**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.
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| 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.
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| 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.
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| 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?

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| **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?
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| **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?
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| **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?

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