Teacher Rubric: Modeling Flood Dynamics with Rubber Ducks

Criteria	4 - Exceeds Expectations	3 - Meets Expectations	2 - Developing	1 - Beginning
1. Observation and Data Collection	Records detailed, accurate, and comprehensive observations for all parts of the activity (Water Movement, Dam, Terrain, Aquatic Life). Includes specific qualitative and quantitative descriptions. Demonstrates keen attention to subtle changes.	Records accurate and relevant observations for most parts of the activity. Data is generally clear and reflects key changes observed.	Records some observations, but they may lack detail, accuracy, or completeness for certain parts of the activity.	Records minimal or inaccurate observations. Struggles to identify key changes or relevant data points during the activity.
2. Understanding of Core Concepts	Clearly articulates a deep and nuanced understanding of how natural and man-made features influence water flow, the mechanics of dam breaks, terrain's impact on flow, and the effects of sedimentation on aquatic life. Consistently connects observations to scientific principles.	Demonstrates a good understanding of how water moves, the role of dams and terrain in affecting flow, and the basic impact of sedimentation on aquatic environments. Can explain most concepts clearly.	Shows some understanding of the core concepts but may struggle with specific details, terminology, or making clear connections between observations and scientific principles.	Limited understanding of the core concepts presented in the activity. Explanations are vague, inaccurate, or demonstrate significant misconceptions.
3. Participation and Collaboration	Actively and constructively participates in all experimental procedures and group discussions. Collaborates effectively with peers, shares ideas, listens respectfully, and contributes to a positive group dynamic.	Participates consistently in group activities and discussions. Works well with group members, contributing to the completion of tasks.	Participates occasionally in group activities or discussions. May need prompting to contribute ideas or engage fully with the task.	Rarely participates or contributes to group work or discussions. May disengage from the activity or rely heavily on others.
4. Analysis and Connection to Real World	Provides thoughtful, well-reasoned, and insightful answers to wrap-up questions. Makes strong, specific, and accurate connections between the model and real-world flood dynamics, ecosystem effects, and environmental impacts.	Answers wrap-up questions adequately, making clear and relevant connections between the activity's observations and real-world flood dynamics or ecosystem effects.	Answers wrap-up questions with some prompting. Connections to the real world are general, simplistic, or lack specificity.	Struggles to answer wrap-up questions or make meaningful connections between the activity and real-world phenomena.