

What do you think chemists do?
(or in more general, scientists)



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Scientists ask questions and make
claims (based on data and evidence)



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What is a scientific question?

- Can be answered by making measurements or observations



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Which is a scientific question?

- What temperature will my coffee be if I add milk to it?
- Do angels have wings?
- Can my dog understand what I say?



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What is a claim?

- A statement, based on evidence and data about some phenomenon.



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What is data?

- Measurements
- Observations



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What is evidence?

- Synthesis of data
- What is the evidence that atoms exist?
- What is the evidence that all life is descended from a single cell?
- What is the evidence that there is an attractive force between large objects?



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What are some examples of scientific

- What could be a claim?
- What could be some data?
- What could be some evidence?



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What is a Law?

- Summarizes past observations and predicts future ones



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Facts, Laws, Hypotheses and Theories

Which is a fact (law, hypothesis, theory)

- Special relativity (time and space are not absolute but are relative to each other)
- The force of attraction between masses is proportional to the product of the masses, and inversely proportional to the square of the distance between them
- An atom of hydrogen has one proton
- If we add reagent X to a reaction it will go faster?



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