



Space

Year 1, Autumn Term

This document outlines the key learning and knowledge for each curriculum area linked to Space. There are suggested activities in each curriculum area.

This document needs to be used alongside the curriculum coverage document which details the statutory requirements for each area.

History

Key learning:

Pupils should develop an awareness of the past. They should ask and answer questions, using parts of stories and other sources to show that they understand key features of events, for example by looking at primary and secondary sources and answering questions or identifying key features. Pupils should be taught to identify differences in past and present, for example by sorting photos and identifying key features in the photos.

Pupils should develop a knowledge about British, local and world history and make comparisons over time. For example, by comparing space travel in different countries.

Knowledge:

- Events within living memory which are significant nationally or globally
 - *To know when and how humans first travelled to space*
 - *To sequence a space travel timeline*
 - *To experience and understand a space mission and the impact this had.*
- The lives of significant people in the past
 - *To understand how and why Neil Armstrong was significant.*

Skills:

- To use, identify and analyse historical sources
- To sort pictures into past and present
- To compare objects and pictures from the past and notice similarities and differences
- To use a range of sources (pictures, text, artefacts, video) to gather information

Suggested activities:

- First man on moon (sensory experience)
- Space missions – experience and retell
- Timeline – create a space timeline
- North Ridge time capsule

Geography

Key learning:

Pupils should develop a curiosity about the world and different places. Teaching should equip pupils with knowledge of different places, people and environments. Pupils should learn about the city and the countryside and the difference between these. Pupils should develop knowledge of globally significant places (land and sea).

Knowledge:

- **Human and Physical geography**
 - *To identify seasonal and daily weather patterns*
 - *To identify the differences in day and night (linked to orbiting the sun)*
- **Protecting the planet**

- *To understand how we can play a part in protecting the planet and look after the environment.*

Skills:

- To use a range of equipment to collect information (e.g. weather recording).
- To identify what we need for different weathers (e.g. clothes, accessories)
- To participate in activities to protect the planet (e.g. recycling, litter picking).

Suggested activities:

- Find out about the solar system
- Looking after the world around us – our environment
- Day and night
- Seasons
- temperature

Science

Key learning:

Pupils should develop their investigative skills and curiosity. Pupils should develop understanding of methods and processes through following instructions. Pupils should be taught to work scientifically, making and testing predictions. Pupils should be encouraged to ask questions, observing changes, noticing patterns and grouping and classifying. Pupils should carry out simple, comparative tests.

Knowledge:

- **Rocks:**
 - *To compare and group together different kinds of rocks on the basis of their appearance and physical properties*
 - *To describe how fossils are formed in simple terms*
- **Light:**
 - *To recognise that light is needed to see*
 - *To know that light is reflected from surfaces*
 - *To understand that light from the sun can be dangerous and there are ways to protect the eyes*
 - *To investigate how shadows are formed and find patterns in changes to shadows*
- **Earth and space**
 - *To describe the position and movements of planets in relation to the sun*
 - *To identify the planets in our solar system*
 - *To identify some properties of planets*
- **States of matter**
 - *To compare and group materials according to whether they are solids, liquids or gases*
 - *To know that some materials change state when they are heated or cooled*
- **Materials**
 - *To investigate how different materials react when mixed:*
 - *Coke and Mentos or vinegar and baking soda to make rocket.*
 - *Slime*
 - *Exploding moon rocks*

Skills:

- **Working scientifically**
 - *To ask simple questions and recognise they can be answered in different ways*
 - *To observe closely using equipment*

- *To perform simple tests*
- *To use observations to answer questions*
- *To gather and record data*
- *To set up simple practical enquires and comparative tests*
- *To take accurate measurements*
- *To make predictions and draw conclusions*

Suggested activities:

- Light sources and shadow
- Planets
- Rockets
- Astronaut food—changes (adding water, heating cooling)
- Forces (push rocket)
- Solar system
- Gravity, air oxygen – states of matter

Music

Key learning:

Musical education should engage and inspire pupils to develop a love of music, increase self-confidence, creativity and a sense of achievement. Pupils should perform, listen to, review and evaluate music across a range of historical periods. Pupils should explore how music is created through pitch, duration, dynamics, tempo, texture and musical notations where appropriate.

Knowledge:

- To match/name/identify a range of musical instruments
- To know that musical instruments can be used purposefully to create sound
- To know that musical instruments can be manipulated to change and produce different types of sound (volume, tempo, pitch)

Skills:

- To use voice expressively and creatively
 - *Create alien sounds with voice*
 - *Create loud and quiet sounds with voice to represent planets*
- To play instruments musically
 - *Using instruments to create different space sounds*
- To experiment with, create and combine sounds (e.g. Blitz soundscape)
 - *Work together to create a soundscape – rocket taking off, exploring different planets*
 - *Follow a symbol/picture piece of music to create soundscape*
- To play and perform solo and as part of a group
- To listen to and respond to music
 - *The Planets (Holst)*

Suggested activities:

- Sounds to accompany space images – explore instruments and compose space music; respond to others' compositions.
- Listen to extracts from The Planets (Holst) - Pen walk
- Music for journey of a spaceship
- Soundscape—unusual instruments

Computing

Key learning:

Pupils should be taught how digital systems work. Pupils should be equipped to use information technology to create programs, systems and a range of content. Computing ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology. Pupils should understand some concepts of the fundamentals of computer science. Pupils should be able to evaluate and apply information technology to solve problems. Pupils should be responsible, competent, confident and creative users of information and communication technology.

Knowledge:

- To understand algorithms and program a range of devices
 - *Program a beebot or robot to move around a solar system*
- To understand the opportunities the world wide web can offer
 - *Use the web to search for information to make a non-fiction book*
- To identify/match/name key computing devices
- To identify/match/name key computing programs

Skills:

- To use technology purposefully to create, organise, store, manipulate and retrieve digital information
 - *Create an information page on planets*
- To use technology responsibly and safely
- To use sequence, selection and repetition in programs
 - *Create a stop animation film about travelling into space*
- To use logical reasoning to predict the behaviour of programs
 - *Space augmented reality app*
- To use search engine technologies effectively
 - *Use the web to search for information to make a non-fiction book*
- To select, use and combine a range of software
 - *Use book creator to make a book with pictures, sound, text and video*

Suggested activities:

- Beebot around solar system (maths link)
- Book creator
- Space film (film it)
- Augmented reality space exploration <http://amazingspacejourney.com/#ar>

Art and Design

Key learning:

Art and design should inspire and engage and challenge pupils. Pupils should experiment, invent and create their own works of art, craft and design. Pupils should explore ideas and record experiences. They should have the opportunity to draw, paint and sculpt. Pupils should evaluate and analyse art work.

Knowledge:

- To know that there are different materials that can be used to produce art (e.g. paper, paint, glue, clay etc.)

Skills:

- To use a range of materials creatively
 - *Space collage*
- To use drawing, paint and sculpture to share ideas, experiences and imagination

- *Solar system drawing*
- *Solar system printing*
- *Solar system models*
- To experiment with colour, shape, pattern, texture, line, form and space
 - *Colour mixing planets*
 - *Light and dark shading (where planets are facing/not facing sun)*
 - *UV paints and torches*
 - *Use sensory paints to make the planets (sand, rice, cereal, shaving foam)*
- To use sketch books to record observations, review and revisit ideas.
- Pupils should be taught about a range of artists, craft makers and designers.

Suggested activities:

- Printing a rocket picture using finger paint
- Printing using crumpets to make moon pictures
- Crayon scratching space scene
- Light and dark shading
- Flicking paint
- Sculpt planets

Design and Technology

Key learning:

Design and Technology is a practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems in a variety of contexts. Pupils should develop the creative, practical and technical expertise needed to perform everyday tasks confidently and enable them to participate in an increasingly technical world. Pupils should critique, evaluate and test ideas. Pupils should begin to develop and apply the principles of nutrition and learn how to cook.

- **Design**
 - To design purposeful, functional and appealing products based on design criteria
 - To generate, develop, model and communicate ideas
 - To use research to inform designs
- **Make**
 - To select and use a range of tools to perform practical tasks
 - To select and use a wide range of materials
- **Evaluate**
 - To explore and evaluate a range of existing products
 - To evaluate ideas against design criteria
 - To understand how key events and individuals in design and technology helped shape the world
 - To test, evaluate and refine ideas
- **Technical Knowledge**
 - To build structures, exploring how they can be made stronger, stiffer and more stable
 - To explore mechanisms
 - To explore electrical materials

Suggested activities:

- Design and make a rocket
- Design and make solar system model
- Make planet pizzas
- Make moon / star biscuits
- Create a universe in a jar

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- Make a rover
- Make alien/rocket junk models