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# RENEWABLE & ALTERNATIVE ENERGY



ENERGY  
EDUCATION  
TOOL KIT

BY INSIDE EDUCATION



# RENEWABLE & ALTERNATIVE ENERGY

## GUIDING QUESTIONS

- What is the difference between renewable and alternative energy?
- What are some different types of renewable and alternative energy?
- Why is renewable and alternative energy on the rise in Alberta?



## RENEWABLE ENERGY

Renewable energy is energy that comes from natural resources that we have an unlimited supply of. Renewable energy sources include wind, solar, biomass, water and geothermal.



## ALTERNATIVE ENERGY

Alternative energy is generated in a way that emits less greenhouse gases than traditional energy production, but doesn't necessarily come from renewable resources. Alternative energy sources include fuel cells and natural gas cogeneration.

## MATERIAL FROM KIT

- Wind turbine model
- Solar panel
- Multimeter
- Hydrogen experiment
- Lab instruction sheets  
(wind, solar, hydrogen)

## MATERIAL FROM CLASSROOM

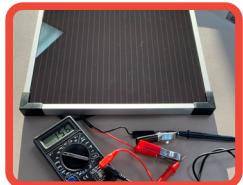
- Fan

## TRY THESE ACTIVITIES



### WIND

- Build a wind turbine model!
- See Wind Lab sheet for instructions



### SOLAR

- Use a solar panel!
- See Solar Lab sheet for instructions



### HYDROGEN

- Find out how hydrogen is made!
- See Hydrogen Lab sheet for instructions

## CONSIDER ...

Renewable and alternative energy are on the rise in Alberta and there are more and more jobs available in research, technology development, and maintenance. Would you consider a career in renewable/alternative energy?

## CONNECT ...

There are an increasing number of subsidies available for people who want to install solar panels on their house, making them more affordable. Look around your community. Do you or do any of your neighbours have solar panels?

## LEARN MORE ...

Explore the Future Energy Systems Renewable Energy Project Map<sup>15</sup> to learn about more renewable energy projects happening in Alberta and across Canada.

> <https://www.futureenergysystems.ca/resources/renewable-energy-projects-canada>

