Decent Work and Economic Growth: Science: How does work affect the landscape?

Prior Learning (What we already know?):

- How to ask simple questions and recognise that they can be answered in different ways including use of scientific language from the national curriculum
- How to use simple equipment to observe closely including changes over time
- How to Communicate ideas about what I do and find out in a variety of ways.
- How to perform simple comparative tests
- Identify, group and classify
- How to use observations and ideas to suggest answers to questions noticing similarities, differences and patterns

How to gather and record data to help in answering questions including from secondary sources of information

New Learning:

To begin to investigate sustainable methods of producing electricity.

How does the use of alternative sustainable energy introduce new scientific job opportunities?

Also use this time to conduct investigations to cover any skills or enquiry types that have not been sufficiently covered.

New Science Skills:

Ask relevant questions (use 5 types of scientific enquiries to answer them)
Set up simple comparative and fair tests
Make systematic and careful observations (take accurate measurements using standard units, use thermometers and data loggers)
Gather, record, classify and present data in a variety of ways to help in answering questions
Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
Identify differences/similarities/changes related to simple scientific ideas/processes
Uses straightforward scientific evidence to answer questions or to support findings

Key Questions:

Can you design a solar panel?

How can solar panels change people's lives?

What are the advantages and disadvantages of solar energy?

How can solar energy affect employment opportunities?

Vocabulary:

alternative energies, careers, solar panels, national grid

Key Facts:

The primary source of all energy on planet Earth is from the sun. Solar power is power generated directly from sunlight. Solar power can be used for heat energy or converted into electric energy. When we use solar power, we don't use any of the Earth's resources like coal or oil. This makes solar power a renewable energy source. Solar power is also clean power that doesn't generate a lot of pollution. Solar power can be used for heating up homes and other buildings. The sun could be used to heat up water or air that is then pumped around a building to provide even heat in all the rooms. When most of us think of solar power, we think of the solar cells that turn rays of sunshine into electricity. Solar cells are also called photovoltaic cells. The word "photovoltaic" comes from the word "photons", which are particles that make up sunlight, as well as the word "volts", which is a measurement of electricity. Today solar cells are commonly used in small handheld devices like calculators and wrist watches.

Key Resources:

https://practicalaction.org/schools/solar-challenge/#resources

https://www.ducksters.com/science/environment/solar_power.php

Can I do this?

N/A