

## Set and Change Everyday Variable Scaffold Prompts

Set a variable is like emptying a box and putting a new item inside.

Changing a variable is adapting the current value.

Change variable by 2 would add 2

Change variable by -2 would subtract 2

**Either** Pupils work in pairs to question each others understanding of these simple numerical set and change algorithm examples

**Or**

Teachers use these for formative assessment questioning purposes

### Complexity

Pages 2-5 are the easiest as they only use set variable examples.

Pages 6-12 are more complex as they include set and change variable examples.

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many seconds did you beep for? **3**

4, What does set times to 3 do?

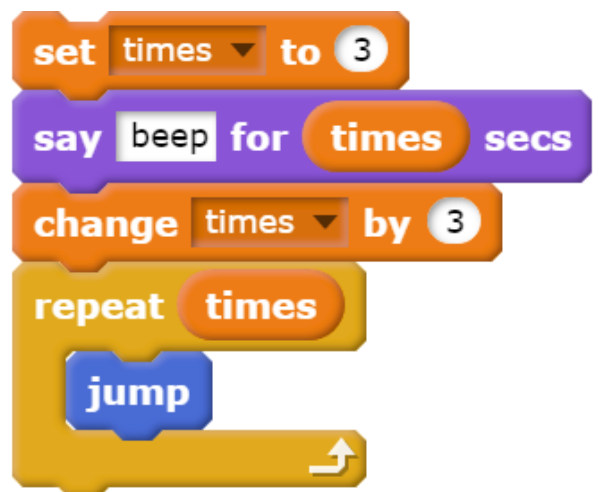
Clear the variable and put three inside

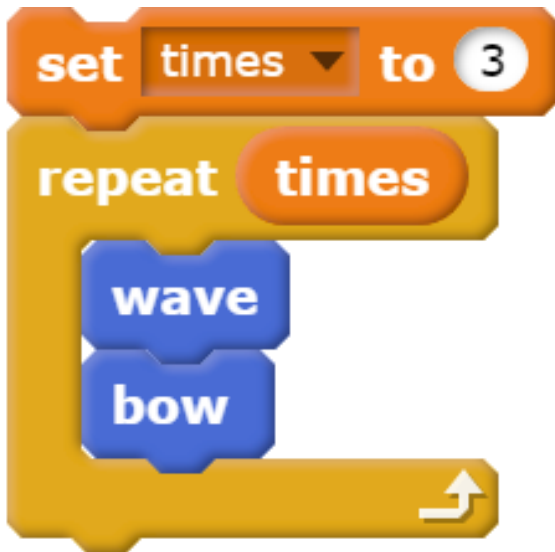
5, What does change times by 3 do?

Adds three to the variable called times

6, If you wanted to make someone beep for two seconds what would you change? **Set times to 2**

7, If you wanted to make someone jump five times what would you change? **There are lots of ways to do this as long as by the time that the repeat uses the variable times there is only five assigned to it.**





- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you bow?
- 4, What does set times to 3 do?
- 5, What are the orange blocks called?
- 6, If you wanted to make someone wave four time what would you change?



- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you jump?
- 4, What does set times to 4 do?
- 5, What are the orange blocks called?
- 6, If you wanted to make someone smile three time what would you change?





```
set times to 5
repeat times
  wave
  wait 2 secs
  beep
  wait 2 secs
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you beep?
- 4, What does set times to 5 do?
- 5, How long did you have to wait in total?
- 6, If you wanted to make someone wave three times what would you change?



```
set times to 4
repeat times
  wait 2 secs
  bow
  beep
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you bow?
- 4, What does set times to 4 do?
- 5, How long did you have to wait in total?
- 6, If you wanted to make someone beep twice what would you change?





- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you meow?
- 4, What does set times to 2 do?
- 5, What are the orange blocks called?
- 6, If you wanted to make someone clap four time what would you change?



- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you bark?
- 4, What does set times to 0 do?
- 5, What are the orange blocks called?
- 6, If you wanted to make someone clap three time what would you change?





```
set times to 5
repeat times
  meow
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you meow?
- 4, What does set times to 5 do?
- 5, What are the orange blocks called?
- 6, If you wanted to make someone meow three times what would you change?



```
set times to 2
repeat times
  beep
  wait 2 secs
  wave
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you beep?
- 4, What does set times to 2 do?
- 5, How long did you have to wait in total?
- 6, If you wanted to make someone wave four time what would you change?





```
set times to 4
repeat times
  meow
change times by 1
repeat times
  wave
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you meow?
- 4, What does set times to 4 do?
- 5, What does change times by 1 do?
- 6, If you wanted to make someone meow twice what would you change?
- 7, If you wanted to make someone wave six times what would you change?



```
set times to 4
change times by 1
repeat times
  bow
change times by 2
repeat times
  beep
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you bow?
- 4, What does set times to 4 do?
- 5, What does change times by 2 do?
- 6, If you wanted to make someone bow twice what would you change?
- 7, If you wanted to make someone beep three times what would you change?





```
set times to 5
repeat times
  wave
change times by -2
repeat times
  bark
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you wave?
- 4, What does set times to 5 do?
- 5, What does change times by -2 do?
- 6, If you wanted to make someone wave twice what would you change?
- 7, If you wanted to make someone bark six times what would you change?



```
set times to 3
repeat times
  jump
change times by -1
repeat times
  bow
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you jump?
- 4, What does set times to 3 do?
- 5, What does change times by -1 do?
- 6, If you wanted to make someone meow twice what would you change?
- 7, If you wanted to make someone wave six times what would you change?





```
set times to 4
repeat times
  bow
change times by 3
repeat times
  beep
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you bow?
- 4, What does set times to 4 do?
- 5, What does change times by 3 do?
- 6, If you wanted to make someone bow three times what would you change?
- 7, If you wanted to make someone beep three times what would you change?



```
set times to 2
repeat times
  nod
change times by -2
repeat times
  clap
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you nod?
- 4, What does set times to 2 do?
- 5, What does change times by -2 do?
- 6, If you wanted to make someone nod four times what would you change?
- 7, If you wanted to make someone clap four times what would you change?







```
set times to 6
repeat times
  clap
change times by -4
repeat times
  bow
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you clap?
- 4, What does set times to 6 do?
- 5, What does change times by  $-4$  do?
- 6, If you wanted to make someone clap five times what would you change?
- 7, If you wanted to make someone bow six times what would you change?



```
set times to 6
change times by -4
repeat times
  wave
change times by 3
repeat times
  bark
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you clap?
- 4, What does set times to 6 do?
- 5, What does change times by  $-4$  do?
- 6, If you wanted to make someone clap five times what would you change?
- 7, If you wanted to make someone bow six times what would you change?





```
set times to 4
repeat times
  bow
change times by 2
say hum for times secs
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you bow?
- 4, What does set times to 4 do?
- 5, What does change times by 2 do?
- 6, If you wanted to make someone bow three times what would you change?
- 7, If you wanted to make someone hum for two seconds what would you change?



```
set times to 4
say hum for times secs
change times by 2
repeat times
  wave
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many seconds did you hum for?
- 4, What does set times to 4 do?
- 5, What does change times by 2 do?
- 6, If you wanted to make someone hum for three seconds what would you change?
- 7, If you wanted to make someone wave four times what would you change?





```
set times to 3
say beep for times secs
change times by 3
repeat times
  jump
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many seconds did you beep for?
- 4, What does set times to 3 do?
- 5, What does change times by 3 do?
- 6, If you wanted to make someone beep for five seconds what would you change?
- 7, If you wanted to make someone jump nine times what would you change?



```
set times to 3
say beep for times secs
change times by 3
repeat times
  jump
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many seconds did you beep for?
- 4, What does set times to 3 do?
- 5, What does change times by 3 do?
- 6, If you wanted to make someone beep for two seconds what would you change?
- 7, If you wanted to make someone jump five times what would you change?





```
set times to 3
say beep for times secs
change times by 3
repeat times
  jump
change times by -2
move times steps
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many seconds did you beep for?
- 4, What does set times to 3 do?
- 5, What does change times by -2 do?
- 6, If you wanted to make someone beep for two seconds what would you change?
- 7, If you wanted to make someone move backwards (-1) one step what would you change?



```
set times to 2
repeat times
  meow
change times by 3
repeat times
  bark
```

- 1, Act out the algorithm
- 2, Explain what happens from top to bottom of the algorithm
- 3, How many times did you meow?
- 4, What does set times to 2 do?
- 5, What does change times by 3 do?
- 6, If you wanted to make someone meow three times what would you change?
- 7, If you wanted to make someone bark four times what would you change?

