Solar Panels

A solar panel captures energy from the Sun and converts that energy into electricity. This electricity can then be used to power houses, cars, and more!

Image: NxTide from Pixabay.

Because this energy comes from natural sources, and more can be made quickly, it is called **renewable energy**.

The Sustainable Development Goals

The 17 Sustainable Development Goals (SDGs) were adopted by the United Nations in 2015 as a call to "end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity".

You can find out more here:
https://www.undp.org/sustainable-development-goals

Renewable energy and the Sustainable Development Goals
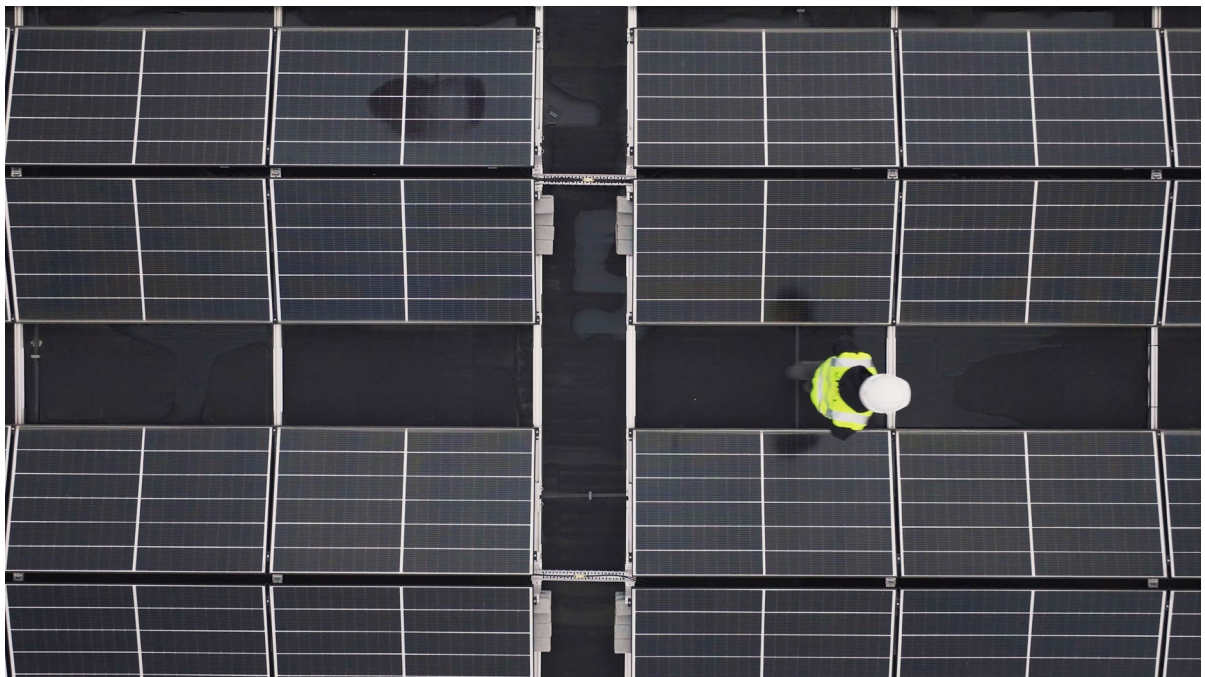
Renewable energy is a key part of **SDG 7**. This is **Affordable and Clean Energy**: Ensure access to affordable, reliable, sustainable and modern energy for all.

It can also be linked to **SGD 12**. This is **Responsible Consumption and Production**: Ensure sustainable consumption and production patterns.

Solar panels are made up of lots of connected solar cells that convert the Sun's energy into electricity.

It is important to use renewable and sustainable energy sources, like the Sun, to make sure we can slow down global warming and look after our planet.

Renewable energy can help reduce energy poverty in rural and remote areas of developing countries, where lack of energy access is often hindering economic development.

Apprentice engineer inspecting solar panels. © This is Engineering. Used under CC BY-NC-ND 2.0 via Flickr.

Find out more about real-life engineer and 'Net Zero Navigator' Harvey (shown inspecting solar panels in the photo above) from This is Engineering:
https://thisisengineering.org.uk/people/harvey-hudson/.
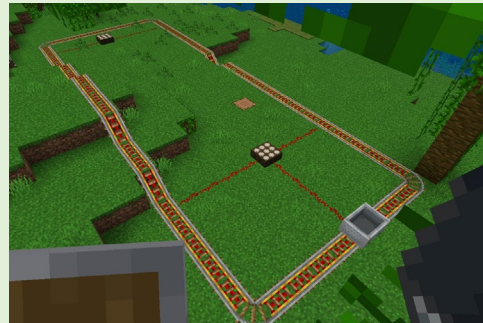
Minecraft Challenge

Create solar powered lights:

- Connect a daylight sensor to a light, such as a redstone lamp.

- You can connect them using redstone dust to act as electrical cabling.

- Pick a location that you think will get you the maximum amount of solar energy.

- Are there any instances where the solar panels don't produce energy?

Create a solar powered train network:

- Use daylight sensors and powered rail to create a network in which trains are powered by solar energy.

Create a battery to store the solar energy:

- As solar panels only produce energy during the daytime, try to develop a battery to store the energy so it can be used at night. You could watch our engineer Daisy's YouTube tutorial for help with this.

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