Tab 1

Patterns Physics Resource: Year 1 Implementation Guidance

The primary goal of Patterns Physics is to position students as scientists who utilize the big ideas of science to explain phenomena and as engineers who apply those same ideas to solve problems. While the curriculum provides an essential framework for this work, it is only one piece of the puzzle. Teachers' experience and familiarity with the curriculum play a critical role in shaping student learning. During the first year of implementation, it is crucial to create time and space to cultivate students' STEM identity through the learning progressions. To support this, we recommend reducing the number of tasks in year one, allowing teachers and students to engage more deeply with each core progression and build a strong foundation for future learning. Refer to the table below for unit-by-unit recommendations on what you can skip to keep to the suggested pacing timeline. This will allow you to prioritize the most essential elements of Patterns Physics and the NGSS.

Unit	Recommendations
Unit 1 - Patterns and Inquiry 6 Weeks	Skip *Task 1.8 - Design an Experiment*. Only provide additional practice if the core task/experiment did not go well.
Unit 2 - Energy and Engineering 6 Weeks	Skip *Task 2.5 - Design an Experiment to Determine the Strength of a Bungee Cord.* Only include *Task 2.8 - How can we determine if a video is real or fake?,* if it fits within the 6-week pacing; otherwise, skip it.
Unit 3 - Engineer a Shoe 6 Weeks	Only include *Task 3.3 – Design an Experiment to Investigate the Traction of a Shoe,* if it fits within the 6-week pacing; otherwise, skip it. Skip Transfer *Task 3.6 - Investigating Momentum.*
Unit 4 - Waves and Technology 7 Weeks	Skip *Task 4.3 – Do Cell Phones Cause Cancer?*

	Only include *4.7 – Do Most of the Good Stuff of an Ultrasound Machine,* if it fits within the 7-week pacing; otherwise, skip it. Skip *Task 4.8 – Design an Experiment to Investigate a Musical Instrument.*
Unit 5 - What is your plan? 8 Weeks	Skip Design Lab Report within *Task 2: Motors and Generators.* If running short on time, engage students in either *Task 3: Wind Turbine Engineering Project* or *Task 5.4: Optimize a Solar Array*.
Unit 6 - Space and the Universe 3 Weeks	If short on time, prioritize *Task 6.3: Understanding the Big Bang*.