HARRISON BAY CENTER

PBL
Project Based Learning

Principles of Manufacturing – Generator power vs Solar Power fans & turbines

Students at Harrison Bay Future Ready Center used a four-position switch to wire an Alternative Energy powered Mill House. The students built the Mill House, wind turbine, solar PV system, and hand crank generator from a kit. The Mill House can operate by selecting power from anyone of the alternative energy power sources. Students not only learn to build and wire, they learn about sustainable energy for a future that they are going to be a part of. Students in person worked with students at home on collaborative teams. Some HCSat Home students also had kits.

Solar-powered fan

A solar fan is a mechanical fan powered by solar panels. The solar panels are either mounted on the device or are installed independently. Solar fans mostly do not require secondary power sources other than solar power, as most of them are used for cooling purposes during day time. Some types are also used for heating purposes. It runs the fastest when it is the hottest outside providing savings on air conditioning costs.

Solar-powered turbines

CSP technology utilizes **focused sunlight**. CSP plants generate electric power by using mirrors to concentrate (focus) the sun's energy and convert it into high-temperature heat. That heat is then channeled through a conventional generator. The plants consist of two parts: one that collects solar energy and converts it to heat, and another that converts the heat energy to electricity