Lesson framework for teacher

A common framework on how to use or develop the STEMforYOUTH materials into the classroom.
Flow diagram

1. Ask a question
2. Do background research
3. Construct a hypothesis
4. Plan a fair test experiment (only one variable must be changed at a time)
5. Do the experiment
Does the experiment work well?

- yes
  - Collect accurate and reliable data (do repeats, take averages, calculate uncertainties)

- no
  - Review and improve experiment (change the techniques or the apparatus used)

Analyse data

Draw conclusions
Does conclusion support hypothesis?

- **yes**
  - Communicate results to wider scientific community (via poster or presentation in conferences)

- **no**
  - Go back to do background research
Introduction
Ask a Question

An appropriate starting question that allows*:
• planning, research, development and review
• span in several subject areas in a creative way, or involve development of new skills or deeper understanding

* http://www.researchinschools.org/
Write some important points of your background research here (include resources, well referenced)
Write your hypothesis here
Explain which factor you will change in your experiment and list all the other factors you will keep the same.
Write the method of your experiment (what you will do)
Write any problems you encountered in the experiment and the steps you took to improve these.
Share the data of your experiment
Explain how you analysed your data
Write your conclusions
Compare your conclusion with the hypothesis
Write here what future steps you will take in relation to extending your experiment