Listen Up! – Term 3

Southville Primary School

Year 4

Local Anchor Point	Visit/ Visitor	Key Person	Key Outcome
British Aerospace -- supersonic!	Local musician	Scientist--Alexander Graham-Bell	Making and advertising ear defenders

Diversity, Equity and Inclusion	Linked Learning
Deafness/hearing impairment--causes, hearing aids, sign language	Syllabic Poetry; Advertising Products

Driver 1: Science

What exactly is sound? How is it created, how does it travel and how is it heard?

Driver 1 Objectives

- Identify how sounds are made, associating some of them with something vibrating.
- Recognise that vibrations from sounds travel through a medium to the ear.
- Find patterns between the pitch of a sound and features of the object that produced it.
- Find patterns between the volume of a sound and the strength of the vibrations that produced it.
- Recognise that sounds get fainter as the distance from the sound source increases

Driver 1 Disciplinary Knowledge and Skills

This is knowing how to carry out practical procedures using different equipment and to collect, use, interpret, understand and evaluate the evidence from scientific processes:

- **Planning**: Asking questions, fair testing, setting up simple tests
- **Doing**: Using different equipment safely, making systematic and careful observations
- **Recording**: Obtaining evidence, classifying and identifying, recording findings in a variety of ways (e.g. drawings, labelled diagrams, keys, bar charts, graphs and tables)
- **Concluding**: Suggesting answers, reporting, presenting (in oral and written forms)
- **Evaluating**: Seeking patterns, making predictions for the future

Driver 2: DT

How can we research, design, make and market our own ear protectors?

Driver 2 Objectives

- Plan, make and evaluate musical instruments
- Make earmuffs from a variety of different materials to investigate which provides the best insulation against sound.

Driver 2 Disciplinary Knowledge and Skills

- **Investigate:** this includes researching and finding about existing products and designers.
- **Design**: the art or process of deciding how something will look or work.
- **Make**: create something by combining materials or putting parts together.
- **Evaluate**: form an opinion of the value or quality of something after careful thought.
- **Apply**: use something or make something work in a particular situation.

Additionally, we teach children that a designer:

- Problem Solves
- Uses tools safely
- Tests, reworks, adapts and improves
- Evaluates and uses feedback
- Works as part of a team
- Follows instructions carefully
- Is technically accurate

Driver 1 Key Vocabulary	Driver 2 Key Vocabulary
• **Tier 2:**quiet, soft, loud, high, low, noise, sound, loudness, tension, tight, contrast, relationship, change, predict, increase, decrease • **Tier 3:**pitch, loudness, vibration, muffle, tuning, frequency, amplitude, decibel, tension, oscillation, resonance, compression, rarefaction, soundwave, medium, auditory, eardrum, cochlea, auditory nerve, reverberation	• **Design**: Designers, Produce, Plan, Explain, Adapt, Original, Communicate, Annotated, Prototype • **Make:** Tools, Task, Material, Outcome, Product, Technique, Finishing, Audience, Market • **Evaluate**: Evaluate, Suggest, Improve, Purpose, Appearance, Alternative, Features, Test, Construction, Alter, Amend

Driver 1 Sequence	Driver 2 Sequence
1. **WALT:** explain what we already know about sound and evaluate our ideas together. 2. **WALT:** make careful observations and draw conclusions. 3. **WALT:** explain how sounds are made when objects/materials vibrate. 4. **WALT:** make predictions and careful observations; demonstrate that sounds are made when objects or materials vibrate. 5. **WALT:** explain how vibrations from sound sources travel through different materials to the ear. 6. **WALT:** use simple scientific language and labelled diagrams to show our understanding. 7. **WALT:** explain how sounds travel as vibrations through a medium to the ear. 8. **WALT:** identify the parts of the ear and explain how they enable us to hear sounds. 9. **WALT:** explore how high and low sounds are created, and find patterns between the pitch of a sound and features of the object/instrument that produced it. 10. **WALT:** demonstrate that the pitch of a stringed instrument depends on the length, thickness, and tightness of the string. 11. **WALT:** explore how high and low sounds are created and find patterns between the pitch of a sound and features of the object/instrument that produced it. 12. **WALT:** make and then test a prediction; identify differences, similarities or changes related to simple scientific ideas. 13. **WALT:** investigate how the volume of a sound is affected by the distance from the sound source; gather and record data to answer a scientific question. 14. **WALT:** describe the achievements of significant scientists and how their discoveries and accomplishments changed people's lives. 15. **WALT:** revise key concepts from the unit and demonstrate understanding through assessment.	1. **WALT:** use scientific knowledge to select materials fit for purpose. 2. **WALT:** find out how the volume of sounds can be changed in a variety of ways. 3. **WALT:** design innovative, functional and appealing products that are fit for purpose, aimed at particular groups (double lesson) 4. **WALT:** select and use a range of tools and equipment; select and use materials according to their functional properties and visual appeal (double lesson) 5. **WALT:** evaluate our ideas and products against design criteria; consider the views of others to improve our work. (double lesson)