|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Science 9** | | | | | | | |
| **Unit Big Idea: Cells are derived from cells.** | | | | **Unit Guiding Question: What are cells and where do they come from?** | | | |
|  | **Goals** | **Access** |  | |  |  | **Extension** |
| **Content** | **Sexual**  **and**  **asexual**  **reproduction** | I know what cells are and why they divide  I know identical and non-identical | I know the outcome of mitosis and meiosis  I know the 6 different forms of asexual reproduction  I know how humans reproduce | | I know the different stages of mitosis and meiosis and their relevance  I know the difference between asexual and sexual reproduction | I know how mitosis and meiosis create genetic variation | I know the significance of mitosis and meiosis in relationship to the survival of living organisms |
| **Curricular Competencies** | **Microscope Skills** | I can find specimens | I can use the microscope’s features appropriately | | I can use the microscope’s features effectively to ensure an efficient search | I can troubleshoot challenges that arise with microscope use and can explain what is happening as I apply its features | I can compare different types of microscopes (light TEM, SEM) and explain their benefits |
| **Graphing Skills** | I can read graphs  I can identify dependent and independent variables | I can read graphs  I can correctly place the independent and dependent variables  I can correctly create a graph with key features | | I can interpret basic graphs  I can correctly create a graph with key features, proper increments, and scale | I can select the most effective type of graph to use with specific data  I can create graphs electronically and by hand | I can interpolate and extrapolate from the graphed data |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Goals** | **Access** |  |  |  | **Extension** |
| **Curricular Competencies** | **Inquiry Project**  **Questions** | I can come up with possible explanations to my wonderings | I can make an informed hypothesis about a scientific question | I can come up with multiple informed hypothesis about a scientific topic | I can formulate new hypothesis based on new information in a scientific inquiry | I can predict multiple outcomes to my own inquiry |
| **Inquiry Project**  **Sources/citations** | I can explain the difference between sources and citations | I understand how CRAAP is used to assess sources  I make attempts to cite my sources | I use CRAAP to assess my sources  I cite my main sources | I can search effectively search to ensure valid sources  I correctly cite all my sources | I demonstrate a healthy and informed skepticism in evaluating claims in secondary sources |
| **Inquiry Project**  **Apply learning** | I can find a topic that is connected to what we have learned | I can demonstrate how my topic transfers and applies my learning to new situations | I can demonstrate the innovative role of scientists and technology in relation to my topic | I can apply my topic to explore solutions to local or global problems | I can generate new or refined ideas as a result of my inquiry. |

* Inquiry project should demonstrate a sustained intellectually curiosity about a scientific topic or problem of personal interest.
* Competencies that are based on the inquiry project must be demonstrated through the inquiry presentation.