Year Group: 9 Term:1 (Sept – Oct)

We are learning:

- **Energy Stores and Transfers** – Understanding different types of energy (e.g. kinetic, thermal, chemical) and how energy moves between stores.
- **Conservation of Energy** – Energy cannot be created or destroyed; it is conserved and transferred between objects or systems.
- **Heating and Cooling** – How energy is transferred by conduction, convection, and radiation, and how insulation reduces energy loss.
- **Work and Power** – Introduction to how forces do work and how power measures the rate of energy transfer.
- **Energy Resources** – Comparing renewable and non-renewable energy sources and their impact on the environment.
- **Calculating Energy Changes** – Using simple equations to calculate energy transferred, including changes in temperature and movement.

How can you support your child:

- Encourage them to make revision posters on each of the sub-topics within the topic.
- Encourage them to make cue cards with questions and answers on all the sub-topics.
- Encourage them to use the notes, videos, and quizzes, on BBC Bitesize.
- Encourage them to use Seneca Learning to supplement and secure their knowledge on the topic.

Try asking them:

1. **"What are the different types of energy stores?"**
   Answer: Kinetic, thermal, chemical, gravitational potential, elastic potential, nuclear, and electrostatic.
2. **"Can energy be created or destroyed?"**
   Answer: No — energy is **conserved**. It can be transferred, stored, or dissipated, but not created or destroyed.
3. **"How does energy move from one place to another?"**
   Answer: Through **conduction**, **convection**, **radiation**, or by doing **mechanical or electrical work**.
4. **"What's the difference between renewable and non-renewable energy sources?"**
   Answer: Renewable sources (like solar and wind) won't run out; non-renewable sources (like coal and gas) will eventually be used up and often pollute.
5. **"What does insulation do in terms of energy?"**
   Answer: It **reduces energy loss** by slowing down heat transfer, helping keep buildings warm or cool.

Useful Links:

Senecal Learning = https://senecalearning.com/en-GB/

BBC Bitesize = GCSE Physics (Single Science) - AQA - BBC Bitesize

Kerboodle = www.kerboodle.com