How science works

EXPLORATION AND DISCOVERY

Making observations
Asking questions
Sharing data and ideas
Finding inspiration
Exploring the literature

Gathering data

Hypotheses
Expected results/observations
Actual results/observations

Interpreting data

Supportive, contradictory, surprising or inconclusive data may...

...support a hypothesis.

...oppose a hypothesis.

...inspire revised assumptions.

...inspire revised/new hypothesis.

TESTING IDEAS

Feedback and peer review
Replication
Discussion with colleagues
Publication
Coming up with new questions/ideas
Theory building

COMMUNITY ANALYSIS AND FEEDBACK

New technology
Practical problem
Curiosity
Personal motivation
Serendipity
Surprising observation

BENEFITS AND OUTCOMES

Develop technology
Build knowledge
Satisfy curiosity
Address societal issues
Inform policy
Solve everyday problems

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