

Pulley Islands – Learning Dimensions Framework & NGSS

| DIMENSION | DESCRIPTOR | Observed | Notes |
|--|--|----------|-------|
| Initiative and Intentionality | Learners take intellectual and creative risks; work without a blueprint | Y OR N | |
| Problem Solving and Critical Thinking | Learners engage in troubleshooting through iteration | Y OR N | |
| Creativity and Self Expression | Learners engage in playful exploration | Y OR N | |
| Social and Emotional Engagement | Learners build on or remix the ideas or projects of others | Y OR N | |
| Conceptual Understanding: NGSS DCI 3-PS2-1: Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. | Learners are able to identify and that objects in contact exert forces on one another. Learners observe the strength and direction of the forces at work in their pulley system | Y OR N | |
| Conceptual Understanding: NGSS practices | Learners ask and refine questions that lead to descriptions and explanations of how the world works and which can be empirically tested | Y OR N | |
| Conceptual Understanding: Crosscutting Concepts | Students identify cause and effect relationships | Y OR N | |

**adapted from The Tinkering Studio Learning Dimensions Framework
<https://www.exploratorium.edu/tinkering/our-work/publications>*