Connecting PLTW Launch to Your Existing Science Curriculum

Paul Schiele
PLTW Director of Implementation

Andy Sarbacker
PLTW Director of Implementation
Agenda

● PLTW Launch modules overview
  ○ Modules supporting NGSS
● Curriculum Frameworks
● How is support accomplished?
● Individual state standards support and existing science adoptions
● Collaborating with peers
● Q and A
● Exploratorium
LIFE SCIENCES SCENARIO

PreK.1 Life Science: Living and Nonliving Things
K.6 Living Things: Needs and Impacts
1.3 Animal Adaptations
1.5 Designs Inspired by Nature
2.2 Materials Science: Form and Function
2.5 Living Things: Diversity of Life
3.3 Variation of Traits
3.6 Life Cycles and Survival
3.7 Environmental Changes
4.4 Input/Output: Human Brain
4.6 Organisms: Structure and Function
5.6 Ecosystems: Flow of Matter and Energy

~12-14 hours / module
PHYSICAL SCIENCES SCENARIO

~12-14 hours / module

1.1 Light and Sound
2.1 Materials Science: Properties of Matter
2.2 Materials Science: Form and Function
K.2 Pushes and Pulls
K.5 Sunlight and Weather
PreK.2 Floating and Sinking
3.1 Stability and Motion: Science of Flight
3.2 Stability and Motion: Forces and Interactions
4.3 Input/Output: Computer Systems
4.5 Waves and Properties of Light
4.9 Energy Exploration
5.5 Matter: Properties and Reactions
5.6 Ecosystems: Flow of Matter and Energy
5.8 Earth’s Water and Interconnected Systems
Intentionally designed to support science needs

- my.pltw.org
  - Courses
  - Module teacher guide
  - Introduction to the module
  - “Connection to Standards and Curriculum Framework”
CCC in Environmental Changes

- **Patterns** of change can be used to make predictions.
- **Cause and Effect** relationships are routinely identified and used to explain change.
SEP: Developing and Using Models

Life Cycles and Survival
• Problem: How can we design a bee habitat **model** that promotes bee survival and meets the needs of bees?
Supporting Performance Expectations

Matter: Properties and Reactions

- **5-PS1-1** Develop a model to describe that matter is made of particles too small to be seen.

- **5-PS1-2** Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.

- **5-PS1-3** Make observations and measurements to identify materials based on their properties.

- **5-PS1-4** Conduct an investigation to determine whether the mixing of two or more substances results in new substances.

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**Investigation 1**

**Introduction**

In this investigation, you will mix cooking oil and water to determine whether they create a new substance.

**Materials**

- 50 mL graduated cylinders (2)
- 100 mL beaker
- Disposable transfer pipette
- Stir stick
- Cooking oil (50 mL)
- Water (50 mL)
- Safety glasses (1 per student)
- Digital device
- Device application: stopwatch

**Procedure**
Accessing Standards Guides

NGSS Standards Guide

PLTW Launch Science Standards for NGSS

PLTW Launch Standards Guides by State

The PLTW Launch Standards Guides by State help schools identify how PLTW Launch supports your science experiences through STEM.

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<th>State</th>
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Supporting schools with existing science curriculums

PLTW Launch Parallelization to Amplify Science NGSS K-5

This resource is intended to support schools in identifying how PLTW Launch can enrich Amplify implementations through the use of PLTW Launch module experiences.

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<th>Amplify Unit</th>
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- Amplify
- EIE
- Foss
- McGraw Hill
- Inspire
- Mystery
- Savvas
- Stemscopes
- Twig Science
Identifying potential new modules to support state science standards
Questions?
Thoughts?