



# Science Portfolio

WEST HOVE  
INFANT SCHOOL  
.....  
A family of friends

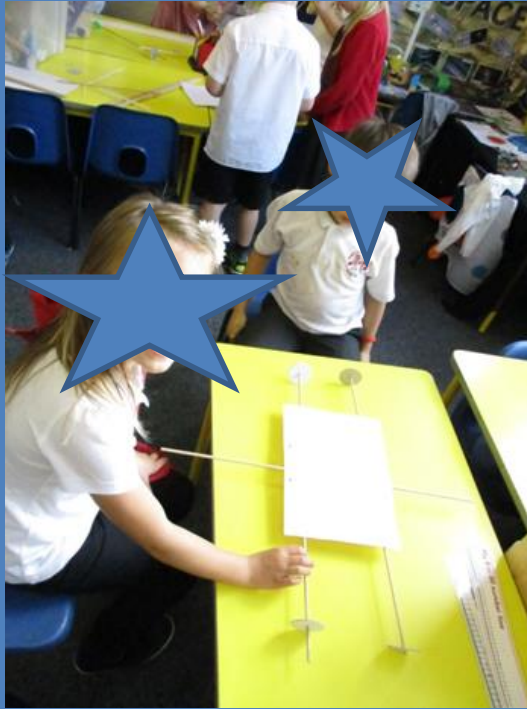


# Science at West Hove Infants

Science is an integral part of our provision and ethos. It is firmly placed within the context of our aims, visions and values and encompasses our curriculum drivers of standards, engagement, enquiry and diversity.

Science is used to develop the children's creativity, curiosity and awareness of the world around them. We celebrate their achievements throughout the school environment. Children are encouraged to ask questions, predict outcomes and test their ideas practically. We look at the work of scientists and important discoveries from a variety of different cultures, both modern and historical.





Our curriculum aims to give children the ability and skills to produce creative work, explore their own ideas and express themselves imaginatively.



# Curriculum

*Creativity, curiosity,  
awareness...*





# Curriculum

*Creativity, curiosity,  
awareness..*

Please go to:  
<http://www.westhoveinfants.co.uk/our-curriculum/schemes-of-work/>

to see our Science  
curriculum planning

# Curriculum Overview

## Year 2 Curriculum Map

### Vision Statement

'Aim high and smile'

WEST HOVE  
INFANT SCHOOL  
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Our Curriculum Maps, detail all of the opportunities for the teaching and learning of **SCIENCE** throughout each year.

- Range of Opportunities**
- Immerse themselves in the world of what has been read so far.
  - Make links between the book they are reading and other books they have read, real-life experiences or films they have seen.
- Pupils:**
- Listen to a range of new types, including fiction and non-fiction.
  - Read and listen to poetry and learn some poems by heart.
  - Become familiar with a wide range of texts of different lengths.
  - Discuss books.
  - Frequenter read with other year groups.
  - Celebrate reading at events like World Book Day.

<sup>1</sup> Teachers should compare the books that their pupils read with those provided for the key stage 1 reading test developed by STA. At West Hove Infant, Gold and Silver banded books are used as on age related expectations benchmark.

<sup>2</sup> Teachers should refer to the spelling appendix to the national curriculum (English Appendix 1) to exemplify the words that pupils should be able to read as well as spell.

<sup>3</sup> Approximately 90 words per minute is a good indicator of when children start to read with sufficient fluency to focus on their understanding, but some pupils read slower than this while still being able to do so.

<b>Learning Expectations</b>	<ul style="list-style-type: none"> <li>• Use co-ordinators (e.g. on / and / but) and some subordination (e.g. when / if / that / because) to join clauses.</li> <li>• Segment spoken words into phonemes and represent these by graphemes, spelling many of these words correctly and marking phonics/visualise strategies as others.</li> <li>• Spell many common exception words<sup>2</sup>.</li> <li>• Use cursive handwriting.</li> <li>• Form capital letters and digits of the correct size, orientation and relationship to one another and to lower case letters.</li> <li>• Use spacing between words that reflects the size of the letters.</li> <li>• Revise, evaluate and polish their writing.</li> <li>• Publish and share work to celebrate their achievements.</li> </ul>		
<b>Range of Opportunities</b>	<ul style="list-style-type: none"> <li>• Non Fiction</li> <li>• Alien Fact File</li> </ul>	<ul style="list-style-type: none"> <li>• Poetry</li> <li>• Rainforest description</li> </ul>	<ul style="list-style-type: none"> <li>• Fiction: Narrative</li> <li>• The Magic pebble</li> </ul>

<sup>3</sup> These are detailed in the word lists within the spelling appendix to the national curriculum (English Appendix 1). Teachers should refer to these to exemplify the words that pupils should be able to spell.

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<b>Learning Expectations</b>	<ul style="list-style-type: none"> <li>• Use sentence stems to explain understanding.</li> <li>• Ask questions based on discussions.</li> <li>• Challenge each other to build on and explain ideas.</li> <li>• Explain and discuss texts read to them and those they have read for themselves.</li> <li>• Take turns and listen to others.</li> <li>• Read aloud what they have written with appropriate intonation to make the meaning clear.</li> <li>• Continue to build, appreciate and recite a repertoire of poems and stories.</li> </ul>		
<b>Range of Opportunities</b>	<ul style="list-style-type: none"> <li>• Enlarge in Cheshire Partner, group and whole class discussions. In all areas of the curriculum.</li> <li>• Listen to and learn a wide range of subject specific vocabulary.</li> <li>• Through reading identify vocabulary that enriches and engages stories.</li> </ul>		





# Spiritual, moral, social and cultural development...

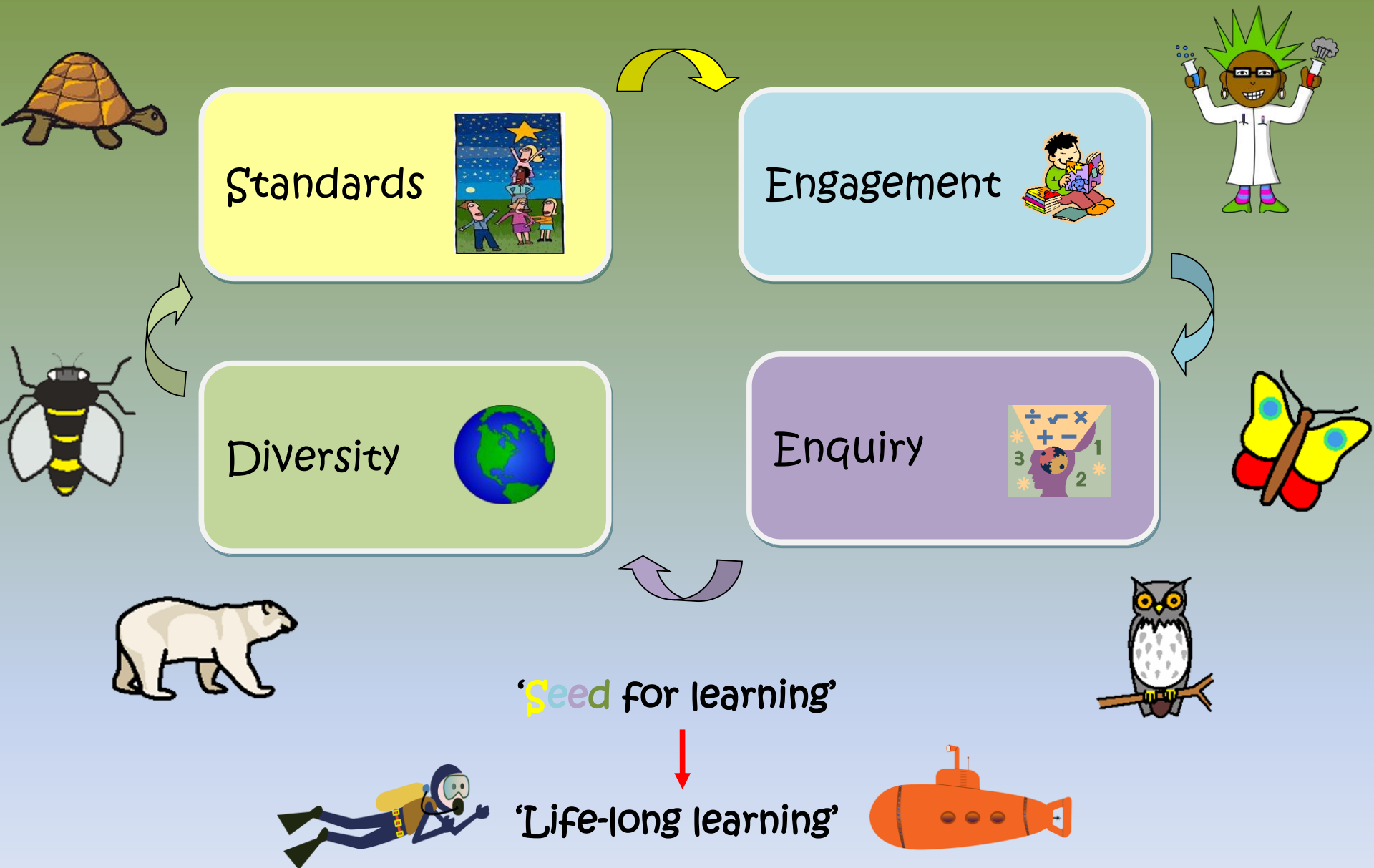
Subject	We promote <i>spiritual</i> development	We promote <i>moral</i> development	We promote <i>social</i> development	We promote <i>cultural</i> development
<b>Science</b>	<p>By demonstrating openness to the fact that some answers cannot be provided by Science.</p> <p>By creating opportunities for pupils to ask questions about how living things rely on and contribute to their environment.</p> <p>By opportunities such as our Visiting Planetarium which raises questions about the size of the universe and how it might have been formed.</p>	<p>By offering pupils the chance to consider the wonder of the natural world and the inventions which have made the world a better place.</p> <p>By considering that not all developments have been good because they have caused harm to the environment and to people.</p> <p>By encouraging pupils to speculate about how science can be used both for good and not so good.</p>	<p>By using opportunities during Science lessons to explain how to keep other people safe and how they might protect a younger or vulnerable young person.</p> <p>By exploring the social dimension of scientific advances e.g. environmental concerns, medical advances, energy processes in age appropriate language.</p>	<p>By asking questions about the ways in which scientific discoveries from around the world have affected our lives. (For example, there is a rich heritage of scientific discoveries from Hindu, Egyptian and Muslim traditions.)</p>

Please look at our website for further information

<https://www.westhoveinfants.co.uk/Science>



# Curriculum Drivers : S.E.E.D.



Consistency of expectations across both sites: planning, moderation. High quality resources, modelling and displays

Having high expectations of all pupils. Thorough assessments in place and a dynamic approach to interventions to ensure all pupils reach their potential: Pupil progress, achievement team & Spotlight meetings

Teaching children explicitly the importance of having a goal and working hard to achieve it. Target setting, PSHE curriculum and assemblies, Special Mention & Star of the Week



## Standards: Achieved by...



Developing a positive attitude to the process of learning:

Learning  
Characteristics,  
Growth Mindset,  
Learning Model,  
Learning Ladders



Teaching children about aspirational people: Nelson Mandela, Mary Anning, Neil Armstrong

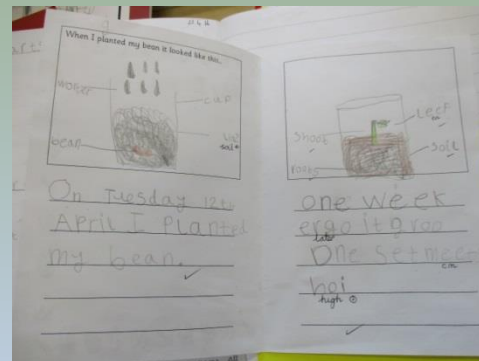
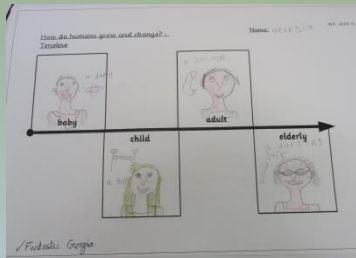


Challenge for all children at all levels in all subjects: marking and feedback, mastery approach, self/peer assessment, polishing pens, challenge partners, 'Deep Dive' challenges

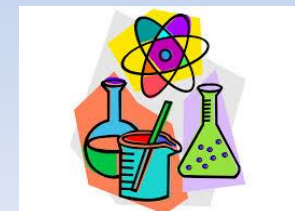




# Standards



The standard of science, both knowledge based and enquiry based is high at West Hove Infants. We celebrate the children's achievements and successes and allow them time to think critically and make changes to their own work



# Standards

We celebrate children's achievements and successes throughout our school environment.

High quality displays in classrooms and around the school environment celebrate and reflect cultural diversity.



# Displays





'Stunning Starts',  
'Fabulous Finishes'

Local  
environment:  
walks, beach visit,  
Wish park



Visits and visitors:  
e.g. Zoolab, Space  
Dome



Challenge for all:  
Challenge Partners,  
Professor Prove it, 'Deep  
Dive' challenges



## Engagement



Theme days:  
Superhero Day,  
Art Day, French  
week



Learning outside.  
Active Learning.  
Sports & PE

Using children's ideas as  
starting points.  
Wonderful World of  
Me. Home Learning  
Projects



First hand  
experiences.  
Investigations.  
Problem Solving.  
Mastery &  
Challenge. Cross  
curricular links



Clubs:  
Storybones, Lego  
club, Science,  
Art & Craft etc!



Are you  
ready to  
learn?



*active  
learning*



*first hand  
experiences*



*visits and  
visitors*

# Engagement

Children are encouraged to work independently and collaboratively in groups





A photograph of a male teacher with a beard, wearing a black t-shirt and dark trousers, leaning over a group of young children. The children, dressed in school uniforms, are sitting on a light-colored wooden floor. The teacher is holding a clear plastic container filled with water and small, brownish aquatic organisms, possibly tadpoles or small fish. The children are looking intently at the container. The scene is brightly lit, with sunlight streaming in from the right, creating strong shadows on the floor. A blue text box is overlaid on the upper right portion of the image.

**The children at West Hove Infants are passionate about Science. Their curiosity and enthusiasm shine through during these lessons.**



Creative and Critical  
thinking: Growth Mindset,  
Learning Characters



Expressing opinions.  
Listening to and  
respecting other's  
opinions



Investigations &  
Problem solving.  
Exploring maths  
and science  
concepts: Lego  
club, Science  
club



Team work:

Discussion and  
Negotiation



Enquiry:  
Developed  
through:



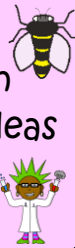
Reasoning and  
Reflecting Justifying:  
'Professor Prove It'



Challenge Partners



Questions which  
promote exploration  
and discussion of ideas  
– no right or wrong  
answers



Generating own  
questions.



Mastery – Depth  
of Understanding



Learning through Play:  
Active Learning,  
Exploring, Innovating,  
Creating



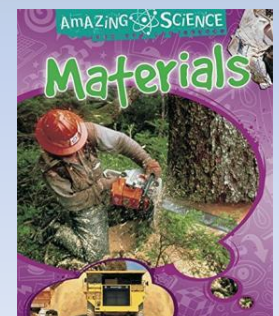
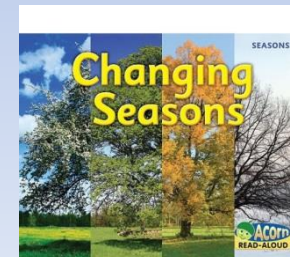
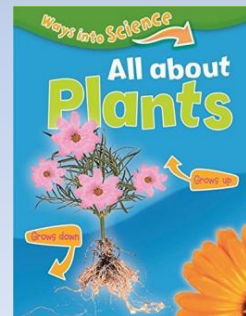
# Scientific knowledge and conceptual understanding

The national curriculum for science states:

*‘The programmes of study describe a sequence of knowledge and concepts. While it is important that pupils make progress, it is also vitally important that they develop secure understanding of each key block of knowledge and concepts in order to progress to the next stage.’*

To develop and consolidate this knowledge and understanding, we have high quality texts available in classrooms which cover a range of objectives from the national curriculum.

These texts are used both in independent and adult led learning and can again lead to more questions about important scientific discoveries in our world.



# Working scientifically

The national curriculum for science states:

*‘Working scientifically’ specifies the understanding of the nature, processes and methods of science. Working scientifically might be embedded within the content of biology, chemistry and physics, focusing on the key features of scientific enquiry, so that pupils learn to use a variety of approaches to answer relevant scientific questions. These types of scientific enquiry should include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources.’*



Festivals: Eid, Diwali,  
Christmas, Chinese  
New Year



Respect: Challenging stereotypes,  
Behaviour and Anti-Bullying,  
Restorative Justice, Refugee Week



Local community:  
Children's  
Parade, Let's  
Dance



Diversity of  
language: Sharing  
home languages,  
French



Diversity:  
Through  
celebration and  
awareness of...



British  
Values:  
preparation  
for life in  
modern  
Britain



A PSHCE curriculum  
that explores  
the diversity of gender  
representation, race,  
religion and family units  
in our community



Awareness of  
others:  
Displays,  
Wonderful  
World of Me!

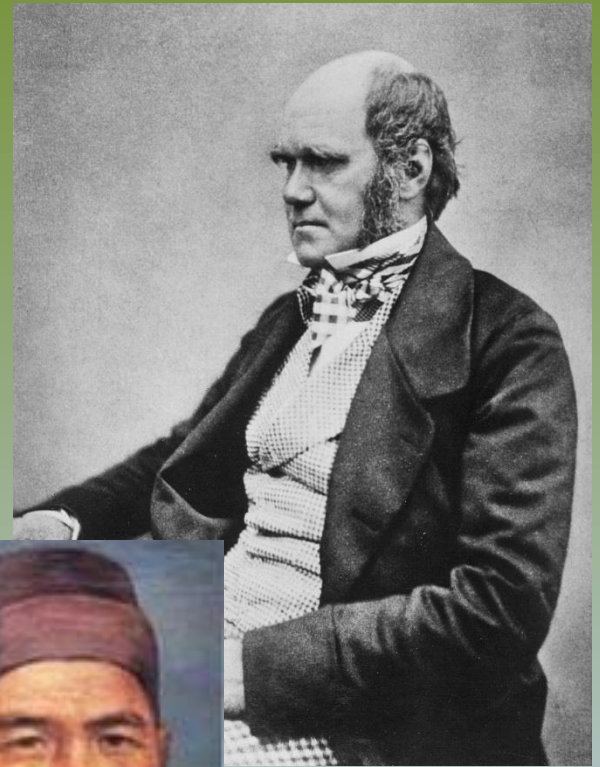


Knowledge of other  
cultures and  
communities both in  
school and further  
afield: Around the  
World, Rainforests,  
French Week, people  
from different cultures/  
countries





*From the start of Reception, all children are exposed to a wide range of scientific discoveries from different times and cultures. They will get to know some scientist's names, who have been influential in how we see science as a subject today. We look at work from a variety of countries and cultures and aim to instil knowledge, curiosity and enjoyment.*



**CULTURAL DIVERSITY**



# Gardening Club..

Gardening Club is a very popular club which is run by dedicated members of staff and has strong links with the National Curriculum. It runs on a weekly basis and is open to children in Y1 and Y2.



# Community Involvement...

We have links with Brighton and Hove Museum, the Booth Museum and local nature reserves.

We invite local scientists into school to talk to the children about their work. We also aim to instil a sense of awe and wonder by holding interactive science workshops.



The Year 2 children love having the Space Dome visit school at the beginning of Autumn term.

It encourages them to build their knowledge about the universe around them whilst being a perfect platform to feed their curiosity and questioning skills.



# How can I support my child at home?

- Try to find time to make full use of the opportunities for 'science talk' that arise out of everyday domestic contexts.
- Encourage your child to keep records in scrapbooks or notebooks of wildlife in the garden, and to make comparisons between different species of birds, for example.
- Play 'What if?' in a scientific context. Talk to your child about questions such as 'What if the sun never shone?'
- Look for scientific principles in picture books, stories and poems and prompt discussion of them.
- Look at the British Science Association's website and its [CREST Star](http://www.britishsociety.org/creststar/) [CREST Star Investigators](http://www.britishsociety.org/creststar/) activities aimed at 5-12 years old children.

<http://www.britishsociety.org/web/ccaf/CRESTStarInvestigators/TStarInvestigators/index.htm>





# How can I support my child at home?

## Local opportunities which may be of interest to your child:

- Herstmonceux Science Museum (and Observatory)
- Booth Natural History Museum, Dyke Road.
- Arundel Wildfowl Trust
- Sussex Wildlife Trust at Woodmancote near Henfield.
- Creative Science, Art & Technology Workshops run by The Curiosity Hub – a leading provider of STEAM (Science, Technology, Engineering, Arts & Maths) enrichment in Sussex, UK.

## London:

- Science Museum, Exhibition Rd, SW7 2DD
- Natural History Museum



# Useful websites and publications...

[www.nhm.ac.uk/education](http://www.nhm.ac.uk/education) The Natural History Museum

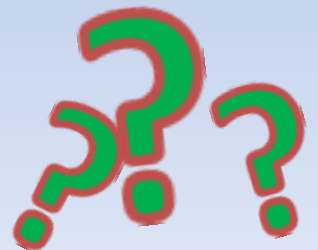
[www.sciencemuseum.org.uk](http://www.sciencemuseum.org.uk) The Science Museum, London

[www.brainpop.com](http://www.brainpop.com) animated educational site for children

[www.sciencekids.co.nz](http://www.sciencekids.co.nz) Fun Science games for kids! (Includes fun experiment ideas too!)

[www.crickweb.co.uk](http://www.crickweb.co.uk) Free interactive Science games.

<http://www.britishsociety.org/web/ccaf/CRESTStarInvestigators/index.htm> Look at the British Science Association's website and its CREST Star Investigators activities aimed at 5-12 years old children.





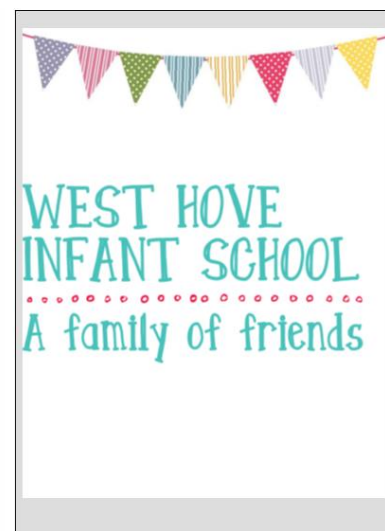
Do also have a look at our 'My Little Book of Fun Things to Do'. These have been sent home but are also available on our website: [www.westhoveinfants.co.uk](http://www.westhoveinfants.co.uk)



Please  
Insert child's  
photo  
Or  
drawing of  
themselves  
here

Look at the fun things to do in your year group and see how many activities you can tick and date to say you have done!

We hope that you have fun completing your list ©



Well done for completing all your fun activities!

Please let us know below any more fun things that you like to do...

Year R			
Activity		✓	Date
Make mud pies			
Stroke a small animal			
Blow bubbles			
Roll down hills			
Splash in puddles			
Dance like no one is watching			
Make a den			
Pick fruit and eat it			
Play in the snow			
Visit a farm			
Plant a bulb and watch it grow			
Go on a crunchy leaf walk			
Fly a kite			
Post a letter			

Year 1			
Activity		✓	Date
Build a sand castle			
Make some biscuits & eat whilst warm			
Make a puppet			
Put on a puppet show			
Borrow a book from the library			
Go on a trip to the seaside			
Carve a pumpkin			
Make a daisy chain			
Dance like no one is watching			
Go on a winter walk			
Look up at the stars on a clear night			
Walk barefoot in the sand			
Collect shells and pebbles to decorate a plant pot			
Keep a collection of some sort			

Year 2			
Activity		✓	Date
Play a musical instrument			
Go on a picnic			
Plant a seed and eat what grows			
Visit a museum			
See live music			
Perform a dance			
Collect snails and race them (put them back once you've finished)			
Have a water fight			
Play in the snow			
Join an extra-curricular club			
See a butterfly hatch			
Talk to an old person			
Make your own ice lolly and eat it			
Take a selfie			