**Stage 1 and Stage 2 Agricultural Production, Agricultural Systems, Biology, Chemistry,**

**Earth and Environmental Science, and Physics**

**Student checklist for deconstruction and design**

There are some particular features of deconstruction described in the *Science Inquiry Skills* section of the subject outline that need to be addressed when providing evidence of a deconstruction.

The following questions help to guide students through those aspects.

Teachers may also find that these questions are useful when reviewing students’ draft deconstructions.

Consider deconstructing the problem:

* Have I stated the problem/need/opportunity?
* Have I considered a range of factors that could affect a solution to the problem?
* Have I discussed how these factors are related to the problem?
* Is there any relevant research that I could include?
* Is this related to a Stage 2 topic?
* Is any preliminary testing needed? Have I provided evidence of this?

Consider designing a method to test a possible factor that affects the solution to the problem:

* Have I selected one factor that can be tested?
* Have I constructed a testable hypothesis using a conventional format?
* Have I identified one measurable independent and one measurable dependant variable?
* Have I identified the variables which need to be controlled, why they need to be controlled and how they will be controlled?
* Have I identified the variables which cannot be controlled and why they cannot be controlled?
* Are specific details of the equipment and materials included? Have I justified these?
* Has the method to be used in the test clearly set out? Have I justified the steps?
* Is there enough detail in the method that it can be followed by another person without further instructions?
* Is it clear what is to be measured to obtain results?
* Is the sample size sufficiently large for me to formulate a valid conclusion?
* Have I constructed a data table to show how the results will be recorded?

Consider the set of evidence of deconstruction and design:

* Does my evidence outline the deconstruction process, show the method designed as most appropriate, justify the plan of action and fit into a maximum of 4 sides of an A4 page?