Y6 Working Scientifically

KS2 Y6 Science · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Turn 'Does exercise affect your body?' into a question you can test.

Step 1 · Pick ONE thing to change

The number of minutes of skipping

Step 2 · Pick ONE thing to measure

Heart rate in beats per minute

Step 3 · Write it question linking the two

How does the number of minutes of skipping affect heart rate?

Answer: How does the number of minutes of skipping affect heart rate?

Check: A good question names what you change and what you measure.

2. Now try one with the steps

Kwame tests whether the number of cells changes how bright a bulb is. List his variables.

Step 1 · Independent variable (what he changes)

Step 2 · Dependent variable (what he measures)

Step 3 · Control variables (kept the same)

Answer:

3. Practice

Have a go at each one. There is space underneath to work it out.

1. What do we call the variable you change in an investigation?

2. What do we call the variable you measure?

3. What are control variables?

4. How many variables should you change in a fair test?

5. Name the type of enquiry: watching a tadpole grow every day for six weeks.

6. Name the type of enquiry: sorting leaves into groups using a key.

7. Testing heart rate after different exercises. What should be measured?

8. Testing heart rate after different exercises. Give one control variable.

9. Investigating shadow height. Ben moves the torch AND uses a bigger toy. Why is this not fair?

10. Write a testable question about how the number of cells affects a buzzer.

11. Name the type of enquiry: 'Do children with bigger hands have bigger feet?'

12. Why should you make a prediction before you test?

13. Give one safety rule for an exercise and heart rate test.

14. Why is it better to measure brightness with a light sensor than by looking?

4. Before you hand it in

Changing two things at once to 'save time'.
Change only the independent variable. Keep everything else the same.

Writing 'keep it fair' control variable.

Name each control: 'same bulb', 'same distance from the sensor'.

Thinking every enquiry must be a fair test.

Choose: fair test, observing over time, pattern seeking, identifying and classifying, or research.

Vague measuring plans like 'see how loud it is'.

Say what equipment and units: 'sound meter, decibels, 50 cm away'.