

Science at home... how can I help?



- Reading, in particular non-fiction / fact based books (see 'Recommended Books').
- Watch the weather forecast and discuss the weather and seasonal changes whilst outside.
- Take a walk in the park or garden – practice identifying the types of tree, plants and animals observed (download a plant identification app to help).
- Cooking is an excellent way of looking at changing materials and is also an important life skill!
- Helping with DIY – looking at materials and what they are like and where they are used and why.
- Look at inventions around the home and how they work.
- Visit Science and STEM-themed museums (see 'Science Capital' section)
- Pets – Research their life-cycles, diets, natural habitats, features etc.
- Watch TV programmes including Steve Backshall's 'Deadly 60' and 'Expedition'.
- YouTube – search 'Kids Science' for great experiments that can be done at home.
- Watch BBC documentary programmes through BBC iPlayer, including: Planet Earth I-III, Blue Planet I-II, Frozen Planet, Dynasties I-II.



Tag your Science experiences: **@stpetersfarn**

Websites and Apps:



Picture Insect:
Spiders & Bugs



LeafSnap –
Plant
Identification



PictureThis –
Plant Identifier



Birda – Bird ID



Dr Jo
Science
Solutions



Science
Kids



The School
Run - Science



BBC Bitesize
KS1 Science

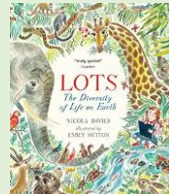


Crickweb
KS1
Science



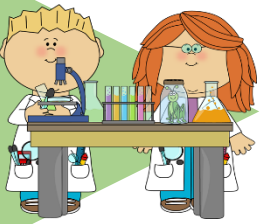
The Met
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Recommended Books:



- A Stroll Through the Seasons, Kay Barnham
- Lots: The Diversity of Life on Earth, Nicola Davies
- Animal Homes: A Lift-the-flap Book of Discovery, Libby Walden
- Investigating Materials, Jacqui Bailey

SCIENCE



A Parents' Guide to Key Stage 1



“Learn, Sparkle & Shine...”

What does my child need to know?



The National Curriculum for Science in Key Stage 1 (Years 1 and 2)

Science is split into two parts: working scientifically and science knowledge.

Working Scientifically (Disciplinary knowledge - the processes of scientific investigation)

Children by the end of Year 2 need to be able to:

- Ask simple questions and recognise that they can be answered in different ways.
- Observe closely, using simple equipment.
- Performing simple tests.
- Identify and classify living things.
- Use their observations and ideas to suggest answers to questions.
- Gather and record data to help in answering questions.

Year 1 Scientific Knowledge (Substantive knowledge – science facts and information)

- **Plants (Biology):** Identifying and naming plants and looking at their basic structure and purpose.
- **Animals including humans (Biology):** Identifying and naming a range of animal types and understand how and why they are grouped (e.g. mammals, birds, amphibians etc.). Identify animals by their diet – herbivores, carnivores and omnivores.
- **Everyday materials (Chemistry):** Naming and looking at their properties and uses.
- **Seasonal changes (Physics):** Observing changes across the four seasons and looking at different types of weather and daylight length.

Year 2 Scientific Knowledge (Substantive knowledge – science facts and information)

- **Living things and their habitats (Biology):** Including dependence within habitats and micro-habitats, food chains and living/dead and never been alive.
- **Plants (Biology):** Observing how seeds and bulbs grow into plants and what plants need to stay healthy
- **Animals including humans (Biology):** Focusing on growth, nutrition/survival and exercise
- **Everyday materials (Chemistry):** Naming them; comparing their uses and looking at how they can be changed by exerting force (bending, twisting etc.).

What is Science Capital?



A person's 'science capital' is how much they are exposed to the knowledge and understanding of STEM subjects (Science, Technology, Engineering and Mathematics), both through education and in the wider world around them.

Science Capital is important, as it helps create linked scientific understanding, thus providing them with a broader, increasingly balanced view of the Science's key role in the wider world and importantly, why it is important to their own lives.

Below are some science and STEM related attractions which can help increase your child's Science Capital (and they're fun too!):

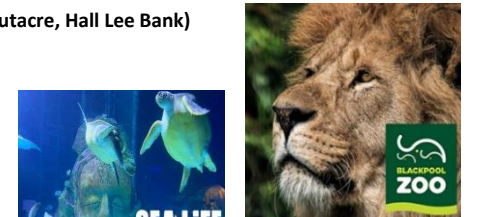
Free admission:

- **Bolton Museum (Aquarium)** (Bolton [BL1 1SE](#))
- **Manchester Museum** (Manchester [M13 9PL](#))
- **Museum of Science and Industry** (Manchester [M3 4JP](#))
- **National Science and Media Museum** (Bradford [BD1 1NQ](#))
- **National Railway Museum** (York [YO26 4XJ](#))
- **Brockholes Nature Reserve** (Preston [PR5 0AG](#))
- **Bolton's various country parks** (**Seven Acres, Moses Gate, Jumbles, Cutacre, Hall Lee Bank**)
- **Local reservoirs:** Anglezarke, Wayoh, Entwistle, Lower Rivington etc.



Charged entrance fee:

- **Catalyst Science Discovery Centre and Museum** (Widnes [WA8 0DF](#))
- **Imagine That!** (Liverpool [L13 1EH](#))
- **Xplore! Science Discovery Centre** (Wrexham [LL13 8AE](#))
- **Jodrell Bank Centre For Engagement** (Cheshire [SK11 9DW](#))
- **Eureka! The National Children's Museum** (Halifax [HX1 2NE](#))
- **Eureka! Science and Discovery** (Wallasey [CH44 6NR](#))
- **Magna Science Adventure Centre** (Rotherham [S60 1FD](#))
- **Sealife Centre** (Blackpool [FY1 5AA](#))
- **Sealife Centre** (Manchester [M17 8AS](#))
- **The Deep** (Kingston-Upon-Hull [HU1 4DP](#))
- **Lakes Aquarium** (Ulverston [LA12 8AS](#))
- **Blackpool Zoo** (Blackpool [FY3 8PP](#))
- **Chester Zoo** (Chester [CH2 1LE](#))
- **Knowsley Safari Park** (Knowsley [L34 4AN](#))
- **South Lakes Safari Zoo** (Dalton-in-Furness [LA12 0LU](#))
- **Smithills Farm** (Bolton [BL1 7NS](#))
- **Bowland Wild Boar Park** (Lancashire [PR3 2HB](#))
- **Martin Mere Wetland Centre** (Burscough [L40 0TA](#))
- **Tropical World** (Leeds [LS8 2ER](#))



Science Capital – An Introduction (Video Clip)