**Appendix A**

**Literacy Methods Class Questions**

Questions are designed to facilitate reflection about making disciplinary literacy connections in the elementary classrooms.

1. What are important concepts that could be explored in light of the Reading Literature Standards? How might the content of the text invite supplemental non-fiction reading that could be related to the Reading Information standards?
2. What connections are you making to science content and how humans can actively engage science in their daily lives?
3. What do you notice in terms of representation? What identities and perspectives are affirmed through the text? How might the book serve as mirror, window, or door?
4. What are entry points for writing with this text? How might the text serve as a model?

Science Methods Class Questions 5-10 are designed to help students articulate their progress and challenges throughout the various stages of instructional design. These questions will be asked as students develop a project in which they are asked to use popular fiction to foster students’ disciplinary literacy skills and knowledge.

1. What disciplinary concepts/core content from the novel will you use for your inquiry project and why? How are these concepts/core content relevant and/or compelling to students?
2. What disciplinary standards and literacy standards will you use and why? How will the “big question” of this project enable students to meet these standards?
3. What non-fiction texts will you use to support and enrich student learning and why? What literacy challenges do these texts pose for elementary students? How will you help students navigate these?
4. What reading, writing, and academic language goals will you set and why? How do these goals align with demands of disciplinary literacy as defined by the science subject area?
5. What final assessment project or performance will you design? How does this assessment incorporate student choice and background knowledge as well as address mastery of content standards and relevant literacy standards?
6. What instructional strategies will you use to teach literacy throughout the inquiry project design? How will these strategies meet the needs of students reading, writing, academic language, and speaking and listening learning?

**Appendix B**

**5E *NGSS* Unit Planning Template**

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| --- | --- | --- |
| **Grade/ Grade Band**: | **Topic:** | **Unit Number of Days:** |
| **Brief Unit Description**: | | |
| **Performance Expectation(s):** | | |
| **Specific Learning Outcomes:** | | |
| **Narrative / Background Information** | | |
| **Phenomena of Focus:**    **Driving Question:** | | |
| **Prior Student Knowledge:** | | |
| **Science & Engineering Practices:** | **Disciplinary Core Ideas:** | **Crosscutting Concepts: ­** |
| **Possible Preconceptions/Misconceptions:** | | |
| **UNIT PLAN – 5-E Model** | | |
| **ENGAGE: Opening Activity – Access Prior Learning / Stimulate Interest / Generate Questions:**   * Describe how the teacher will capture students’ interest. * How will teacher solicit student prior ideas and thinking? * What kind of questions should the students ask themselves after the engagement? | | |
| **EXPLORE: Lesson Description – Materials Needed / Probing or Clarifying Questions:**   * Describe what hands-on/minds-on activities students will be doing. * List “big idea” conceptual questions the teacher will use to probe and encourage and/or focus students’ exploration | | |
| **EXPLAIN: Concepts Explained and Vocabulary Defined:**   * Student explorations should precede introduction of terms or explanations by the teacher. What questions or techniques will the teacher use to help students connect their exploration to the concept under examination? * Teachers will solicit *student* explanations and help them to justify their explanations. * What vocabulary will be introduced and how will it connect to students’ explorations?     **Vocabulary:** | | |
| **ELABORATE: Applications and Extensions:**   * Describe how students will develop a more sophisticated understanding of the concept. * How is this knowledge applied in our daily lives and to novel situations? | | |
| **EVALUATE:**   * How will students demonstrate that they have achieved the lesson objective? * This should be embedded throughout the lesson as well as at the end of the lesson * List higher order thinking questions.     **Formative Assessment:**    **Summative Assessment:** | | |
| **Elaborate Further / Reflect: Enrichment:**   * Where will the teacher and students go from here? | | |