

Alternative Energy Club

Facilitators: Mr. Saltmarsh, Science Teacher (and certified math teacher)

Mr. LaBombard, Technical Education Teacher

Science, technology, engineering, and math (STEM) are skills necessary for the twenty first century. This club will offer a STEM project by combining instruction and facilitation in all four disciplines. Necessary materials will be provided by the grant. There is no cost to participate. Open to grades 6, 7 and 8.

An alternative energy club will be offered at Winnisquam Regional Middle School as a part of the Alternative Energy Club Grant awarded to the district. The club will meet on Tuesdays from 2:30 to 3:30. Scheduling will be organized quarterly around topics of alternative energy. For those who would like to participate but are unable to attend the after-school club, the first quarter Friday enrichment block will offer this topic as one of the options.

The first topic will be wind energy. This topic will begin with an inquiry-based discussion of alternative energy, an investigation of what wind is, and why wind moves in predictable patterns of speed and direction. Students will then discuss where and why to place windmills to harvest the power of wind.

Video clips will introduce “The Boy Who Harnessed the Wind”, an animation of the cause and effect of windmill generation, consumer use and storage of excess power, and wind mill farms in operation throughout the world.

Following the discussions, students will apply what they know through an inquiry-based process to design, construct, and test windmills. Focus will be on designing the most effective blade considering the material, size, and pitch of the blades. This understanding will then be transferred to more sophisticated windmills using prepared windmill kits. Students will be able to measure and display the energy generated from a constant wind flow source, and will make adjustments to the blades to increase this energy using the scientific method.

Schedule: Meetings will be after school from 2:30 to 3:30 on three Tuesdays a month. Students need to be picked up promptly at 3:30. This will also be offered as a choice for Friday’s enrichment block each quarter.

9/27 10/4 10/18 10/25 11/1 11/8 11/15

Where: Mr. LaBombard’s Technical Education Room