Playlist

Year Group: 3/4

Cycle A

Science • Sound	**Geography** Map skills: • Eight points of compass • Four-digit grid references • Symbols and key • Ordnance survey maps
Climate/Environment • Impact of noise pollution on humans and animals	
Computing • Multimedia	**Design and Technology** • Instruments: research, develop, design, make and evaluate

Science

National Curriculum (Knowledge and Skills): Pupils should be taught to:

Sound

- 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

Working Scientifically

- Ask relevant questions and use different types of scientific enquiries to answer them
- Set up simple practical enquiries, comparative and fair tests
- Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- Gather, record, classify and present data in a variety of ways to help in answering questions
- Identify differences, similarities or changes related to simple scientific ideas and processes
- Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- Use straightforward scientific evidence to answer questions or to support their findings
- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions

Investigation Focus:

How does sound travel through solids, liquids and gases?

- Hydrophone Experiment: https://www.ogdentrust.com/assets/general/Phizzi-Practical-Make-a-hydrophone_for-website.pdf
- 'See the Sound' and 'Classic Paper Cup and String Phone' Experiments https://www.kidsacademy.mobi/storytime/sound-science-experiments/

Climate/Environment Focus:

- Impact of noise pollution on humans and animals
- *https://www.nationalgeographic.org/encyclopedia/noise-pollution/ (teacher resource)*
- *https://www.epa.gov/clean-air-act-overview/noise-pollution-materials-kids-and-teachers (pupil work pack)*
- *https://www.youtube.com/watch?v=onpott7jpCE (pupil video)*
- *https://www.oceancare.org/en/our-work/ocean-conservation/underwater-noise/underwater-noise-consequences/*

Prior Learning

Forever Firs children working at ARE should already be able to:

Animals, Including Humans (Year 1)

- identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense

Working Scientifically

- ask simple questions and recognise that they can be answered in different ways
- observe closely, using simple equipment
- perform simple tests
- gather and record data to help in answering questions
- identify and classify
- use their observations and ideas to suggest answers to questions

Key Vocabulary

Tier 1		Tier 2		Tier 3	
Sound Ear Loud		Vibrate Vibration Vibrating	Enquiry Practical Systematic	Pitch Volume Sound wave	Comparative test Fair test Solid

Quiet		Medium Low High distance	Observation Findings Table Record Classify Data Differences Similarities Material Evidence Findings Predictions		Liquid Gas

Science Assessment			
Children working below ARE	**Children working towards ARE**	**Children working at ARE**	**Children working above ARE**

Geography

National Curriculum: Pupils should be taught to:

- use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied
- use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world

Key Lines of Enquiry:

- Children will meet the NC objectives through a cross curricular activity which makes links to learning in science relating to noise pollution – learning about map skills through the study of maps demonstrating noise pollution levels in different locations.
- https://www.geography.org.uk/write/MediaUploads/download/GA_PRICTIdea20NoiseMaps.pdf (teacher resource - variety of maps showing noise pollution levels in different areas)
- http://www.extrium.co.uk/noiseviewer.html (noise map of England – linked to Google maps and street view)
- https://noise.eea.europa.eu/ (noise maps of Europe)

Note: The suggested maps do not include grid references, teachers may wish to print of make their own simplified versions of these maps and add grid references

Age Related Subject Skills (Progression Guidance):

Year 3

Using maps

- Follow a route on a map with some accuracy
- Locate places using a range of maps including OS & digital
- Begin to match boundaries (e.g. find same boundary of a country on different scale maps)
- Use 4 figure compasses, and letter/number co-ordinates to identify features on a map

Map knowledge

- Locate the UK on a variety of different scale maps
- Name & locate the counties and cities of the UK

Making maps

- Try to make a map of a short route experiences, with features in current order
- Create a simple scale drawing
- Use standard symbols, and understand the importance of a key

Year 4

Using maps

- Follow a route on a large-scale map
- Locate places on a range of maps (variety of scales)
- Identify features on an aerial photograph, digital or computer map
- Begin to use 8 figure compass and four figure grid references to identify features on a map

Map knowledge

- Locate Europe on a large-scale map or globe,
- Name and locate countries in Europe (including Russia) and their capitals cities

Making maps

- Recognise and use OS map symbols, including completion of a key and understanding why it is important
- Draw a sketch map from a high viewpoint

Prior Learning

Forever Firs children working at ARE in Year 3 should already be able to:

Using maps

Follow a route on a map

Use simple compass directions (North, South, East, West)

Use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features

Map knowledge

- Locate and name on a world map and globe the seven continents and five oceans.
- Locate on a globe and world map the hot and cold areas of the world including the Equator and the North and South Poles

Making maps

- Draw or make a map of real or imaginary places (e.g. add detail to a sketch map from aerial photograph)
- Use and construct basic symbols in a key

Key Vocabulary

Tier 1	Tier 2	Tier 3
Map	Atlas Globe Countries Features	Ordnance Survey North South East

	Compass Directions Symbols	West Southwest Southeast Northwest Northeast Grid references Key

Geography Assessment			
Children working below ARE	**Children working towards ARE**	**Children working at ARE**	**Children working above ARE**

Design and Technology

National Curriculum:

Pupils should be taught to:

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
- select from and use a wider range of tools and equipment to perform practical tasks [e.g. cutting, shaping, joining and finishing], accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities
- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

Curriculum Intentions (Key Knowledge and Skills to be learned):

- Children will research, design and make their own musical instruments

Age Related Subject Skills (Progression Guidance):

Design

- Gather information about the needs and wants of particular individuals and groups
- Develop their own design criteria and use these to inform their ideas
- Research designs
- Share and clarify ideas through discussion Model their ideas using prototypes and pattern pieces
- Use annotated sketches, cross-sectional drawings and diagrams
- Use computer-aided design

Make

- Select tools and equipment suitable for the task
- Explain their choice of tools and equipment in relation to the skills and techniques they will be using
- Select materials and components suitable for the task
- Explain their choice of materials and components according to functional properties and aesthetic qualities Order the main stages of making
- Produce detailed lists of tools, equipment and materials that they need
- Follow procedures for safety
- Use a wider range of materials and components, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components
- Measure, mark out, cut and shape materials and components with some accuracy
- Assemble, join and combine materials and components with some accuracy apply a range of finishing techniques, include those from art and design, with some accuracy

Evaluate

- Identify the strengths and weaknesses of their ideas and products
- Consider the views of others, including intended users, to improve their work
- Refer back to their design criteria as they design and make
- Use their design criteria to evaluate their completed products
- Investigate - how well products have been designed, how well products have been made, why materials have been chosen, what methods of construction have been used, how well products work, how well products achieve their purposes and how well products meet user needs and wants
- Identify great designers and their work and use research of designers to influence work
- Identify the strengths and weaknesses of their ideas and products
- Consider the views of others, including intended users, to improve their work
- Investigate - who designed and made the products, where products were designed and made, when products were designed and made and whether products can be recycled or reused

Prior Learning

Forever Firs children working at ARE should already be able to:

Design

- State the purpose of the design and the intended user
- Explore materials, make templates and mock ups e.g. moving picture / lighthouse
- Generate own ideas for design by drawing on own experiences or from reading

Make

- Select from a range of tools and equipment explaining their choices
- Select from a range of materials and components according to their characteristics
- Follow procedures for safety
- Use and make own templates
- Measure, mark out, cut out and shape materials and components
- Assemble, join and combine materials and components Use simple fixing materials e.g. temporary – paper clips, tape and permanent – glue, staples
- Use finishing techniques, including those from art and design

Evaluate

- Talk about their design ideas and what they are making
- Make simple judgements about their products and ideas against design criteria
- Suggest how their products could be improved Evaluating products and components used
- Investigate - what products are, who they are for, how they are made and what materials are used

Cooking and Nutrition

- Know where food comes from
- Use appropriate equipment to weigh and measure ingredients
- Prepare simple dishes safely and hygienically, without using a heat source
- Use techniques such as cutting
- Name and sort foods into the five groups of the 'eat well' plate
- Know that everyone should eat at least five portions of fruit and vegetables every day

Key Vocabulary

Tier 1	Tier 2		Tier 3
noise sound	design make evaluate research materials purpose sketch materials	aesthetic functional improve strengths weaknesses users instrument	design criteria

Computing

National Curriculum:
elect, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

Computing Strand: Multimedia

Topic Links: To produce a video to present of a performance

Age Related Subject Skills (Progression Guidance - DDAT):

- *Presentations: Pupils learn to write and deliver a presentation on a given subject*
- *Sound and video: Pupils record and edit media to create a short sequence*
- *Animations: Pupils learn how to develop a storyboard and then create a simple animation using for instance 'Puppet Pals' or 'Stop Motions' Animation'*

Lower Key Stage 2

•	• Explore new media such as making videos • Record using a programme

Other Key Areas of Learning:

- To use audacity to record voices as part of a script
- To record a performance (music or drama) using digital cameras
- To know how to playback the recording
- To know how to import the recording to the computing
- To begin to edit the video (add a title, introduction, end credits etc.) using editing software
- To begin to know how to overlay media e.g. narration over a video

Prior Learning
Forever Firs children working at ARE should already be able to:

- Use a paint package to create a picture to communicate their ideas: Explore shape, line and colour, talk about their choice of tools, talk about the differences between a graphics package and paper based art activities (undo, changes quickly and easily made)
- Develop basic editing skills including different presentational features (font size, colour and style)
- Save, print, retrieve and amend their work
- Use appropriate editing tools to improve their work

Key Vocabulary

Tier 1		Tier 2		Tier 3	
Record Sound Video Picture	Voices Camera Music Button	Script Play back Microphone	Performance Title Introduction	Overlay Narration	Import

Computing Assessment			
Children working below ARE	**Children working towards ARE**	**Children working at ARE**	**Children working above ARE**

Firs
Primary
School

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Primary
School