

## 1752 Nadroga Sangam School

### Elementary Science Lesson Notes – week 2

#### Year 6 – Term 2, 2021

#### Topic – Sources of Energy

**Energy** – The capacity for doing work. It may exist in potential thermal, electrical, renewable, non-renewable forms of energy.

There are two sources of energy:

#### 1. **Renewable Energy**

- Unlimited in supply
- Environmentally friendly
- Clean Energy
- Cheap and easy to use

##### *Example:*

- **Solar energy** – energy from the sun, pollution free and does not harm the environment.
- **Wind power** – generated by wind turbines and converts wind energy into electricity.
- **Wave power** – comes from the energy created by waves in the ocean, can be used for electricity and pumping purposes.
- **Hydroelectric Power** – Hydro power is fueled by water, driving a water turbine and generator so it's clean fuel source.
- **Bio-fuels** – are made mostly from plants that have just been harvested. There are 3 main types of bio-fuel – ethanol, bio-diesel and bio jet fuel. Bio-fuel is used in cars, trucks, tractors and planes.

#### 2. **Non-Renewable Energy**

- Are resources which is limited in supply, it comes from the earth itself and takes millions of years to form.

##### *Example :*

- **Crude oil / petroleum** – It is a non-renewable resource that forms in a liquid form between the layers of the earth's crust. It is retrieved by drilling deep into the ground and pumping it out. It produces petroleum such as heating oil, petrol diesel, jet fuel etc.
- **Gas** – It is formed in the earth's crust and must be drilled and pumped out. Methane and ethane are most common types of gases obtained through this process.
- **Coal** – A fossil fuels which is obtained through mining. It is most typically used in homes, heating and running of the power plants.

**Activity**

1. Explain the difference between renewable and non-renewable energy?

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2. List some sources of renewable and non-renewable energy in Fiji?

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3. What is bio fuel?

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4. List some advantages and disadvantages of using renewable and non-renewable sources of energy?

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