Snohomish Public Utilities District Classroom Workshop Standards

Below are the key Washington State Learning Standards covered in the middle school SnoPUD Hydropower and Renewable Energy workshops. Workshops directly address the Washington State Environmental and Sustainability Standards Connections.

Both workshops incorporate the three Environmental and Sustainability Standards Connections.

- **ESE Standard 1: Ecological, Social, and Economic Systems**. Students develop knowledge of the interconnections and interdependency of ecological, social, and economic systems. They demonstrate an understanding of how the health of these systems determines the sustainability of natural and human communities at local, regional, national, and global levels.
- **ESE Standard 2: The Natural and Built Environment**. Students engage in inquiry and systems thinking and use information gained through learning experiences in, about, and for the environment to understand the structure, components, and processes of natural and human-built environments.
- **ESE Standard 3: Sustainability and Civic Responsibility.** Students develop and apply the knowledge, perspective, vision, skills, and habits of mind necessary to make personal and collective decisions and take actions that promote sustainability.

Middle School Standards

	Hydropower: Energy and Systems	Renewables: The Future of Energy
Next Generation Science Standards (NGSS)		
MS-PS3-2 Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.	●	
MS-PS3-5 Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	●	●
MS-ESS2-4 Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.	●	
MS-ESS3-1 Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy and groundwater resources are the results of past and current geoscience processes.		●
MS-ESS3-2 Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.		●
MS-ESS 3-3 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.	●	
MS-ESS3-3 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.	●	●

MS-ESS3-4 Construct an argument supported by evidence for how increase in human population and per-capita consumption of natural resources impacts Earth's systems.	●	●
MS-ETS 1-3 Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.	●	●
Common Core State Standards		
RST 6-8.3 Follow a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.	●	●
RST 6-8.7 Compare and contrast information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.	●	●
L 6.6, L 7.6, & L 8.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.	●	●
RI 6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	●	●
RI 6.7 Integrate information presented in different media or formats.	●	●
RI 7.1 Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	●	●
RI 8.1 Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.		●
SL 6.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on [grade appropriate] topics, building on others' ideas and expressing their own clearly.	●	●
Washington State Social Studies Standards		
G1 Understands the physical characteristics, cultural characteristics, and location of places, regions, and spatial patterns on Earth's surface.	●	●
G2 Understands human interactions with the environment.	●	●
G3 Understands the geographic context of global issues and events.		●
E4 Understands the economic issues and problems that all societies face.	●	●