Object properties

What are parameters?

The numbers used to describe an object's properties are known as **parameters**. You can use code to **detect** these parameters, so that they can be used in some way. For instance, you can find out what direction an object is moving, and pass this information on to another object, to make things follow each other around the screen.

What you'll build

In *Level 6 - Object properties*, you'll practise detecting and passing on parameters as you make some fun and challenging games.

Combine randomness with object properties to make a tricky game where birds move in unpredictable ways!

Detect the position of the rocket and pass this on so that it appears to fire a laser.

Detect the speed and direction of the mouse to simulate kicking a ball.

Herd a sheep into its pen by passing on properties from the sheepdog.

Your blocks

Use the **get** command to detect the parameter of an object's property.

This block will ask the computer to detect the speed of an object.

Combine the **get** block with a **set** block to pass the parameter on to another object.

In this code, the sheep will move at the same speed as the dog.

Combine the **get** block with a **set** block and an **operator** to detect an object's parameter and change it before it is passed on to another object.

In this code, the sheep will move slightly faster than the dog.

Object properties

Match each term to its meaning

Detect	Something on the screen, such as a picture, a button or a piece of text.
Parameter	Something about an object that can be represented by a number.
Object	When the computer checks the parameter of an object's property.
Property	The numbers used to describe an object's properties.

Free Code Challenge

Use what you have learned about detecting and passing on object parameters to make a game where you have to steer an object around an obstacle course. Design your course, and then choose an object which you'll guide around it. Write code so that when you click and drag the object, it will move at the same speed as your pointer. (Remember to add some friction so that it will eventually stop!) Use conditional events to make things happen if you hit the obstacles. You could lose points, move backwards, or even be sent right back to the start.

Parameter puzzles

If the speed of the police car is 3, what is the speed of the bus for each of these lines of code?

Speed of bus _____

Speed of bus _____

Write in the value needed to move the police car in the opposite direction of the bus.

Put a tick by the picture that illustrates the following code: