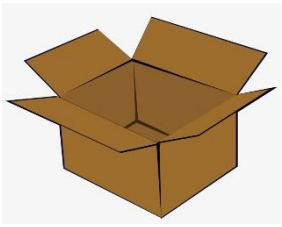
Science Activity

Energy saving house & garden

Time to prepare: 10 minutes



 Please, stay safe and ask a grown up to supervise you

Resources/ things you need

- Colours
- Paper
- Scissors
- Cellotape, glue
- Card board box (if you don't have a box, then please see the picture on page 2 of this activity sheet as a piece of paper can be folded simply into a house shape)
- Junk modelling
- Optional – foil, cotton wool, any cut off textiles, any **packaging (BUT NOT plastic)** or toilet roll.

Optional – this could all be simply drawn onto a piece of paper with junk modelling or a box needed.

What to do

1. You are going to make and design an eco-friendly house that will keep you warm in the Winter and cool in the Summer. **Your house should help keep in and preserve energy.**

Your cardboard box is the house.

2. Start by making your house from the cardboard box. **See the pictures to help you.**
3. Use your junk modelling items as the materials for your house.

Think about these questions:

a) **What materials will you use and stick on the walls?**
b) **What material will you use on the roof to keep the heat energy in?**
c) **What materials will you use for the windows and floor?**
d) **Can you think of any other energy saving features your house or garden may have?**
(For example solar panels.)

Optional – Stick your house onto some card board and design the garden.

a) **Can the garden generate some energy for the house? (FOR EXAMPLE is there a windmill, or a water feature, solar panels?)**
b) **Could fruit and vegetables be grown to save energy?**
c) **Is there a composting area or recycling area?**

Background and the link to learning

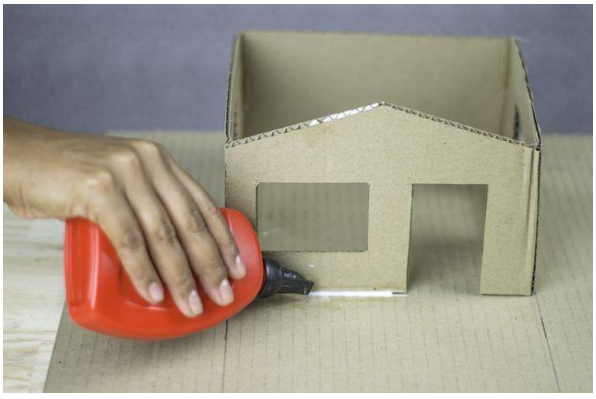
The simplest **definition** of **energy** is "the ability to do work". **Energy** is how things change and move. It's everywhere around us and takes all sorts of forms.

Some different types of energy include electrical, thermal (heat), light, sound, kinetic (movement), gravitational potential (when you hold something up high in your hand and it is about to fall), chemical (like in a battery) and elastic.

Some clues

Remember foil reflects heat and light energy as it is shiny. The walls should be insulated to keep you warm in the house. Black also absorbs heat.

Pictures



Link to other similar activities – Please see rainbow for recycling & refuse.