**Investigative Lesson**

This lesson will build upon the skills learned in the two day 5E lesson plan and allow students to apply what they have learned to their overall project.

Engagement: Students will be shown a photo of a 53 year old terrarium and its creator. Questions like the following will be presented to the class: Thinking about what we’ve gone over the past two days, what are some important processes that must happen in order for your artificial biosphere to be sustainable? Why?

Exploration: Students will log observations of their terrariums. They will be instructed to modify, if needed, their terrariums now that they have new information. Rationale for changes must be included in their logs. Students will also draw and label a diagram of how carbon is cycling within their terrariums.

Explanation: Teacher will facilitate student sharing of their carbon cycle diagrams and how this information could be applied to large-scale enclosed ecosystems.

Elaboration: Students will get into small groups and discuss the success of their terrariums, receiving and giving feedback on them.

Evaluation: Teacher will check carbon cycle diagrams and log books as students during the exploration and explanation. Students will also complete the formative assessment, RERUN.

* **Recall**: Summarize how you have built your terrarium
* **Explain**: Explain any modifications you have made since initially creating it
* **Results**: Describe your most recent observations of your terrarium
* **Uncertainties**: Describe what you are still unsure about when creating your terrarium
* **New**: Write at least two new things that you have learned since initially building your terrarium