**Grades 6-12 Science Curriculum Analysis Worksheet**

Current research on science education emphasizes the importance of integrating the learning progressions from all three dimensions included in *A Framework for K-12 Science Education* in order to deepen student understanding of the big ideas connected to scientific phenomena*.* This Curriculum Analysis Worksheet is a tool that can be used to align your current instructional practices to a 3-dimensional model of instruction, designed to deepen student learning.

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| 1. | Identify a science concept(s) within the Arizona Science Standard from Strands 4, 5, or 6 that you teach at your grade level/course. Record the science concept, big idea/scientific phenomena, and the three-dimensional learning outcome(s). |
| 2. | Identify learning progressions from each of the three dimensions that will be bundled together to build student conceptual understanding of the big idea/scientific phenomena selected in Step 1. |
| 3. | 1. Identify objectives from the Arizona Science Standard from Strands 1, 2 and 3 that align with the **Science and Engineering Practices** learning progression(s) you have identified in Step 2. 2. Examine your current science curriculum to identify ways you can modify instruction to reach the vision of *A Framework for K-12 Science Education* while you currently teach grade level objectives aligned to the Arizona Science Standard. |
| 4. | 1. Identify the current objectives from the Arizona Science Standard from Strands 4, 5, and 6 that align with the **Disciplinary Core Ideas** learning progression(s) you have identified in Step 2. 2. Examine your current science curriculum to identify ways you can modify instruction to reach the vision of *A Framework for K-12 Science Education* while you currently teach grade level objectives aligned to the Arizona Science Standard. |
| 5. | 1. Identify the current unifying concept(s) from page viii of the Arizona Science Standard that aligns with the **Crosscutting Concepts** learning progression(s) you have identified in Step 2. 2. Examine your current science curriculum to identify ways you can modify instruction to reach the vision of *A Framework for K-12 Science Education* while you currently teach grade level objectives aligned to the Arizona Science Standard. |
| 6. | 1. Identify connections to grade level ELA/Literacy standards, as appropriate. 2. Identify connections to grade level Mathematics standards and practices, as appropriate. |

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| **1.  Arizona Science Concept:**  **Big Idea/Scientific Phenomena:** | | | | | | | |
| **2. Science and Engineering Practices Learning Progression**  *(See Learning Progressions for 6-12 Science)* | | | | | **Disciplinary Core Ideas Learning Progression**  *(See Learning Progressions for 6-12 Science)* | | **Crosscutting Concepts Learning Progression**  *(See Learning Progressions for 6-12 Science)* |
| **Three Dimensional Learning Outcomes:** | | | | | | | |
| **3. Science and Engineering Practices** | | | | | | | |
| **Current Practice** | **Identify performance objectives from Strands 1-3 within the Arizona Science Standard that align to the learning progressions listed above.**  **(Strand 1: Inquiry; Strand 2: History and Nature of Science; Strand 3: Science and Social Perspectives)** | | **Vision of A Framework for  K-12 Science Education** | | | **Gap Analysis/Curriculum Examination**  **Refer to the Science and Engineering practice learning progressions within the Learning Progressions for 6-12 Science document and your current curriculum to answer the following questions.**   * What scientific phenomenon will students investigate and connect to the big idea? * What practices are currently missing from my curriculum? * What changes and refinements need to be made? * What strategies/investigations can be implemented to achieve the vision? | |
| **4. Disciplinary Core Ideas** | | | | | | | |
| **Current Performance Objectives** | |  | **Vision of *A Framework for  K-12 Science Education*** | | | **Gap Analysis**  **Refer to the Content learning progressions within the Learning Progressions for 6-12 Science document and your current curriculum to answer the following questions.**   * What core idea(s) is/are currently targeted within my current curriculum? * What changes and refinements need to be made? (add, refine, delete concepts) * What strategies/investigations can be implemented to achieve the vision? | |
| **5. Crosscutting Concepts** | | | | | | | |
| **Current Crosscutting Concepts** | | **Unifying Concepts and Processes (Crosscutting concepts)**  **Listed in page viii of the front matter of the Arizona Science Standard, and explained in the National Science Education Standards (1995) pp. 115-119** | | **Vision of *A Framework for  K-12 Science Education*** | | **Gap Analysis**  **Refer to the Crosscutting Concepts learning progressions within the Learning Progressions for 6-12 Science document and your current curriculum to answer the following questions.**   * How is/are the crosscutting concept(s) made explicit within my current curriculum? * What changes and refinements need to be made? * What strategies/investigations can be implemented to achieve the vision? | |
| **6. Connections** | | | | | | | |
| **Other Content Area Standards** | | **Identify other Content Area Standards that will build student understanding of this concept or phenomenon, especially those in ELA/Literacy and Mathematics/Practices.** | | **Connections to Instruction** | | **Gap Analysis**  **Refer to the Other content standards that are being used as a connection to answer the following questions.**   * How are the connected standards explicitly taught within my current curriculum? * What changes and refinements need to be made? * What strategies/investigations can be implemented to achieve the vision? | |