



Parent sheet 4

At npower, we feel it's important to bring the learning of energy to life and that's why we have created npower Climate Cops Green Fingers – a teaching resource for 4 - 7 year-olds that uses gardening to help younger minds understand the power of the Earth's natural energy. To help support your child's learning, why not try this activity at home? Together you will be able to see nature's energy in action and learn about natural and renewable energy whilst having fun.

Create your own greenhouse solar heating system*

Renewable energy doesn't cost the Earth. This activity relies on the natural principles of heat absorption. Throughout the day your homemade heating system will absorb the sun's energy and the trapped heat will be dispersed throughout the night, helping to slightly increase the night-time temperature inside your greenhouse. It's cheap and simple to do and will help you and your child / children see, first hand, renewable energy in action!

You will need: Pea gravel** (enough to fill the required amount of bottles / box / container), black paint, 5 - 10 large pop bottles and / or a metal box / container with lid (the larger the better).

Instructions:

- 1 Wash and dry the pop bottles / box / container
- 2 Using the black paint, cover the bottles / box / container thoroughly and leave to dry
- 3 Move the bottles / box / container to a sunny location within your greenhouse (it is easier to move these when empty)
- 4 Carefully fill each bottle / box / container with pea gravel and replace the caps / lid to stop spillage
- 5 If using bottles, arrange them in a huddle formation / tight circle
- 6 The bottles / box / container must be in a sunny position for the renewable heater to work, so check the location again and move bottles / box / container to a sunnier location if needed
- 7 Your heater is now up and running! Throughout the day your heater will absorb the sun's energy, heating up the pea gravel inside. As the sun goes down and the air inside your greenhouse cools, the stored heat in your bottles / box / container will disseminate into the cooler greenhouse air helping to slightly raise the temperature*



* This system is designed to be a fun, experimental activity and npower does not make any claims, promises or representations for the efficiency or effectiveness of the system

**Pea gravel retails at about £3.00 for a 25kg bag