Lesson Observation: 3-Dimensional Science in the Schoolyard

Teacher: **Observer:** **Date:**

School: **Standard:**

Class size: **Grade level:**

Description of Learning Experience Observed:

Teaching Methodologies Observed:
- ☐ Student-directed investigation
- ☐ Engineering design challenge
- ☐ Teacher-directed hands-on activity
- ☐ Direct instruction: lecture or explanation
- ☐ Other: _____

ecoSTEM kit in use?
- ☐ Water
- ☐ Energy
- ☐ Earth
- ☐ PolliNation
- ☐ None
- ☐ Other

Lesson Setting:
- ☐ Outdoors / schoolyard
- ☐ Outdoors / garden
- ☐ In classroom
- ☐ In STEM Lab
- ☐ Both indoors and outdoors

3-Dimensional Learning in Science

Students engaged in 3D science and engineering practices?
- ☐ Asking questions arising from observation of phenomena
- ☐ Developing and using models
- ☐ Planning and carrying out investigations
- ☐ Analyzing and interpreting data
- ☐ Using mathematical and computational thinking
- ☐ Constructing explanation (science); designing solution (engineering)
- ☐ Arguing from evidence
- ☐ Obtaining, evaluating and communicating information

Comments and Suggestions

Any of these crosscutting concepts referenced by teacher or students?
- ☐ Patterns
- ☐ Cause and effect
- ☐ Scale, proportion, and quantity
- ☐ Systems and system models
- ☐ Energy and matter
- ☐ Structure and function
- ☐ Stability and change

Comments and Suggestions

Do students observe and make sense of a phenomenon?
- ☐ Teacher presents a phenomenon to engage students with a core idea
- ☐ Students try to make sense of phenomenon (instead of having it explained)
- ☐ Students conduct investigations to create, revise explanation for phenomenon

Comments and Suggestions

Integrated STEM Learning?
- ☐ ecoSTEM Kit or STEM performance tasks incorporated in lesson
- ☐ At least 2 subjects integrated (science, math, engineering, technology)
- ☐ Opportunities for creativity, communication, collaboration, critical thinking

Comments and Suggestions

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Pedagogy

Classroom Management Strategies

- ☐ Students collaborate in small teams
- ☐ Boundary markers set for outdoor activities; signals used to regroup
- ☐ Journaling used to engage, focus, and reflect
- ☐ Students engaged and on task; time management effective
- ☐ Other strategies: _____

Comments and Suggestions

Differentiated Instruction

- ☐ Accelerated learners given extension opportunities
- ☐ Students who don't initially master concept, given multiple
- ☐ Culturally and developmentally appropriate
- ☐ Other strategies: _____

Comments and Suggestions

Assessment of Student Performance

- ☐ Students demonstrate competency on authentic tasks
- ☐ Keeley probe, Kahoot, Quizlet or mid-lesson assessment used
- ☐ Other strategies: _____

Comments and Suggestions

Professionalism

- ☐ Teacher exhibits subject matter knowledge
- ☐ Clarity in communication, process, flow of activities, focus
- ☐ Organization and preparation minimize off-task time, disorder
- ☐ Necessary supplies and materials on hand;
- ☐ Rapport with students encourages curiosity, inquiry, understanding
- ☐ Length, level and pacing of learning activities appropriate for abilities
- ☐ Lesson is engaging, creative, and sparks student curiosity
- ☐ Student self-discipline
- ☐ Teacher facilitates learning and encourages student voice and choice
- ☐ Goals and expectations clear; rubrics provided to students in advance

Comments and Suggestions

Strengths and Overall Effectiveness

Suggestions for Growth