****

**Improving Student Engagement in the Science Classroom Using a Driving Question Board (DQB)**

Professional Learning Module

Participant Packet

**Driving Question Board Module Session A**

|  |
| --- |
| **Session A Focus Question Meta Moment:**  What is a driving question board and what is its purpose in the science classroom? |

|  |  |  |  |
| --- | --- | --- | --- |
| **Session A: Notes** | | | |
| What is a driving question board? | |  | |
| What is the purpose of the driving question board in the science classroom? | |  | |
| How does the driving question board support equitable science classrooms? | |  | |
| What resonates with you in how this can be impactful in the classroom? | |  | |
| **Session A: Overall Reflection** | | |
| What resonated with you from this session?​ |  | |
| What questions might you have as a result of your learning from this session? |  | |

|  |  |
| --- | --- |
| **Session A: Next Steps- Considerations for Implementation** | |
| How do you envision incorporating the driving question board into your classroom routine? |  |

**Driving Question Board Module Session B**

|  |
| --- |
| **Session B Focus Question Meta Moment:**  How does the use of a driving question board foster a community of learners in terms of student engagement and motivation? |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Session B: Notes- Teacher Hat** | | | | |
| How do you usually teach water, earth systems and structure and properties of matter?   * What do you want students to learn? * How might you sequence the learning experiences? * What ideas do students struggle with? | |  | | |
| Stop and Reflect | | | | |
| What did you learn from this experience? | |  | |
| How did the use of a driving question board impact your experience in terms of engagement and/or motivation for learning? | |  | |
| **Session B: Adult Learner Notebook**  A yellow construction hat to signify the participant is looking at this through an adult learner lens as they build their own science content knowledge. | | | |
| Anchoring Phenomenon   * What do you notice and wonder from the picture? * What can you do get the items clean? * What would happen to the dirty stuff on/in the items? | |  | | |
| Developing a Plan  Develop a plan to get the dishes clean. Write your group’s plan to the right. | |  | | |
| Stop and Think  Where else might we use clean water and make it dirty? | |  | | |
| Comparing Models   * What was similar and different in the ideas that you saw represented in your model compared to the other models? * What did you notice was similar and different across all the models? | | |  |  | | --- | --- | | Similarities | Differences | | Your model:  All models: |  | | | |
| **Session B: Overall Reflection** | | | |
| What  What inspired you during this session? | So What  Why did that inspire you? | | Now What?  What are your goals as a result of this experience?​ |
|  |  | |  |

|  |  |
| --- | --- |
| **Session B: Next Steps- Considerations for Implementation** | |
| How does the resource support the implementation of the DQB? If it does not, how might you incorporate a DQB within the learning experience? |  |
| Things to Consider | |
| What standards are you using during the instruction? |  |
| What anchoring phenomenon addressing those standards might you use to frame the learning around?​ |  |
| Using the guidance on slide 40, what might be the driving question?​ |  |

**Driving Question Board Module Session C**

|  |
| --- |
| **Session C Focus Question:**  How can a driving question board anchored in a phenomenon be used to build a cohesive storyline? |

|  |  |
| --- | --- |
| **Session C: Notes** | |
| What SEPs, DCIs, and CCCs will students be engaged in to figure out the anchoring phenomenon through the investigations identified? |  | |
| How was the DQB used throughout this learning experience as described in the article? |  | |
| As the students were navigating through the learning experience, what were the actions of both the teacher and students? |  | |
| **Stop and Think** | |
| How can the DQB anchored in a phenomenon be used to build a cohesive storyline? |  | |

|  |  |
| --- | --- |
| **Session C: Overall Reflection** | |
| What might be one thing you **STOP** based on today’s session?​ |  |
| What might be one thing you will **CONTINUE** based on today’s session?​ |  |
| What might be one thing you **START** based on today’s session? |  |

|  |  |
| --- | --- |
| **Session C: Next Steps- Considerations for Implementation**  Use the driving question board you planned for the last session with your students.​ | |
| How might you facilitate the grouping of questions during the development of the driving question board? |  |
| How might you encourage students to identify some investigations that may help them answer their questions? ​ |  |
| What other investigations need to be considered to answer their questions? |  |
| How might you put these in a logical order (storyline) to build understanding and help students make sense of the phenomenon? |  |

**Driving Question Board Module Session D**

|  |
| --- |
| **Session D Focus Question:**  Why should the Driving Question Board be used as a formative assessment tool to foster an equitable learning community?​ |

|  |  |
| --- | --- |
| **Session D: Notes** | |
| Equitable Learning Community | |
| How might the DQB help ensure all student ideas/questions/perspectives are shared, heard, and considered? |  | |
| Why is an equitable classroom community essential while using a DQB? |  | |
| How might you use the driving question board as an opportunity to build areas of agreement and disagreement? |  | |
| How might you differentiate the driving question board to meet the needs of all students in your classroom? |  | |
| Formative Assessment | |
| In your own words, how would you describe formative assessment? |  | |
| How might the driving question board be used to give voice to all students as an informal assessment? |  | |
| What supports do teachers need to enact robust informal formative assessment in their classrooms? |  | |
| How might the driving question board support the formative assessment process as described in the graphics? |  | |
| **Stop and Think** | |
| How can the driving question board be used as a formative assessment tool to foster an equitable learning community? |  | |

|  |  |
| --- | --- |
| **Session D: Next Steps- Considerations for Implementation** | |
| What science ideas or lack of ideas did developing the driving question board reveal? |  |
| How might you continue to revisit the driving question board all throughout the unit? |  |
| How might you formatively assess the students using the driving question board process? |  |
| What evidence do you have that students were engaged in “making sense” of the science in the unit?​ |  |

|  |  |
| --- | --- |
| **Session D: Overall Reflection** | |
| **It’s all in a Social Media Post!** | |
| Think about the learning from this module. Compose a social media post consisting of a summary and your take aways to share.  Consider sharing it on social media along with the link to the resource!​ |  |