, Make the beachball bounce higher. Describe what you changed.
Change the move 20 steps to a higher number (1 mark)

Name