**Enzyme Inhibitors – Module 2**

**Resource B – Modifying the experiment**

Complete Resource A before attempting these activities.

No experiment is perfect. Review the experimental method completed in Module 1 and Module 2. How could you modify this experiment? You can choose to extend, refine or redirect.

*Extend = in science, to extend an experiment is to modify the methodology to overcome limitations of the scope or applicability of the data.*

*Refine = in science, to refine an experiment is to modify the methodology to obtain more accurate or precise data*

*Redirect = in science, to redirect an experiment is to modify the methodology to gain further insight into the phenomena observed in the original experiment*

*Activity 1*

Use a highlighter to identify the key terms in the definitions of extend, refine and redirect.

Imagine you had to explain the difference between extend and refine to a younger family member. How would you do it?

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*Activity 2*

Consider the two methods in Module 1 and Module 2. Propose one modification to the methodology:

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| Modification | Proposed change to the methodology |
| Extend |  |
| Refine |  |
| Redirect |  |

Select one of your proposed changes to focus on for the remainder of this Module. Circle your selection.

*Activity 3*

Explain the reasoning for your proposed modification. How would it reduce limitations (extend), increase precision (refine) or gain further insight into inhibitors (redirect)?

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*Activity 4*

Construct a research question\* for your modified experiment. Be specific.

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*\*a question that directs the scientific inquiry activity; it focuses the research investigation or student experiment, informing the direction of the research, and guiding all stages of inquiry, analysis, interpretation and evaluation.*

*Activity 5*

Determine how the method would be modified. Use the space below to set out the changes to your methodology. You may write a paragraph or draw a labelled diagram to demonstrate your method.

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Cognitive Verbs and Sentence starters

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| Cognitive Verb | QCAA Definition | Sentence Starters |
| Explain (difference) | make an idea or situation plain or clear by describing it in more detail or revealing relevant facts; give an account; provide additional information | The most important difference is… |
| Propose | put forward (e.g. a point of view, idea, argument, suggestion) for consideration or action | Further experiments are needed to…. |
| Construct | create or put together (e.g. an argument) by arranging ideas or items; display information in a diagrammatic or logical form; make; build | What is the effect of …………on………..in the reaction of….. |
| Determine | establish, conclude or ascertain after consideration, observation, investigation or calculation; decide or come to a resolution | n/a |