

# CIE Biology GCSE

Planning experiments and improving  
technique

Flashcards

# What is the independent variable?

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The variable that is changed in the practical.

# What is the dependent variable?

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The variable that is measured in the practical.

# What are controlled variables?

# What is a controlled variable?

Variables that are kept the same in the practical.

# What is the purpose of a control?

## What is the purpose of a control?

To show that it is the independent variable that is having a true effect on the dependent variable.

What criteria should be used to select the appropriate apparatus?

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- Precision
- Accuracy
- Sensitivity
- Resolution

What should be planned regarding safety  
before starting a practical?

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Carry out a risk assessment and take appropriate precautions.

# How can the reliability of the results be improved?

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Use a larger sample size.

Repeat the practical and take a mean.

What is the difference between accuracy  
and precision?

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**Accuracy** - how close a reading is to the true value.

**Precision** - How close a reading is to other readings taken under the same conditions (i.e. how 'close together' they are).

State two sources of error in a practical.

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Certain variables not controlled.

Equipment is not precise and/or accurate enough.