INSTRUCTIONAL STAFF 2018
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SCHEDULE

Monday June 18
Driving Question: How do equal and unequal forces on an object affect that object?
Learning Goals:
• Construct explanations based on evidence.
• Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.
• Define a simple design problem that can be solved by applying scientific ideas about magnets.
• Model effective science, engineering, and literacy integration.
• Construct an open-ended, engaging driving question that effectively drives a PBL unit.
Activities:
• Welcome, introductions, background, and context
• Assessment summary 2017 and pre-workshop assessments 2018
• Little Red Riding Hood and the nature and practice of science
• Balancing Forces (Amplify Science)
• Introduction to PBL: Constructing a driving question

Tuesday June 19
Driving Question: How much water can be found in different places on Earth?
Learning Goals:
• Develop a model using an example to describe ways in which the geosphere, biosphere, hydrosphere, and/or the atmosphere interact.
• Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment.
• Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
• Model effective science, engineering, and literacy integration.
• Explore strategies to manage PBL
Activities:
• How Can We Provide Freshwater To Those In Need? (Smithsonian Science Education Center)
• PBL: Managing projects
Wednesday June 20
Driving Question: How are materials similar and different from one another and how do the properties of materials relate to their use?
Learning Goals:
• Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
• Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.
• Make observations and construct an evidence-based account of how an object made of a small set of pieces can be disassembled into a new object.
• Construct an argument with evidence that some changes caused by heating and cooling can be reversed and some cannot.
• Successfully complete a digital fabrication task.
Activities:
• Making crystals, but not the way you think to do it.
• Visit to think[box] – tour and tasks

Note: CWRU will be offering a themed BBQ for lunch. Eat a light breakfast!

Thursday June 21
Driving Question: Can new substances be created by combining other substances?
Learning Goals:
• Make observations and measurements to identify materials based on their properties.
• Conduct an investigation to determine whether the mixing of two or more substances results in new substances
• Explore strategies to assess PBL
Activities:
• Fun with Play-Doh
• PBL: Assessment and culminating design challenge

Note: University Hospitals hosts the North Union Farmers Market every Thursday. Worth checking out.

Friday June 22 (We will meet at the Cleveland Metroparks Zoo on Friday)
Driving Question: How do organisms interact in groups so as to benefit individuals?
Learning Goals:
• Construct an argument that some animals form groups that help members survive
• Model effective science, engineering, and literacy integration.
Activities:
• Better Together (NSTA Picture-Perfect STEM Lessons 3-5)
• Habitat design challenge
• Post-assessments 2018