The 7 Steps of the Scientific Method

How a question becomes a tested answer

1

Ask a question

Notice something and turn it into a question you can answer by measuring.

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2

Do background research

Find out what is already known so you can make a better prediction and avoid known mistakes.

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3

Construct a hypothesis

Write a testable prediction, often as "If ... then ... because ...".

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4

Test with an experiment

Change one variable, measure another and keep everything else the same. Repeat at least three times.

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5

Analyze the data

Organize the results in a table or graph and look for a pattern.

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6

Draw a conclusion

Decide whether the data support or reject the hypothesis, and say why.

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7

Communicate results

Share what you did and found so others can check it or repeat it.

Not a one-way street. If the data reject the hypothesis, revise it and test again. Real scientists often loop back to earlier steps.

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