*Handout 2*

TOPIC EXPLORATION AND DEVELOPMENT

NGSS Topic Study

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| **Goal #1: Identify the Outcomes of the Standards**  The Next Generation Science Standards establish a vision of what all students should know and be able to do to be considered literate in science as they leave high school. This is the base set of knowledge that all adults (including teachers) should have to be informed citizens and consumers in our knowledge and technology-driven global society.   * What "big ideas" and major concepts make up this topic? * What examples or contexts were used to explain the ideas? * What other new insights about the topic did you gain from your study? |
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| **Goal #2: Consider Instructional Implications**  Identify important considerations for K-12 or grade span instruction, provide a broad overview of the big ideas, concepts, and skills for K-12 students related to the topic, and suggest effective instructional strategies and contexts.   * What “big ideas” and concepts should students at your identified grade level know and be able to do with the topic you are studying? * What student learning difficulties, misconceptions, or developmental considerations are mentioned? * Are there explanations, examples, or investigations that you can use with students to explain concepts in an interesting or comprehensible way? * How would you sequence the “big ideas” in an instructional sequence that makes sense? |
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| **Goal #3: Identify Concepts and Ideas through Performance Expectations**  Identify the concepts, specific ideas, level of sophistication, and appropriate terminology related to a topic as they relate to the performance expectations of the NGSS.   * What performance expectations align with this topic? * What concepts, specific ideas, and practices make up the performance expectations for this topic? * How do these performance expectations help you clarify what is important to teach in the topic? * How do these performance expectations help you determine what you can eliminate or place less emphasis on? |
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