

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?



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 the 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



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)



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?



Topic-based English

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

National Curriculum Links:

Pupils should be taught to:

Recover Years 2 & 3 SPaG Objectives

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

(Jigsaw PSHE Syllabus)

Celebrating Differences

Year 3 (Willow)

Children will be able to:

- understand that everybody's family is different and important to them.
- understand that differences and conflicts sometimes happen among family members.
- know what it means to be a witness to bullying.
- know that witnesses can make the situation better or worse by what they do.
- recognise that some words are used in hurtful ways.
- an tell you about a time when my words affected someone's

Year 4 (Chestnut & Maple)

Children will be able to:

- understand that, sometimes, we make assumptions based on what people look like.
- understand what influences me to make assumptions based on how people look.
- know that sometimes bullying is hard to spot and I know what to do if I think it is going on but I'm not sure.
- can tell you why witnesses sometimes join in with bullying and sometimes don't tell.
- can identify what is special about me and value the ways in which I am unique.

Maths

National Curriculum Links: Year 3 – Addition and Subtraction, Multiplication and Division Facts

Addition and Subtraction (White Rose)

Pupils should be taught to:

2NF-1 Secure fluency in addition and subtraction facts within 10, through continued practice.

2AS-1 Add and subtract across 10.

2AS-2 Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more...?".

2AS-3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number.

2AS-4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.

Pupils should be taught to:

- Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds
- Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
- Estimate the answer to a calculation and use inverse operations to check answers
- Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

Multiplication and Division Facts (White Rose)

Pupils should be taught to:

2MD-1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.

2MD-2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotative division).

- 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

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

Maths

National Curriculum Links: Year 4 – Addition and Subtraction,

Measurement: Length and Perimeter. Multiplication and Division Facts

Addition and Subtraction (White Rose)

Pupils should be taught to:

3AS-1: Calculate complements to 100.

3AS-2: Add and subtract up to three-digit numbers using columnar methods.

3AS-3: Manipulate the additive relationship: Understand the relationship between addition and subtraction, and how both relate to the part-part-whole structure. Understand and use the commutative property of addition and understand the related property for subtraction.

- add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
- estimate and use inverse operations to check answers to a calculation
- solve addition and subtraction two-step problems in contexts, deciding which operation and method to use and why.

Measurement: Length and Perimeter (White Rose)

Pupils should be taught to:

- Convert between different units of measure
- Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.

Multiplication and Division Facts (White Rose)

Pupils should be taught to:

3MD-1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotative and partitive division

- 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



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*)

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*)

Physical Education

Rugby & Modified Team Games (Willow, Chestnut and Maple), Problem Solving (Chestnut)

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

Music

Christmas Carols

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



Religious Education

(Discovery RE Syllabus)

Year 4 (Chestnut and Maple) – Christianity

Learning Outcomes:

Children will be able to:

- design a symbolic object to show the significance of Christmas or the Christmas holiday to me.
- describe one thing a Christian might learn about Jesus from a Christmas symbol.
- ask questions about what Christmas means to Christians and compare this with what it means to me.

P4C: What is the most significant part of the Nativity story for Christians today?

Year 3 (Willow) – Christianity

Learning Outcomes:

Children will be able to:

- explain what Christmas means to them and talk about whether this involves giving and receiving gifts.
- start to explain the Christian belief that Jesus was God in human form and why God gave him the world.
- recognise that Christmas means different things to different people.

P4C: Has Christmas lost its true meaning?