

Reasoning flow scaffold template

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Use this argumentation scaffold template to help your students construct sound scientific arguments

A recent study helped students to construct clear, logical arguments by scaffolding the argumentation process.

The researchers developed a reasoning flow scaffold (RFS) that identifies four key components of an argument: claims, evidence, reasons and rebuttals. Their RFS involves a box-and-arrow diagram, where boxes represent argument components and arrows represent the logical relationships within the argument. They reasoned that making these features explicit familiarises students with the structure of a sound argument and helps them generate good arguments of their own.

The results showed that RFS instruction significantly improved students' ability to provide *evidence* and *rebuttal*, compared to the more conventional teaching approach. The RFS strategy transforms the complex process of constructing sound scientific arguments into basic elements that are logically connected. This study showed that it can help students to think about how to write their own arguments.

Using the RFS

Familiarise yourself with the RFS process using the [research article](#) (an example with completed boxes can be found in Appendix 2) and use the scaffold template on the next page with your students.

Find more teaching tips in the *Education in Chemistry* article '[Flowing SOLO](#)'.

Reference

L Luo, B Wei, M Shi and X Xiao, *Chem. Educ. Res. Pract.*, 2020, DOI: 10.1039/c9rp00269c

Fill in the boxes to construct your argument.

