



Wind Farms

Simulating a turbine using Scratch

SCN 3-04b - By investigating renewable energy sources and taking part in practical activities to harness them, I can discuss their benefits and potential problems

Benchmarks

- 1) Design and build a program using a visual language containing constructs and using multiple variables
- 2) Can find and correct errors in program logic
- 3) Writes code which receives and responds to real world input (in a visual language)

Your task

To build a working simulation of a wind turbine.

Step 1) Find information about a wind farm in your area

Step 2) Follow video tutorial to build turbine simulation

Step 3) Test your simulation using the information gained about your turbine/wind farm

Factors that affect power generation

Make a list of the variables that affect the amount of power generated

For example:

- Rotor diameter



Find out about a wind farm in your area

Use a search engine to find out information about a wind farm in your area.

Find out the following:

- “Rated output” of wind farm
- Make and model of turbine
- Technical information about the model of turbine

If this isn't available then use:

<http://bit.ly/2IT3jf5>

Extra Challenges

- 1) Get your turbine blades to change size based on changes to rotor diameter variable. HINT: Use shrink and grow block
- 2) Simulate a whole wind farm