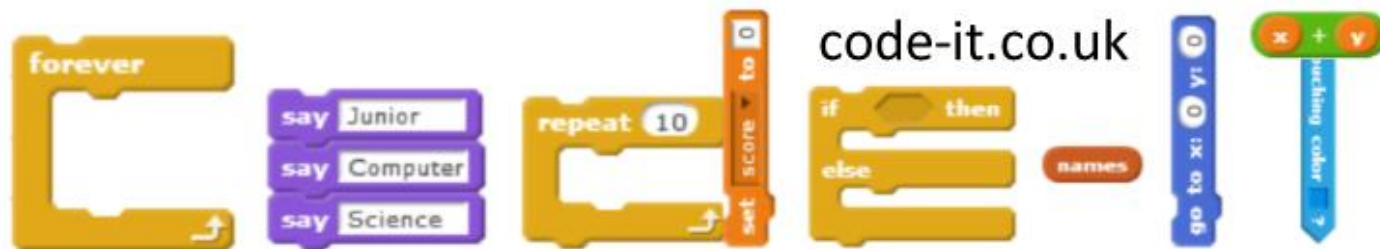


Count Controlled Loops

v2

Supported by



code-it.co.uk

By Phil Bagge

[HIAS](#) Computing
Inspector / Advisor

[CAS](#) Community Leader

Author of the
[code-it](#) resources

Everyday repetition

Music loops

Can you think of any other songs with loops?

I know a song that will
get on your nerves }
Get on your nerves } repetition
Get on your nerves }
I know a song that will
get on your nerves }
Get on your nerves } repetition
Get on your nerves }
I know a song that will
get on your nerves x3 } repetition

<https://www.youtube.com/watch?v=1mgpZ3gaYv0>

Everyday repetition

Dance loops

Which parts
of the dance
are repeated?



[Better when I'm Dancing - Meghan Trainor - Easy Kids Dance Warming Up Video - Choreography](#)

Everyday repetition

Dance loops

Which parts
of the dance
are repeated?



[Brain Breaks - Action Songs for Children - Happy Dance - Kids Songs by The Learning Station](#)

Count controlled Loops


do 4 times
wave

Can you roleplay
this everyday
algorithm?

Count controlled Loops

do 4 times
wave

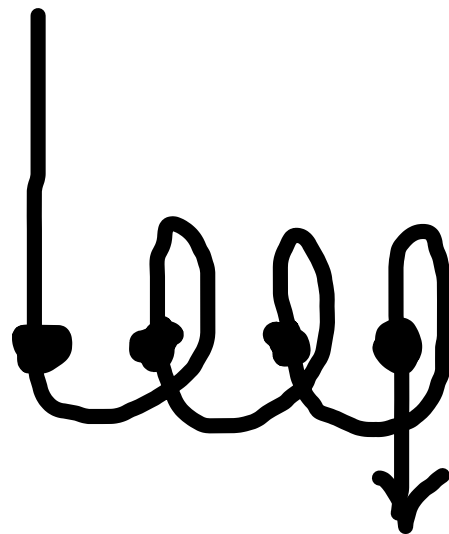
Wave
Wave
Wave
wave



Did you carry out
these actions?

Flow of control

do 4 times
wave



Inside and Outside the loop


stand

loop 4 times

wave

bow

sit



What actions are
inside the loop?

Inside and Outside the loop

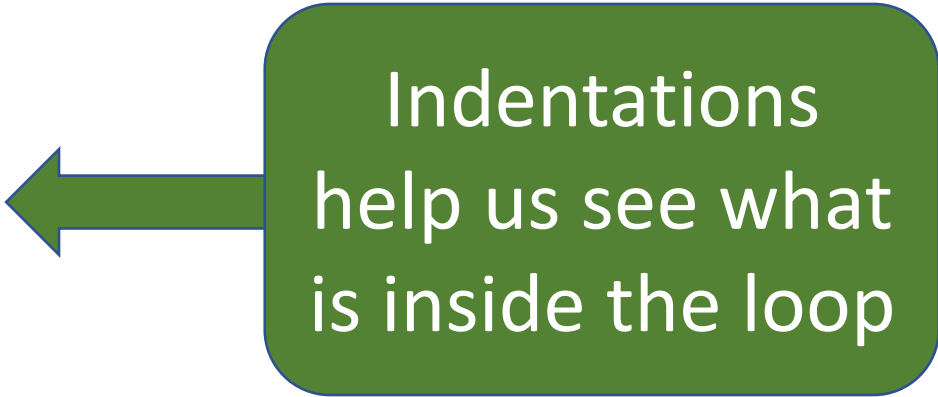
stand

loop 4 times

→ wave

→ bow

sit



Indentations
help us see what
is inside the loop

Inside and Outside the loop

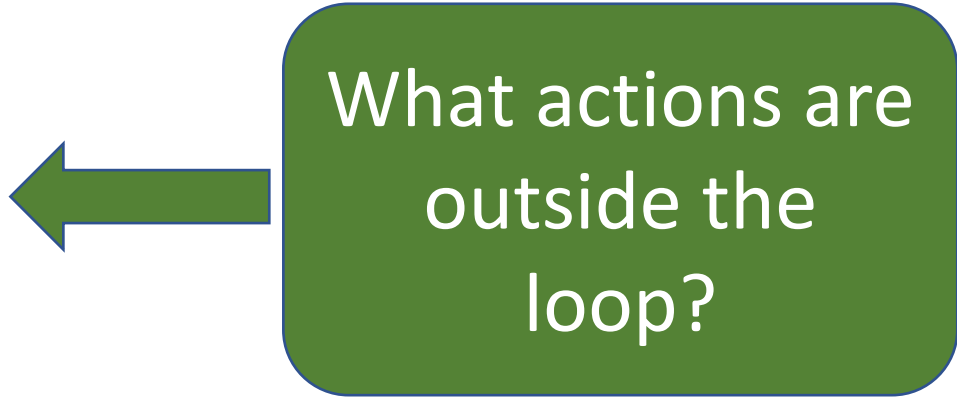
stand

loop 4 times

wave

bow

sit



What actions are
outside the
loop?

Inside and Outside the loop

stand

loop 4 times

wave

bow

sit

No indentations
mean these
actions are
outside the loop

Inside and Outside the loop

stand

loop 4 times

wave

bow

sit

Can you roleplay
this everyday
algorithm?

Inside and Outside the loop

stand

loop 4 times

wave

bow

sit

stand

Wave

Bow

Wave

Bow

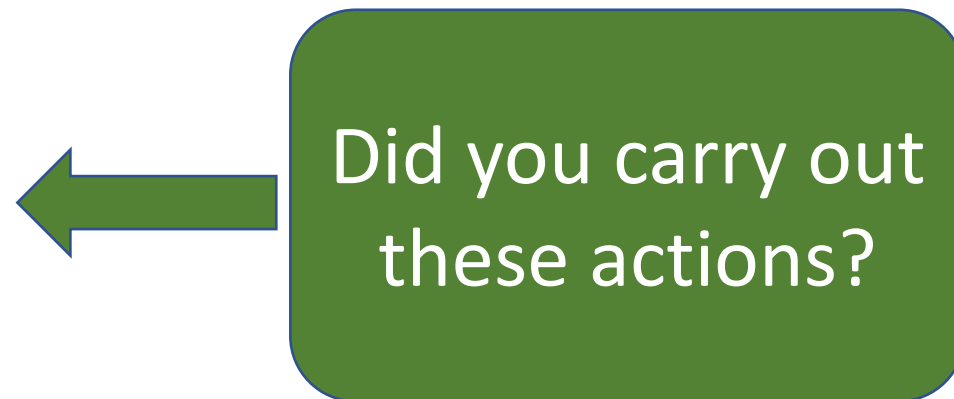
Wave

Bow

Wave

Bow

sit



Flow of control

stand

loop 4 times

wave

bow

sit

Can you draw
the flow of
control?

Flow of control

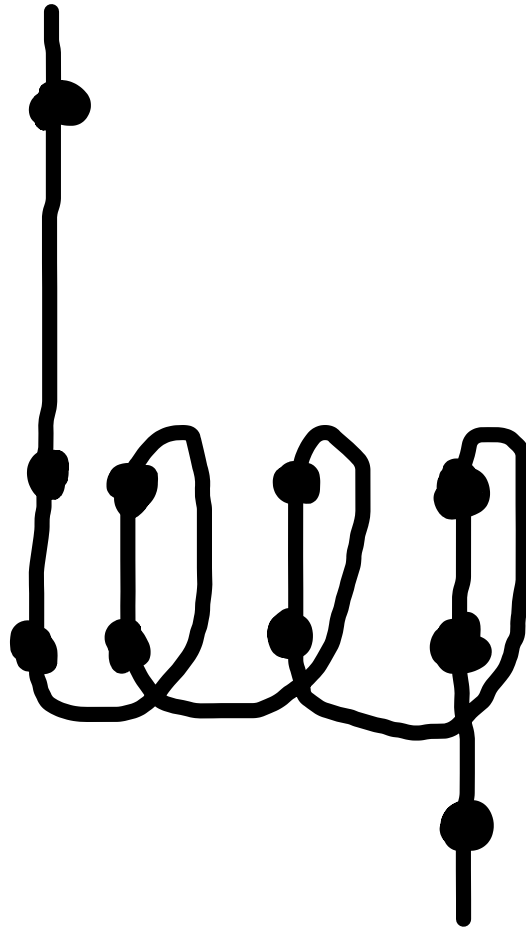
stand

loop 4 times

wave

bow

sit



Did your line do this?

Did you add dots to show actions?

stand

loop 2 times

say pig

Sit

Do 3 times

wave

grin

Say end

How many loops
are there?

stand

loop 2 times

say pig

Sit

Do 3 times

wave

grin

Say end

Two
Loops

stand

loop 2 times

say pig

Sit

Do 3 times

wave

grin

Say end

Draw the flow of
control

stand

loop 2 times

say pig

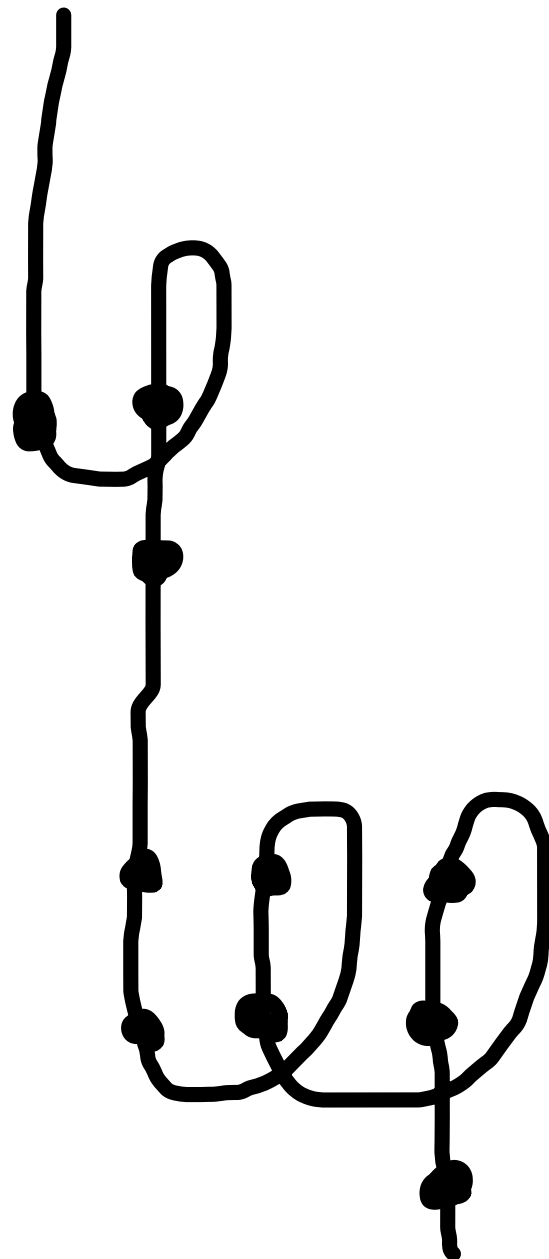
Sit

Do 3 times

wave

grin

Say end



Did your line
do this?

Did you add
dots to show
actions?

Count controlled Loops

smile


loop 3 times

stand

sit

do 4 times

bow



Now write your own everyday algorithm that uses count controlled loops

Can your neighbour act it out?

One mark if it makes sense
One mark if each action is on a new line
One mark if you indent the actions

Count controlled Loops

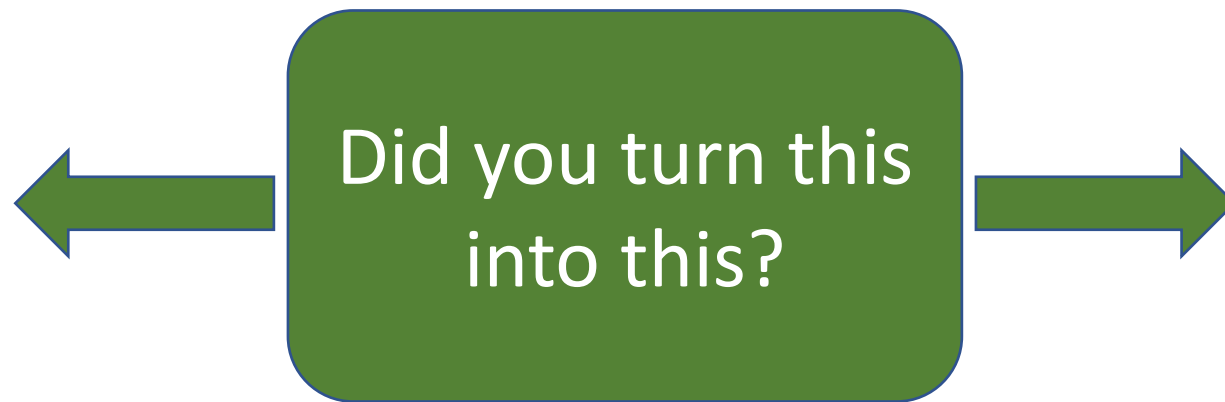
bow
jump
bow
jump
bow
jump

Can you turn this sequence into a count controlled loop?



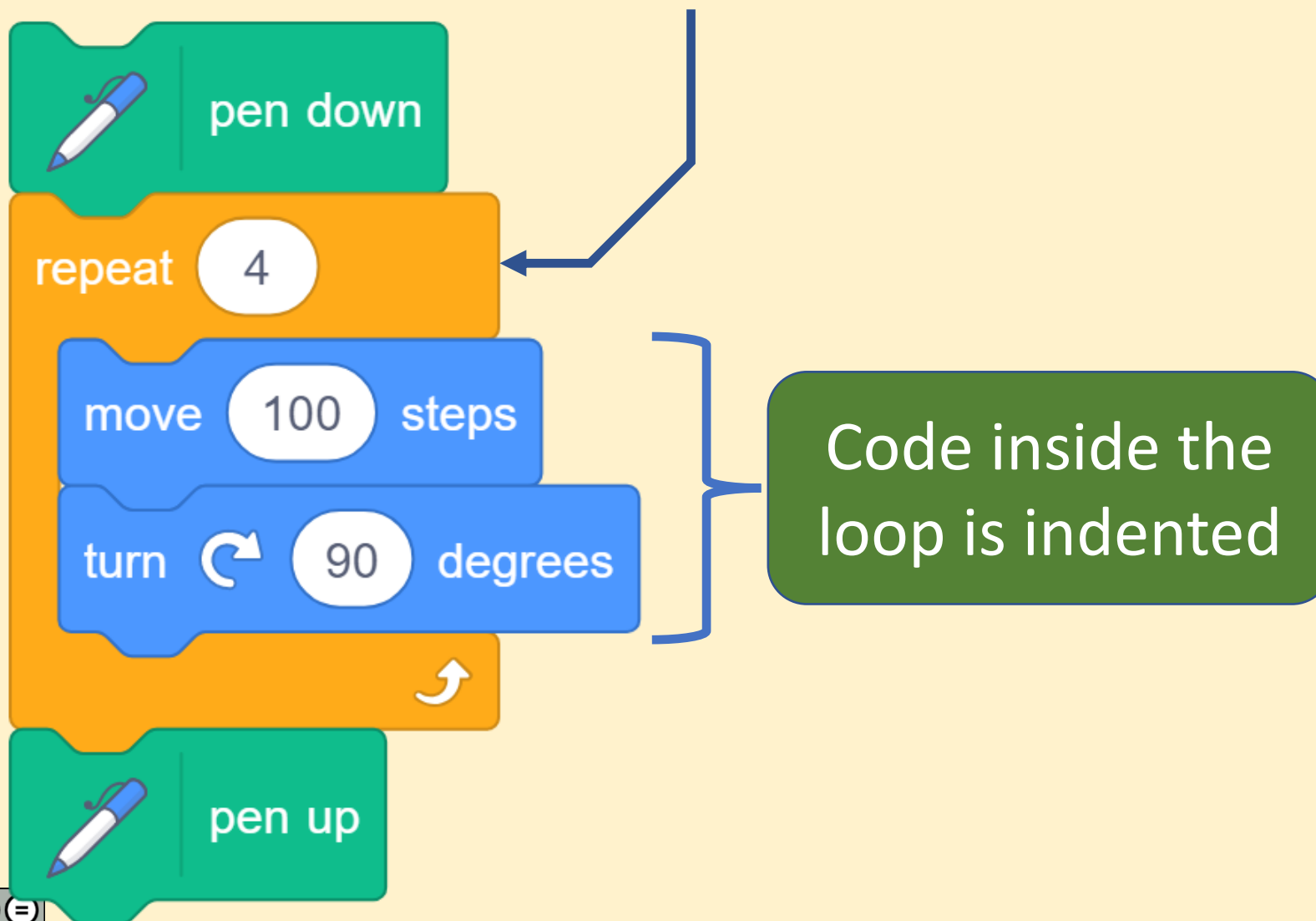
Count controlled Loops

bow
jump
bow
jump
bow
jump



do 3 times
bow
jump
or
loop 3 times
bow
jump

A count controlled loop in code



Teacher Notes

- Avoid using scratch language like repeat so pupils learn the concept outside programming making it easier to port the idea between different programming languages and algorithms. Adapted from KS3 research by Armoni
- Nested loops are covered later as research by the [everyday computing team](#) suggests that these are more complex
- Only use one of the videos on slides three or four