## Lesson 3 - Reflection

Science - Physics - Key Stage 3
Light and Space

Miss Wickham

## Recap questions

1. What do waves transfer?
2. True or false: light travels in a straight line.
3. What sort of wave is light?
4. How fast does light travel?
5. What happens to light waves when they meet a dark surface?

## Hypothesis: The angle of incidence affects the angle of reflection.

Identify the following:

Independent variable:
Dependent variable:
Control variables:

## Secondary data

Which result is anomalous?

How should this be treated when calculating means?

Calculate the average angle of reflection for each angle of incidence.

| Angle of Incidence ( ${ }^{\circ}$ ) | Angle of Reflection ( ${ }^{\circ}$ ) |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Test 1 | Test 2 | $\begin{gathered} \text { Test } \\ 3 \end{gathered}$ | Mean |
| 10 | 10 | 9 | 11 |  |
| 20 | 19 | 20 | 21 |  |
| 30 | 31 | 40 | 29 |  |
| 40 | 40 | 39 | 41 |  |
| 50 | 49 | 50 | 50 |  |

## Writing a conclusion

1. What do you notice about each value for the angle of incidence and the angle of reflection?
2. Can you give 2 examples of data to show this?
3. Are these results repeatable?

## Spot the errors on the reflection ray diagram and outline

 how to draw a ray diagram correctly.

Matt black surface

