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Unit 19 – Sources of Energy(2)

Renewable energy sources

Activity 19.3

Find the effect of the size of the solar heat cooker on its function

You will need :- Several torch reflectors of different sizes, several matchsticks, clay Method :-

• Fix a matchstick in the hole of the torch reflector with the help of clay. Turn the reflector towards sunlight. Place it in a position



Figure 19.5 A torch reflector

- in which the top of the match is set at the point where sunlight is collected. Measure the time it takes to light the match.
- Do this experiment by using torch reflectors of different sizes. Measure the time at each occasion. (Do this activity as a instructive model)

Activity 19.4

Generating electricity from solar batteries

You will need :- Solar batteries, multimeter

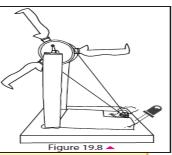
Method :-

- Find a solar panel if possible.
- Connect it to a motor and direct the solar panel towards the sunlight. If not remove the solar panel in a calculator with the help of an adult.
- Connect the connective wires to the multimeter.
- Adjust the multimeter to the scale of milliampere (mA).
- Direct the solar batteries to the sunlight and check the index of the multimeter.

• What are the disadvantages of solar power ?

Activity 19.5

Generating electricity using wind power You will need:- A car cassette motor of 12 V, a LED bulb, a biscuit tin of which the diameter is 14 cm and the height is 10 cm, three plastic water bottles of one litre each (without water), three mega bottle lids, three bolt nails, a small pulley which can be fixed to the axis of the motor, twine or any other thread. Method:-



- Fix the three mega bottle lids at a similar distance to the biscuit tin with the bolt nails.
- Fix three wind blades made by cutting and removing a part of the bottle, to those three bottle lids.
- Do not forget to fix the bottle lids towards corner of the biscuit tin and not in the middle.
- Fix the small pulley to the axis of the motor.
- Connect the car cassette motor of 12 V with the twine thread in a manner as to be able to rotate it.
- Connect a LED to the motor and rotate the turbine with the help of a fan.
- Record your observations.
- Increase the speed of the wind flow and observe the lighting of the LED.