Medium Term Plan: Supporting Implementation of LTP/Progression Grid

Subject: Science Year: KS1 year 2 – Energy

NC/PoS:

Unit designed to introduce children to energy (electricity, light, sound, and forces) before studying national curriculum units in LKS2

Prior Learning (what pupils already know and can do)

Children know that they can switch some things on/off. Know that a toy car is pushed to make it move. Know different animals make different sounds. Know lights are switched on and off in the house, school and outside.

End Goals (what pupils MUST know and remember)

- Know examples of common appliances that run on mains electricity are television, fridge/freezer, microwave, washing machine, lights
- Know that everyday appliances use electricity; these include things that light up, heat up, produce sound, or move
- Know examples of objects that use batteries are torches, mobile phones, calculators
- Know a force is a push or a pull
- Know that pushing or pulling things can make objects start or stop moving
- Know that sometimes pushes and pulls change the shape of objects
- Know that there are many different sources of sounds
- Know how to make observations of sounds by listening carefully
- Know that light sources give out light and the sun is a light source
- Know that light is essential for seeing things
- Know that sources of light show up best at night-time

Key Vocabulary: electricity, appliance, battery, mains electricity, socket, push, pull, change, twist, stretch, sound, sources, light source, natural, artificial

Session 1: review prior learning

Know examples of common appliances that run on mains electricity are television, fridge/freezer, microwave, washing machine, lights
Know examples of objects that use batteries are torches, mobile phones, calculators

Suggested activities:
Explore the classroom and identify appliances which use mains electricity and those which use batteries.
Visit other parts of the school, identifying other electrical appliances, plug sockets and lights.
Help children to make a record of all the appliances identified, together with their use.
Watch https://www.youtube.com/watch?v=oR_rrEkiAy8 introduction to electricity
Vocabulary: electricity, appliance, battery, mains electricity, socket,

Session 2: Recap: Name some appliances that use mains electricity or batteries

Know that everyday appliances use electricity; these include things that light up, heat up, produce sound, or move
Suggested activities:
Watch https://www.youtube.com/watch?v=oR_rrEkiAy8 using electricity
Sort pictures of different objects that use electricity into things that light up, heat up, produce sound, or move
Walk around school looking at things that use electricity. What does the electricity make the appliance do?
Vocabulary: electricity, appliance, battery, mains electricity, socket

Session 3: Recap: How does electricity affect appliances?
Know a force is a push or a pull
Know that pushing or pulling things can make objects start or stop moving
Know that sometimes pushes and pulls change the shape of objects

Suggested activities:
Present children with a collection of materials *e.g. plasticine, dough, bag of sand, sponge, elastic bands.* Ask children to explore how to make a variety of shapes *e.g. sausage, ball, worm* to describe what action they used *e.g. twist, stretch* and to classify the action as a push or a pull.
Present children with a collection of toy cars and ask them how to make them move faster, slower, or change direction. In PE ask children to throw bean bags to each other or hit soft balls to each other and suggest how to make them move faster or slower or change direction.

Vocabulary: push, pull, change, twist, stretch

Session 4: Recap: What is a force? What do forces do?
Know that there are many different sources of sounds
Know how to make observations of sounds by listening carefully

Suggested activities:
https://www.youtube.com/watch?v=n1m4h79JZso What is the sound?
Carry out a 'sound quiz' by asking children to listen to a recording containing familiar sounds *e.g. a car engine, birds singing, children singing, a piano playing, footsteps, a tap running* and to identify what they are. Record different children in the class speaking and ask children to identify who they are

Vocabulary: sound, sources

Session 5: Recap: Give examples of sources of sounds
Know that light sources give out light and the sun is a light source

Know that sources of light show up best at night-time

Know that light is essential for seeing things
Suggested activities:
https://www.youtube.com/watch?v=1PsHHKwtXQU what is light?
Sort photographs of objects that emit light/ do not
Vocabulary: light source, natural, artificial

Link to career scientist:
Electrician, sound engineer, light engineer

Scientists who have helped develop understanding in this field: