

# AQA Physics GCSE

## RP10 - Radiation and Absorption

### Flashcards

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Outline the basic steps of the practical.



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1. Place a Leslie cube on to a heatproof mat and fill with hot water
2. Use the infrared detector to measure the amount of radiation that is emitted from each side
3. Draw a suitable chart to compare the results for each surface



# What is a Leslie cube?



## What is a Leslie cube?

A cube with different textured surfaces used to demonstrate the differing radiation emitted.

Typically it has a matt white, a shiny silver/gold, a matt black and a shiny black side.



# Why is a heatproof mat used?



## Why is a heatproof mat used?

Boiling water is poured into the cube meaning the base can get hot and so a mat is used to protect the desk.



What type of data is collected from this experiment?





What type of data is collected from this experiment?

The four different surfaces being measured produces categorical data.



Give an example of a chart that may be used to display the data.



Give an example of a chart that may be used to display the data.

A bar chart with radiation intensity on the y-axis and the four surfaces on the x-axis.



Which surface would you expect to emit the most radiation?



Which surface would you expect to emit the most radiation?

The matt black surface since good absorbers of radiation are also good emitters. Matt black surfaces are good emitters and poor reflectors.



Which surfaces would you expect to emit the least radiation?



Which surfaces would you expect to emit the least radiation?

The shiny surfaces, as they are good reflectors and poor emitters.



What type of radiation is being emitted?





What type of radiation is being emitted?

Infrared radiation, which is part of the electromagnetic spectrum.



What piece of apparatus is useful when filling the cube and why?



What piece of apparatus is useful when filling the cube and why?

A funnel since the opening is very small and it will reduce the likelihood of spillages.



What safety precaution should be taken when using a Leslie cube?



What safety precaution should be taken when using a Leslie cube?

Avoid handling it with bare hands when filled with boiling water since the cube will be very hot.

