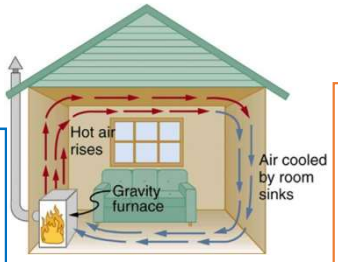


# Physics

**What makes an eco-home?**  
Discover different means of transferring heat, and apply them to the design of an eco-home.



**Challenge:**  
Perform an Eco-audit of your home. Identify how you could make it more eco-friendly!

**Check point**  
A topic assessment testing knowledge, of the eco homes

**How can the world become carbon neutral?**  
Learn about the different energy resources available and the balance between reliable and renewable energy.

**Challenge:**  
Design your own eco-community. Consider not only the design of the buildings but the road layout and the types of energy resources used to support the community.



The Autumn line

**Check point**  
Exam week: Knowledge will be tested on topics learnt so far.



**Challenge:**  
Breaking the sound barrier - What happens when something goes faster than the speed of sound? Research this phenomenon.

**What are Waves?**  
Have you ever considered what the difference is between X-Rays and Radio waves? Do you know how to calculate the speed of sound? What does an explosion sound like in space? We will give you the tools to answer all of these questions in the waves topic.

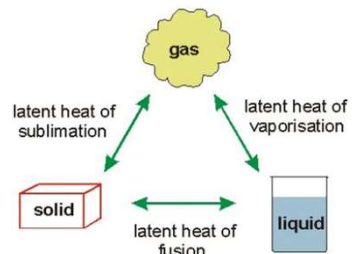
The Spring line

**Energy:**  
What is energy and why does it matter? Learn about one of the fundamental concepts of Physics and how it applies to the world around us.

**Challenge:**  
How much energy is in light? Research Planck's Equation and the energy of a photon.

**Energy KS4:**  
What will fall to ground first when dropped from the same height – a feather or a bowling ball? Take the qualitative ideas learnt and develop them further in order to perform calculations.

**Particles and Matter**  
Why does sand heat up much quicker than water? What happens to the temperature of a substance as it boils?



**Check point**  
Assessment testing your knowledge and skills from previous topics

The Summer line

