Deconstruction and Design Checklist

# Deconstruction of a problem

* Is the problem clearly stated?
* Are a range of factors (potential independent variables) considered?
* Is the effect of a range of factors explained logically (not just described)?
* Are a range of practical approaches described clearly?
* Is the practicality of measurement of variables considered critically?
* Are the reasons explained for the choice of independent variable to investigate?

## Design of an investigation

* Are the aim, hypothesis, independent variable and dependent variables stated clearly?
* Is the hypothesis defended with logical explanation? (in either deconstruction or design)
* Are a range of controlled variables considered, with both how and why explained?
* Are uncontrolled variables listed, why they cannot be controlled and potential effect?
* Is an equipment list included? Is a logical reason given for each of the items?
* Is a numbered method included, with concise indication of repeated steps?
* Are the method steps detailed so that the experiment could be replicated reliably?
* Is each step of the method (and the particular values chosen) justified with reasons?
* Are risks considered and safety precautions logically explained?
* Is an empty results table included, with values pre-filled where possible?
* Is guidance for potential analysis included, such as graph axes or a predicted pattern?