

Science

Electricity

National Curriculum Links

Pupils should be taught to:

- Identify common appliances that run on electricity
- Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
- Recognise that a switch opens and closes a circuit, and associate this with whether or not a lamp lights in a simple series circuit
- Recognise some common conductors and insulators, and associate metals with being good conductors

Learning Outcomes

Children will be able to:

- Explain the difference between mains and battery circuits
- Talk about the dangers of electricity
- Create simple circuits, including those with switches
- Identify circuits which will work and those which won't
- Test their predictions by recreating given circuits
- Explain the difference between conductors and insulators
- Test materials to see if they are conductors or insulators
- Use their knowledge of conductors and insulators to create their own switches
- Use their knowledge to create a circuit for a given purpose

Opportunity for scientific investigation:
Which materials can we use to make a switch?



Topic-based English

Instructions and Explanations: Cross-Curricular links to Science Performance Poetry / Shape Poetry

National Curriculum Links:

Pupils should be taught to:

- Develop positive attitudes to reading and an understanding of what they read by listening to and discussing a range of texts
- Discuss the words that capture the readers interest and imagination
- Ask questions to improve their understanding of a text
- Identify main ideas drawn from more than one paragraph and summarise them
- Plan, draft, write, evaluate and edit their written work
- Proof read for spelling and punctuation errors
- Use a wide range of conjunctions to extend sentences
- Choose nouns / pronouns appropriately for clarity and cohesion, avoiding repetition
- Read aloud their own writing, using appropriate intonation and controlling the tone and volume so that the meaning is clear

Design Technology

An Alarmed Treasure Box

National Curriculum Links

Pupils should be taught to:

- Design (see NC for more detail)
- Make (see NC for more detail)
- Evaluate (see NC for more detail)
- Understand and use electrical systems in their products.

Learning Outcomes

Children will be able to:

- Create 3D objects using 2D nets
- Construct a box that can be used to store 'treasure'
 - Incorporate a circuit into their design that sets off an alarm when their box is opened

Modern Foreign Languages

French: Classroom Instructions & Greetings Numbers 0 - 12

National Curriculum Links

Pupils should be taught to:

- listen attentively to spoken language and show understanding by joining in and responding
- engage in conversations, ask and answer questions.
- speak in sentences using familiar vocabulary
- read carefully and show understanding of words, phrases and simple writing

Learning Outcomes

Children will be able to:

- Understand and give a variety of classroom instructions.
- Greet each other, asking how you are and be able to reply
- Count in French up to 12



- Increase the legibility, consistency and quality of their handwriting
- Use the diagonal and horizontal strokes that are needed to join letters

Science

Sound

National Curriculum Links

Pupils should be taught to:

- Identify how sounds are made, associating 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

Learning Outcomes

Children will be able to:

- Explore and identify the way sound is made through vibration in a range of musical instruments from around the world
- Identify how the pitch and volume can be changed in a variety of ways
- Find patterns in the sounds made by similar objects of different sizes/thicknesses etc
- Use their knowledge to make their own instruments

Opportunity for scientific investigation:
How does the volume of a sound change with distance?



Computing

Make Your Own Drum Machine (MaKey MaKey)

National Curriculum Links

Pupils should be taught to:

- Select, use and combine a variety of software 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

Learning Outcomes

Children will be able to:

- Interact with MaKey MaKey and explore how it works
- Use their knowledge of circuits and conductors to control a computer via a MaKey MaKey
- Design a controller for a computer-based drum machine that responds to their touch
- Use MaKey MaKey to control simple programs that they have created (e.g. in Scratch)

Maths

National Curriculum Links: Year 3 – Addition and Subtraction (Continued from Autumn 1), Multiplication and Division Facts (White Rose)

Pupils should be taught to (multiplication and division facts):

- Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.
- Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.
- Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems

Maths

National Curriculum Links: Year 4 – Addition and Subtraction (Continued from Autumn 1), Multiplication and Division Facts (White Rose)

Pupils should be taught to (multiplication and division facts):

- Recall and use multiplication and division facts for multiplication tables up to 12×12 .
- Count in multiples of 6, 7, 9, 25 and 1000
- Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.
- Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems.



Religious Education

Christianity: Festivals and Celebrations

Learning Outcomes

(Northumberland Agreed Syllabus)

Children will:

- Know that Christmas is important to Christians because it celebrates the birth of Jesus
- Know that Christmas is a special and happy time of the year involving special stories, events, artefacts and traditions
- Know that the Bible is the source for information about Jesus' birth

PSHE

Health and Wellbeing (Keeping Safe)

National Curriculum Links (PSHE Association)

Pupils should be taught about:

- Managing risk in familiar situations and keeping safe
- Feeling negative pressure and how to manage this
- The importance of school rules for health and safety
- How to get help in an emergency
- About drugs that are common in everyday life (medicines, caffeine, alcohol and tobacco)
- Keeping safe in the local environment
- People who help them stay healthy and safe

Outdoor Learning Opportunities

Children will:

- Use natural materials to make instruments
- Use home-made instruments to experiment with sound over varying distances
- Create shapes with natural materials and measure the perimeter of outdoor objects

Mastering English

Learning Outcomes

Children will be able to:

- Describe a favourite sound using 'show don't tell' so that friends can guess it (*Science: Sound*)
- Write a personal set of rules for staying safe around the home with electricity (*Science: Electricity / PSHE: Keeping Safe*)

Physical Education

Rugby (Willow, Chestnut and Maple), Yoga (Willow and Chestnut) Dance (Maple)



National Curriculum Links

Pupils should be taught to:

- Develop flexibility, strength, technique, control and balance
- Use running, jumping, throwing and catching in isolation and in combination
- Play competitive games and apply basic principles suitable for attacking and defending

Mastering Maths

Learning Outcomes

Children will be able to:

- Sort appliances using Carroll and Venn diagrams of those that run on mains electricity, batteries or both (*Maths: Statistics / Science: Electricity*)
- Use a Log-Box to collect a set of data when experimenting with sound over distances (*Maths: Statistics and Measure / Science: Sound*)

Music

Christmas Production (Cinderella Rockerfella)

National Curriculum Links:

Pupils should be taught to:

- Appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians
- Play and perform in solo and ensemble contexts, using their voices with increasing fluency, control and expression