SCIENCE
STANDARDS-BASED CLASSROOM
INSTRUCTIONAL FRAMEWORK

Instructional Framework

- Opening
- Transition
- Work Session
- Closing

Time will vary based on instructional focus

PERVASIVE LESSON PRACTICES

Teacher will embed pervasive practices throughout lesson based on instructional focus

Literacy Across the Content:
- Disciplinary literacy
- Content literacy
- Close reading
- Disciplinary research/ reading to learn

Writing Across the Content
- Content writing
- Writing process
- Writing to learn

Vocabulary Development:
- Academic vocabulary
- Content vocabulary
- Discipline vocabulary
- Engages in three-dimensional learning

Formative Assessment:
- Formal assessments
- Informal assessments
- Standards-based feedback

Classroom Culture:
- Models practices and procedures
- Encourages risk-taking and collaboration
- Demonstrates high expectations in classroom discourse
- Emphasizes safety practices

OPENING

Teacher:
- Introduces phenomena to engage students in investigations
- Engages students/accesses prior knowledge and makes connections by encouraging them to ask questions
- Provides explicit instruction aligned to standard(s), including skill development and conceptual understanding
- Models science and engineering practices and questioning based on crosscutting concepts

Student:
- Accesses prior knowledge
- Asks thought-provoking and clarifying questions.
- Participates in classroom discussions; engages in investigations and analyzes thinking

TRANSITION TO WORK SESSION

Teacher:
- Provides guidance to engage in exploration of phenomena
- Helps students in identifying routines to engage in collaboration
- Introduces organizing tools
- Reviews success criteria and expectations for work

Student:
- Engages in exploration of phenomena
- Participates in discussion
- Prepares organizing tools
- Asks questions or define problems

WORK SESSION

Teacher:
- Facilitates independent and small group work; scaffolds learning tasks
- Engages students in the 3-dimensions of science instruction
- Monitors, assesses and documents student progress and provides standards-based feedback
- Provides small group instruction
- Allows students to engage in productive struggle, make mistakes, and engage in error analysis
- Conferences formally and informally with students

Student:
- Engages in independent or collaborative learning
- Demonstrates proficiency of science and engineering practices, crosscutting concepts and core disciplinary ideas
- Completes conceptually rich performance tasks, research or guided practice
- Conferences with teacher and receives standards-based feedback

CLOSING

Teacher:
- Formally or informally assesses student understanding
- Asks questions targeting students' explanations and claims to provide feedback
- Provides phenomena that challenges students' explanations
- Engages students in summarizing learning and celebrates progress toward mastery of standard(s)
- Identifies next steps for instruction based on data analysis

Student:
- Shares, assesses, and justifies work using language of the standards
- Provides peer feedback and asks clarifying questions using language of the standards
- Reflects and summarizes progress toward mastery of learning target/standard based on success criteria