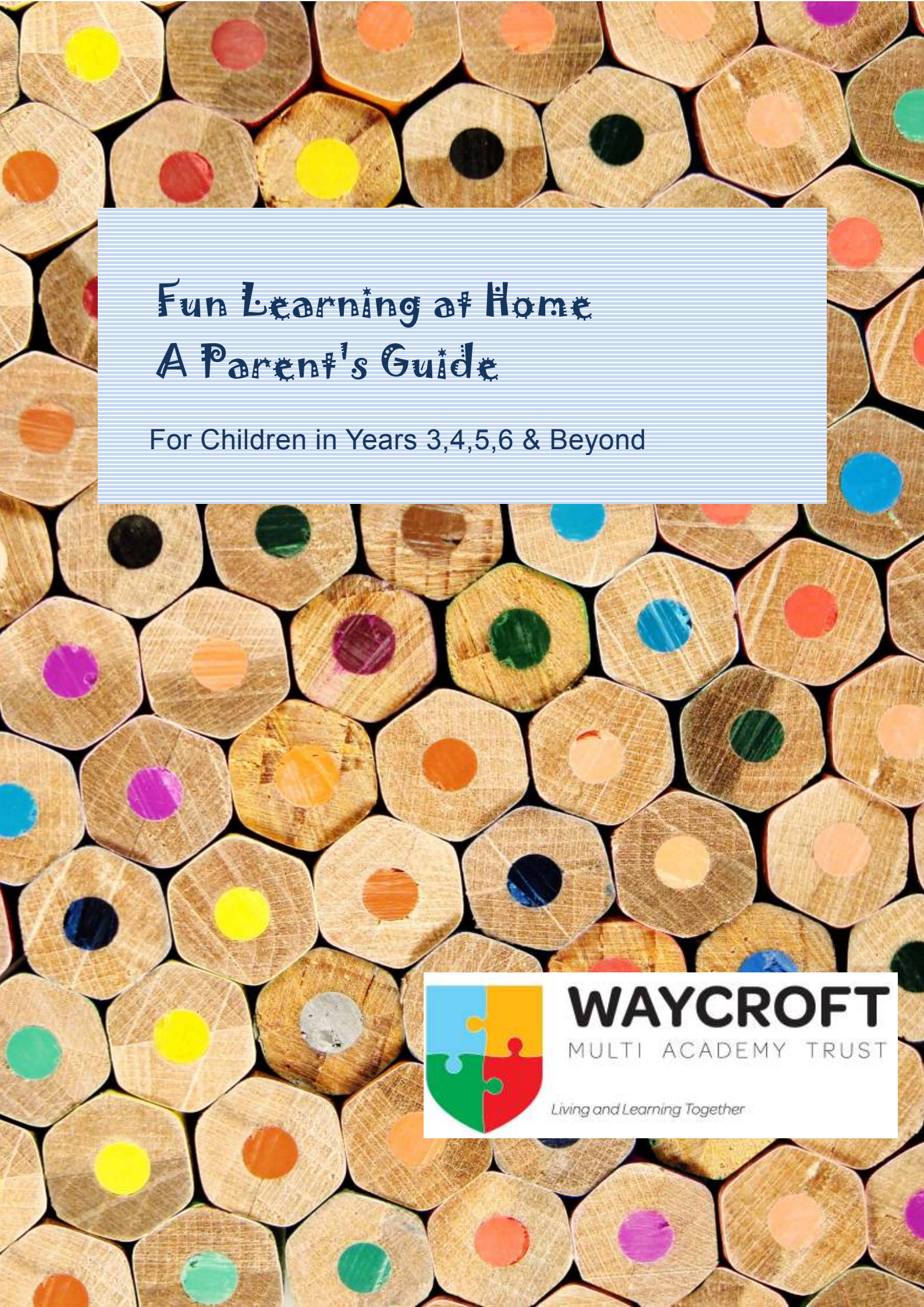


Fun Learning at Home
A Parent's Guide

For Children in Years 3,4,5,6 & Beyond

WAYCROFT
MULTI ACADEMY TRUST

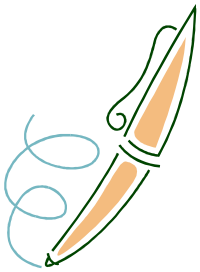
Living and Learning Together

English

Speaking and Listening

- Encourage family debating, discussion and justification, e.g. local issues, topics brought up on the radio/TV.
- Interview relatives about a particular theme, experience or incident.
- Make up 'Family Stories', e.g. mum starts the story, brother does next paragraph etc. The genres could be mixed, e.g. the first paragraph is a fairy tale, the second a thriller etc.
- Listen to story tapes on long car journeys.
- Kim's game - make up a story around the objects on the tray.
- Articulate moods, e.g. can you describe an objects, action, place without using the word for other people to guess?
- Make a film.
- Stick a book character's name on other person's forehead- can person work out who they are by asking questions which require only yes/no answers?

Writing



- Be film (theatre or radio) critic and write/discuss options on something seen at the cinema, e.g. could the ending have been better, the characterisation was weak etc.
- Follow recipes and instructions. Perhaps attempt writing own version e.g. for making a toy, or something from origami.
- Keep a diary, journal, travel log, scrap book of memories.
- Design a superhero or villain fact file.
- Encourage children to write for a purpose, e.g. letters of complaint to the BBC about a programme or to a favourite author, party invitations, thank you cards/emails.
- Design own Cluedo characters/top trump cards.
- Create a story or play script for TV characters.
- Read and discuss epitaphs in local graveyard - write own epitaph.
- Create own book jackets, e.g. cover and blurb, with a review.
- Create own travel brochure for a holiday within a particular locality.
- Re-label foods/objects with own brand names.
- Write own shopping lists.
- Create children's newspaper, books, comic.
- Create a library or cafe food critic.

Words

- Play word games, e.g. Crossword puzzles; I Spy; Words within words; Word searches; Anagrams; Sudoku with letters; Bingo with words; Registration plate games; alphabet games; Scrabble; Boggle; Pass the Bomb; Hangman etc.
- Fridge magnets - spell out what you want for lunch!
- Etymology hunt - investigate the origins of words within the English language. Does the spelling give a clue regarding derivation (look at prefixes and suffixes etc.)
- Come up with own adverts for products e.g. Beans Meanz Heinz.
- Write own limericks.

Reading

- Join the local library.
- Create a book club with friends.
- Bedtime stories.
- Read as wide a range of genres as possible. What are the ingredients of a particular genre? E.g. What must a fairy tail include?
- Read stories/poems written by the same author. What's their style?

Websites

http:/ /www.www.ictgames.com/literacy

http:/ /www.bbc.co.uk/bitesize

http://resources.woodlands-junior.kent.sch.uk/interactive/literacy2.htm

http://www.phonicsplay.co.uk/

http://www.funenglishgames.com

http://scs.mathletics.com/SignIn.asp?Spellodrome=true

Geography

- Where does food come from? (plot on a map).
- Follow a map when going on a journey.
- Compare and contrast foods from different countries.
- Make a board game (e.g. monopoly for different countries).
- Guess the building/town/country (e.g. horse pig weight= Shirehampton, Battle knife = Warsaw)
- Planning routes for trips: maps, distances, transport (e.g. breakfast in Paris for 8am from home).
- Describe familiar routes- landmarks.
- Design and make a sustainable house using environmentally friendly sources of energy.
- My favourite place (pictures, photos, postcards).
- Plan a trip of a lifetime (where? why? Currency? Food? Travel?).
- Treasure hunts.
- Weather record (signs of spring, cutting grass, sunrise/set).
- Rivers (different parts and different parts and different characteristics, depth, speed (pooh stick), erosion, deposition).
- Visit contrasting environments (gorge, mountains, beach, river valley etc). Locate on map of Bristol - why are they positioned there?
- Rocks and fossils (collect and classify).
- Place names (any patterns? Reasons for names e.g. influence of past invasions: Vikings, Romans, etc).
- Redevelop an area in the vicinity (turn it into something else).
- Study own area (How is land used? Shops, recreation, leisure, residential).
- Journey of a water drop (grain of sand or sugar etc)- comic/cartoon.
- Weather diary/weather station (microclimate influences).
- Make a model- island: mountain, rivers, coast, settlements. Transport links (invent place names).
- Model high street out of boxes.

- Involve in planning the garden (what grows best where? why?).
- On journeys- what kind of shops/buildings do you pass?
- Refer to TV/newspaper/magazines- what is it like elsewhere?
- Discuss local issues/new developments.
- Research other countries (if you won the National Lottery where in the world would you most like to live and why?)
- Visit important geographical areas (e.g. Cheddar gorge, Avon gorge, Aust fault line, Sand Bay, Somerset levels, Severn tidal bore etc, caves, River Wye).
- Symbolism- why are particular souvenirs associated with particular countries in the world? What about emblems for countries of the United Kingdom? Think of alternatives with good reasons supporting your suggestions.
- How climate change affects us / Europe / The World: weather, habitats, fossil fuels, etc. What can be done to help.
- Links with schools in other countries: pen-pal / Email links
- Reduce, Re-use, Recycle
- Links to being Eco-friendly throughout a lot of topics

Learning Spellings at Home

- Arrange your words in alphabetical order.
- Write your words in colourful bubble writing.
- Illustrate each of your words with a picture.
- Play hangman with a partner using your words.
- Paint your words with paint (on paper) or using water or chalk (outside).
- Write out your words, cut up into any smaller words that you can find.
- Design a board game to play with your words. Write the rules too.
- Write your words in different fonts and colours.
- Sit back to back with a friend and test your words.
- Use each of your words in a silly sentence. Underline the word used.
- Put your words to a number code eg A=1, B=2
- Play charades with your words. When someone has guessed the word, spell it.
- Write your words on cards. Select 6 to put on a bingo grid. Turn cards over one by one. If you have word and can spell it, you can cover it.
- Write rhymes for each of your words.
- Write a sentence for each word to explain its meaning.
- Make a wordsearch with your words. List them underneath.

Websites

http:/ /www.mapzone.co.uk/index.htm

www.fairtrade.org.uk

http://www.bbc.co.uk/schools/websites/4_11/site/geography.shtml

National Georgraphic Kids

http://resources.woodlands-junior.kent.sch.uk/interactive/literacy.html

http://www.crickweb.co.uk/ks2literacy.html

http://www.phonicsplay.co.uk/

http://www.tutpup.com/

http://www.ictgames.com/literacy.html

http://www.adrianbruce.com/reading/games.htm

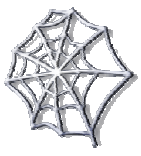
History

- Make meals from different period- what is similar/different today and why?
- Play games from a past era .
- Art work- collage, gather pictures from particular periods (Tudor, Victorian,
- Egyptian, Greek etc.) Compare and contrast styles, themes and methods used to produce them.
- Make comparisons between now and then, in every day life- bathing, dancing, ablutions, clothes, leisure activities etc.
- Track an artefact through time - e.g. an iron. Has it changed? Why?
- Improve the design of a particular artefact .
- Convince people of an alternative use for an artefact .
- Read fiction books from a particular era .
- Talk to older family members about their experiences .
- Visit old graveyards look at fashions in names, ages (life expectancy), styles of gravestones etc.
- Clothes- Dressing up, design a hybrid outfit taking the best from two eras e.g.

Tudors and modern

- Look at old photos (e.g. of the local area)- talk about things which are different and the same (suggest reasons for the changes).
- Be an archaeologist and dig for treasure.
- Produce a 'survival guide' for people travelling back in time to a particular period (currency, health tips, language etc.)
- Look at works - how have these changed through time - e.g. Tudor recipes (terms used and spellings), look for French and Latin roots, e.g. 'loo' comes from French 'garde l'eau' when toilet waste was thrown from above!
- Visit historic sites.
- Legacy- look for impact of various periods in Bristol - e.g. Classical architecture (Greek), buildings (Tudor, Victorian) etc.
- Research key figures associated with Bristol (Joseph Fry, Mary Carpenter etc.)

Websites



http:/ /www.bristolblitzed.org
http:/ /www.english-heritage.org.uk/server/show/nav.1579
http:/ /www.bbc.eo.uk/history/trail/

http:/ /www.bristol-city.qov.uk/museums
http:/ /www .architecturecentre.co.uk

Art

- Create a personal sketchbook full of interesting colours, material/paper, paintings and notes.
- Visit museums (free admission).
- I spy walks ..... develop observation skills.
- Talking about/describing objects:- material, shape, form, texture.
- T shirt---+ fabric paints.
- Drawing and painting with your child – observational or imaginary
- Design objects of the future.
- Jewellery/fashion show from recycled materials.
- Decorating bedrooms/re-design, rearrange.
- Art books from the library.
- Produce art in different styles e.g. Aboriginal, Roman, Egyptian art, Pointillism etc.
- Study a particular artist and produce art in their style (e.g. Matisse, Lowry etc.)

- Look at art from around the world, produce your own version, how do they differ and why?
- Texture, collages of people/places.
- Scrap book of favourite pictures/postcards.
- Continue the scene around a Christmas card ---+ clippings from magazines and from picture.
- Make cards- birthday, thank you, Christmas etc.
- Collect nature art (using sands, shells, grass, feather etc.)
- Rubbings.
- Chalk murals on the floor.
- Decorate trees with ribbons and old CDs.
- Printing- fruit/vegetable.
- Make a dream diary and draw your dreams.
- Decorate balloons, eggs, glass etc.
- Photography.
- Short videos.
- Look at sculptures outside shops etc.
- Sculpture trail (e.g. Bristol statue trail).
- Sculpture- modelling, plasticine etc.
- Animation -+ pivot stickman.
- Create an artistic design on food e.g. cakes.
- Painting stones.
- Image you have discovered a new breed of fish/bird/alien- draw.
- Establish an art box- art equipment, leaves, textures, paper, stickers etc.

Books

The Anti colouring Book, ISBN 0-590-70011-1, Susan Striker and Edward Kimmel

Ed Emberley's Drawing Book: Make a World. ISBN-13: 978-0316789721

Websites

http://www.studentartguide.com/articles/art-sketchbook-ideas

http:/ /www.mrpicassohead.com/ create.html

Art Videos on websites

http://www.bbc.co.uk/learningzone/clips/colour-mixing-from-primary-colours/7725.html

http://www.bbc.co.uk/learningzone/clips/primary.art

Art Websites

Look at different types of paintings -
http://www.bbc.co.uk/arts/yourpaintings/

Year 6 - Be an Art detective http://www.eduweb.eom/pintura/a I .html

Fun activities for years R-6
http://www.harcourtschool.com/menus/art_express.html

Links to lots of websites for all ages: includes drawing cartoons, games, puzzles, crafts,

Photography, cameras, art museums.

http://www.kidsites.com/sites-edu/art.htm

Interactive Mondrian Art - Read instructions carefully
http://www.stephen.com/mondrimat/index3.html?

Lots of fun online activities http://www.nga.gov/kids/zone/zone.htm

Fun Art! http://www.eduweb.com/insideart/

Modern Art for children http://kids.tate.org.uk/

R.E.

Religious Symbols

- Symbolism: make a list of symbols encountered in society (e.g. school badges, company logos etc). Discuss why these particular symbols were chosen. Invent some alternative symbols and justify your decision.
- At Christmas time investigate the symbols used. What do they stand for? Sort into categories.
- Investigate the origin of your name. Why was it chosen and what does it mean?
- Investigate where you see forms of religious symbolism (jewellery, flags, religious texts, tombstones, buildings, badges etc). Are there examples of these in your local community? Where? (Plot the locations on a map).
- Read religious stories together and discuss the underlying meaning.

- Build a memory bank from a trip/holiday. What memories do particular objects bring back?

Religious Buildings

- Become a religious buildings detective. What have you spotted? Where?
- Visit places of worship. Compare and contrast (layout, location, age, architecture, atmosphere, names, furniture, size, purpose, external features, sacred texts, activities held, symbols).
- Study the architecture. Is there a religious style? What is it? Is this reflected in any other non-religious buildings?
- Visit religious architecture. Analyse their interiors using a sensory approach- sight, sound, smell, touch. Which is the most important part of the building and why?
- How do people use the building - what activities are they engaged in?
- Is there anything very special in the building? If so investigate it further.
- Analyse the setting of the building. Which direction does it face? What surrounds it? Where is it located? Why?
- Plot religious buildings on a local map? How many are there? Any particular patterns? Why? What is the most frequently occurring building?

Religious festivals and celebrations

- As a family list the events you have celebrated in a year. Any community celebrations? Who was involved? How did you celebrate? Reason for celebration?
- Make cards to celebrate particular occasions (birth, Bar/Bat Mitzvah etc).
- Investigate which symbols are associated with particular celebrations? (Candles on a birthday cake, water at a christening, ring at a wedding etc).
- Look at family photos of celebrations. Discuss the traditions associated with this.
- In the calendar look for celebrated events and bank holidays (holy days). Why are certain days marked in this way? Compare/ contrast with other cultures/religions. Are there any pan-world celebrations? What? Why?
- Investigate festival food (Waster eggs, Christmas cake etc). Which foods are connected to which religious festivals? Why? Devise a special food menu.
- Analyse music associated with specific religious events. What mood does it convey? Which instruments were used?
- How does the community celebrate particular religious events? (Shop displays, Christmas lights and trees etc).

Websites

www.theresite.org.uk

www.topmarks.co.uk/

www.reonline.org.uk

Computing

- Produce homework on the computer.
- Design cards or invitations for special events.
- Keep a diary on the computer - e.g. weather, indicators of spring, phases of the moon etc.
- Email family members.
- Surf the web (web addresses, specialist websites, search engines, ask an expert) research a particular project/topic.
- Technology hunt. How many different forms of technology can you see in your community?
- Helping parents guide ICT
- Create an algorithm – a list of rules to follow in order to solve a problem. I.e. – for getting dressed in the morning.

ICT activities to try at home

- Touch typing: one of the skills that can really help children with their word processing is touch typing. There are several websites that can help children with their touch typing. Try Purple Mash (see websites section for details) and dance mat typing: http://www.bbc.co.uk/schools/typing/
- Photo editing: edit photos, adding exciting effects. Take a look at Tuxpi Photo Editor: http://www.tuxpi.com/
- Have fun creating collages from a set of words. Try http://www.wordle.net/
- Make your own wordsearch: http://www.wordsearchmaker.net/Default.aspx

Websites to support ICT

Purple Mash - Waycroft have a subscription and children will receive their passwords in Term 3. The website will help children practise a range of ICT skills - from touch typing to control and simulations.
www.mashlogin.com/waycroft

Kent ICT - Click on ICT Themes to access a range of resources to support pupils' ICT skills.
http://www.kenttrustweb.orq.uk/kentict/kentict_home.cfm

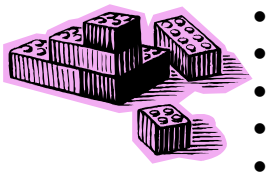
NfGL - For Key Stage 2 http: //www.ngfl-cymru.orq.uk/enq/vtc-home/vtc-ks2-home/vtc-ks2-ict

www.yahooligans.com

Please note: Although the websites have been checked for suitability, Waycroft has no control over their content so they must be used with parental supervision.

DT

- Make a scrap book of their favourite thing or something they collect
- Have a 'making box' so they always have recycled materials they can use for building
- What can you turn this into? E.g. washing-up-liquid bottle
- What could you use this for? E.g. elastic bands
- Cooking at home - Savoury & sweet – Hot & cold. Can they follow a recipe? Can they adapt it?
- Talking about food (where does it come from). Look at the packet and find the country on Google Earth
- Packaging (Design more environmentally friendly alternatives).
- Compare and contrast foods from different countries.
- Have a part of the garden to grow things in or grow something in a pot
- Make a board game.



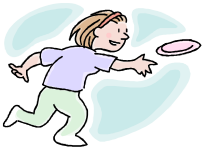
- Lego (Design and construct a building).
- Inventions (Design and make, e.g. by combining two unrelated items).
- Mobile (dream catcher, wind chime).
- Puppets (make a sock, shadow, finger, string puppets etc.)
- Make a hat. What weather would it be good for?
- Decorating - help with painting.
- Nature art (make a model using natural products only).
- Make own dress up clothes.
- Create new purpose for 'rubbish' e.g. what can used tea bags be used for?
- Improve the design of an object (e.g. an umbrella- what are the current disadvantages and how can this be improved?)
- Make structures (e.g. the tallest building possible using 10 straws and an elastic band).
- Make a miniature model of a Bristolian icon (e.g. Wills tower, suspension bridge etc.)

Websites

This is a DT booklet
http://www.tyrellsprimary.com/curriculum_detail.asp?Section=6&Ref=400

Games

Outdoors



- Buy a ball/bats- challenge yourself.
- Use different tricks using a tennis racquet: bounce the ball on the frame, then handle, then back of the boot, then knee
- Swing-ball
- Target games- (smaller target, further away). Use dart board – relate to maths. Use hula-hoops as targets.
- Throwing and catching different objects. Use bean bags and shuttlecocks.
- Watch rugby, football, hockey, netball in local park.
- Visit the skatepark.
- Rolled up newspaper- target.
- Timed races / obstacle course: can you improve your times?
- What's going on? Look for local events and facilities.
- Check your school's notice board for events in the holidays.
- Skipping with a rope – different routines.
- Collection of dressing up clothes - to simulate movement and expression.

Swimming

- Water safety in sea, rivers, lakes and swimming pools - talk through.
- Gain confidence in the water- bath "splashing" having fun, showers, pools.
- In the pool - play in the water - techniques through fun.
- Join a club.
- Check notice boards.

Dance

- Make a collection of body shapes from magazines, make a poster/collage (rainy day). Extend to photographs.
- Moving to different types of music. Match the movement to the music: how does it change? Is it happy or sad? How to use expression without words.
- Mimic movement of different animals.
- Tell a story to music by using actions instead of words.
- Sports dance- mimic sporting actions, seen on TV or video. Fit actions to music.
- Music videos: mimic actions. Try doing it mirror image or in reverse to challenge yourself.
- Local dance groups
- Theatres/productions
- BBC - check for programmes/videos
- Listen to music from different parts of the world and learn about their dances, e.g. Irish dancing, Flamenco, Morris, Salsa, African.

Books

Children in Bristoi/Titch Hiker's Guide.

Websites

http:/ /www.bristol-city.qov.uk/ cc m/ content /Leisure-Culture/ SportsClubs-and -Centres/ sports-clubs.en

Cycle paths (or use scooters) www.bristol.gov.uk/page/transport-and-streets/cycling

MUSIC

- Point out how many times your child hears music (CD's, TV, tapes).
- Theme tunes for TV programmes/films- analyse these- what mood do they create? Explain why? Plot your emotional response on a graph.
- Analyse music used for adverts.
- Compare and contrast cover versions and the originals. What are the differences? What does this say about society? Which version is better? Why? What about the CD/record cover?
- Sing together - harmonise, use different rhythm patterns, make up songs using rhymes or the tune from another song.
- Make home-made instruments (spoon on saucepan, elastic bands, rice in a container).

- Compose your own rhythm using these home-made instruments (E.g. using symbols, graphic scores).
- Discuss musical terms- high/low pitch, quiet/loud volume .
- Milk bottle challenge- fill 8 glass milk bottles with varying amounts of water. Place them in pitch order. Play a well-known song on the milk bottles.
- Read a story and find bits of music to accompany parts of it. Justify decisions.
- Picture/portrait- set it to music and explain choices.
- Listen to music from around the world. What defines their style? (e.g. music played in different restaurants when on holiday).
- Analyse music- identify the beginning middle and end, repeated rhythms, speed, volume, pitch, rhythm, beat, melody, mood created etc.) E.g. Peter and the Wolf/The Carnival of Animals- which could it be? Which animal couldn't it be? Why?
- Discuss which music you like? Why?
- Go to a children's concert.

Websites

http:/ /www.earlybirdsmusic.com

http:/ /www.bbc.co.uk/radio3/makingtracks/games.shtml

Science

A key to good science at home (and at school!) is asking questions. Use open-ended questions (like 'Why do you think this happens?' or 'How do you think you could change that?') that allow children the opportunity to think and explore their own ideas.

- Design a miniature garden (including different environments and with plants that grow at different times). Why do different plants grow at different times of the year?
- Use a magnifying glass or telescope. Can you make things appear bigger or smaller? Why do you think this happens?
- Visit to a museum (most of these have free admission). What can you discover?
- Explore a variety of foods: be a 'Veg Detective'. Where do fruit and vegetables come from? Have they changed over time? Can you identify them growing in allotments or gardens?
- Art fun with seeds (make pictures using different types of seeds). What is inside the seeds? Can you open them up to have a look? Is it what you expected?
- Planting your own seeds or bulbs - keep a diary of how they grow, and use drawings to record them.
- Observing tadpoles and frogs in a fish tank or pond. Can you see how they change and grow over time?

- Look at a variety of objects around house - identify materials and their properties (waterproof, flexible, electrical conductor etc.) Why has that material been chosen for that use?
- Baking/cooking – think about processes- can food items be turned back to their original state (e.g. an egg)?
- Country walks v. town walks – compare the environments (plants, animals, sights, sound etc.) Why are they so different? What is the same?
- Identify man-made and natural materials. How were they formed? How are the materials similar? How are they different?
- Perform shadow shows. Can you make the shadows bigger or smaller? How?
- Read the electricity meter. Can you see the numbers moving? Do they move faster or slower if you turn all of the lights off? How can we conserve energy?
- Look at the phases of the moon (you could record these in a diary). Why do you think the (visible) shape of the moon changes?
- Use a magnet to explore around the house. What materials does it stick to? Why?
- Measure the time taken for puddles to evaporate using chalk markings. Try on a different day – did they evaporate faster or slower? Why?

Websites

BBC Dynamo make and do – instructions for lots of science based activities to do at home: http://www.bbc.co.uk/education/dynamo/lab/make.shtml

Science demonstrations for school or home: http://listverse.com/2007/12/03/top-10-coolest-home-science-experiments/

http://www.naturedetectives.org.uk/autumn

Games and activities:

http://www.crickweb.co.uk/ks1science.html

http://www.crickweb.co.uk/ks2science.html

http://www.sciencemuseum.org.uk/onlinestuff/games/

Maths

Your children have already developed many mathematical skills, which they now need to regularly apply within meaningful, real life situations. There are many opportunities to develop your child's learning of maths both at home and within the wider community. Here are just a few ideas:

- Use different objects around the house e.g. Two DVD cases, how could they move them around to create new shapes? What are the new shapes that they have made?
- Baking and/or Cooking – the children can read and follow recipes, learning how to measure out ingredients and use and read scales accurately. It also gives them the opportunity to convert measurements and use ratio and proportion to calculate how much of each ingredient they will need. E.g. If they have a recipe for 8, how much of each ingredient would they need if they were cooking for 4?
- Whilst out shopping. Can they round objects to the nearest 10p, £1 etc? Can they calculate the total food bill? Could they work out the correct notes and coins to use to pay for the shopping? Could they calculate change? Could they calculate the monthly average spending on shopping?
- Calculate costs at restaurants and cafes. Again this can give the children the opportunity to calculate cost and change as well as which notes and coins to use.
- Play games in the car, e.g. how many blue cars can you spot in 1 minute? Can they add, subtract or multiply the numbers on different number plates?
- Use plane, bus and train timetables to plan Journeys.
- Use household objects to further understanding of capacity, length and mass.
- Calculate the cost of holidays and trips, use graphs to identify temperatures and distance of various destinations. Investigate differences between time zones.

Websites:

http://www.tutpup.com/

http://www.mathletics.co.uk/

http://www.bbc.co.uk/bitesize/

http://www.sums.co.uk/

http://www.coolmath4kids.com/

http://www.multiplication.com/games

http://www.kidsnumbers.com/

http://www.mathsisfun.com/

www.gamequarium.com

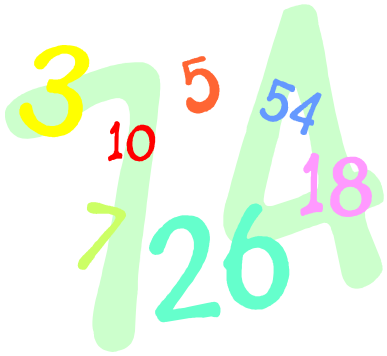
http://www.counton.org/

http://www.mad4maths.com/parents/

On the following pages are some examples of the methods used for addition, subtraction, multiplication and division.

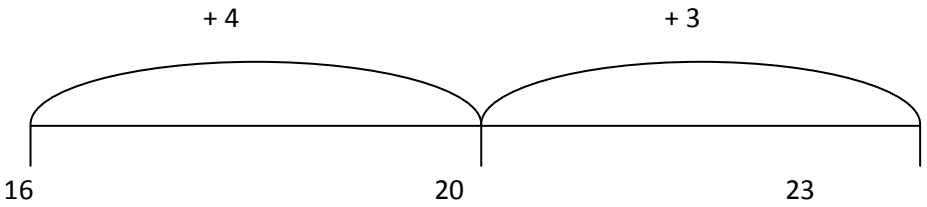
Methods used in Addition

Using a number line



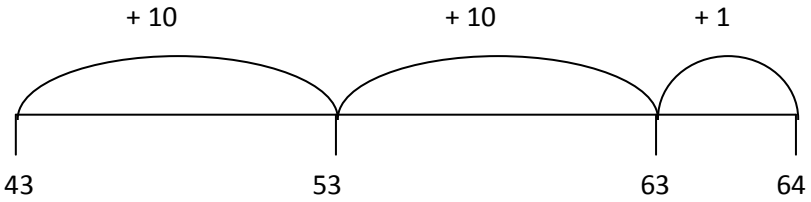
Jumping to the next multiple of 10 first

16 + 7 = 23



Adding on the tens and then the ones

43 + 21 = 64



Partitioning both numbers

46 + 29 =
6 + 9 = 15
40 + 20 = 60

60 + 15 = 375

Formal written method - add the least significant digits first

$$\begin{array}{r} 2\ 4\ 6 \\ +\ 1\ 2\ 9 \\ \hline 1\ 5 \\ 6\ 0 \\ 3\ 0\ 0 \\ \hline 3\ 7\ 5 \end{array}$$

The teacher may use this method to help the children understand how to add the columns.

Leading to ⟶

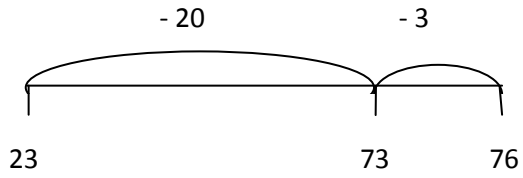
$$\begin{array}{r} 2\ 4\ 6 \\ +\ 1\ 2\ 9 \\ \hline 3\ 7\ 5 \\ \hline 1 \end{array}$$

Methods used in Subtraction

Using Number Lines

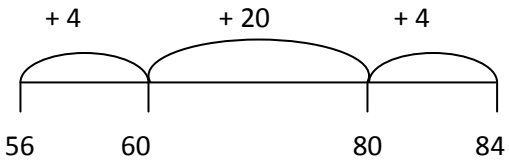
Counting back from the larger Number

E.g. 76 – 23 = 28



Counting up from the smaller to the larger number

E.g. 84 – 56 = 28

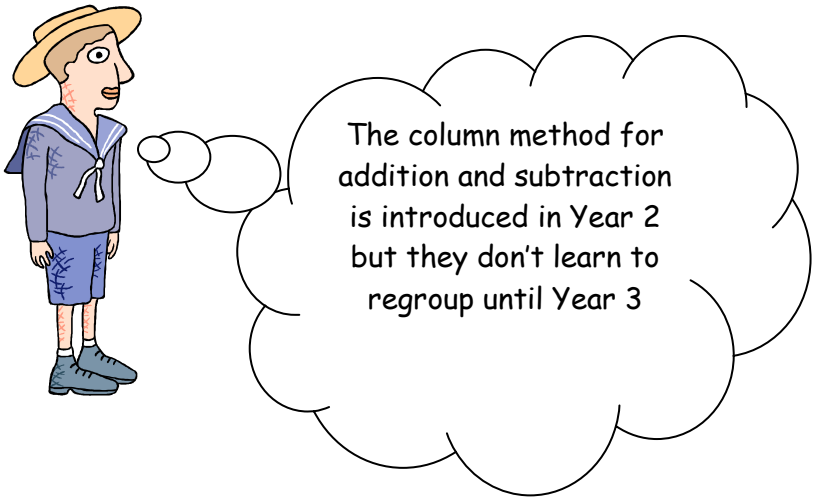


Formal written method

$$\begin{array}{r} 2\ 5\ 6 \\ -\quad 2\ 3 \\ \hline 2\ 3\ 3 \end{array}$$

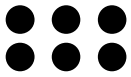
Leading to →

$$\begin{array}{r} 6\ 14\ 1 \\ \cancel{7}\ \cancel{5}\ 4 \\ -\quad 8\ 6 \\ \hline 6\ 6\ 8 \end{array}$$



Methods for Multiplication

Using arrays



2 x 3 = 6 or 2 lots of 23

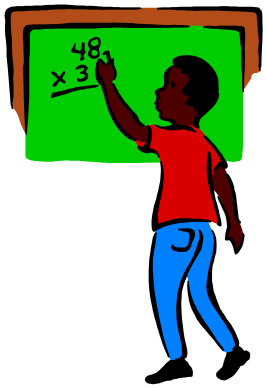
3 x 2 = 6 or 3 lots of 2

Repeated addition

3 x 6 = 6 + 6 + 6

6 x 3 = 3 + 3 + 3 + 3 + 3 + 3

Partitioning Method



2 3 x 7 =

2 0 x 7 = 1 4 0

3 x 7 = 2 1

1 4 0 + 2 1 = 1 6 1

Short Multiplication *(Involving multiplying by a 1-digit number)*

Expanded written method (taught in Year 3)

$$\begin{array}{r} 2\ 3 \\ \times\quad 7 \\ \hline 2\ 1 \\ 1\ 4\ 0 \\ \hline 1\ 6\ 1 \end{array}$$

(3 X 7)
(20 X 7)

Leading to ⟶

Formal written method

$$\begin{array}{r} 2\ 3 \\ \times\quad 7 \\ \hline 1\ 6\ 1 \\ \hline \end{array}$$

2

Long Multiplication

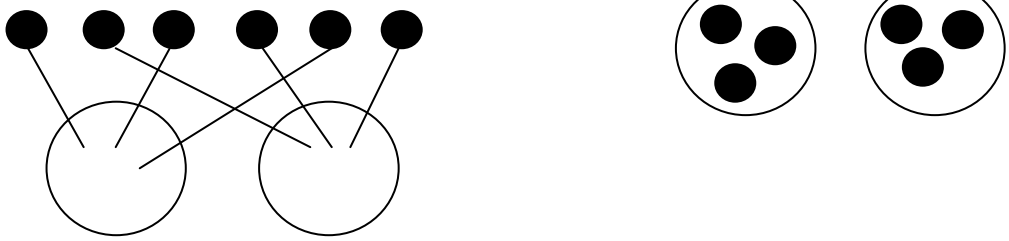
$$\begin{array}{r} 7\ 2 \\ \times\quad 3\ 8 \\ \hline 5\ 7\ 6 \\ 2\ 1\ 6\ 0 \\ \hline 2\ 7\ 3\ 6 \\ \hline \end{array}$$

1

Methods for Division

Sharing

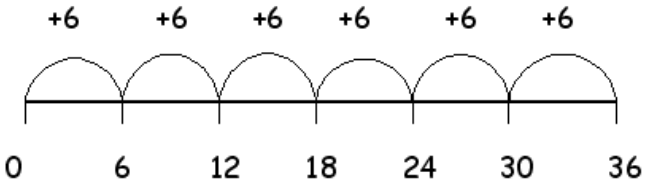
6 sweets are shared equally between 2 people. How many sweets do they get each?



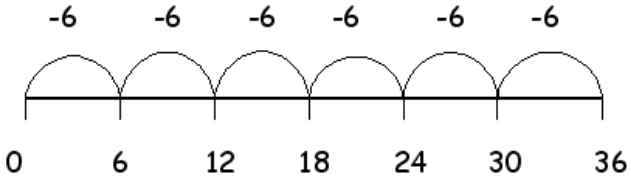
Grouping or Repeated Subtraction

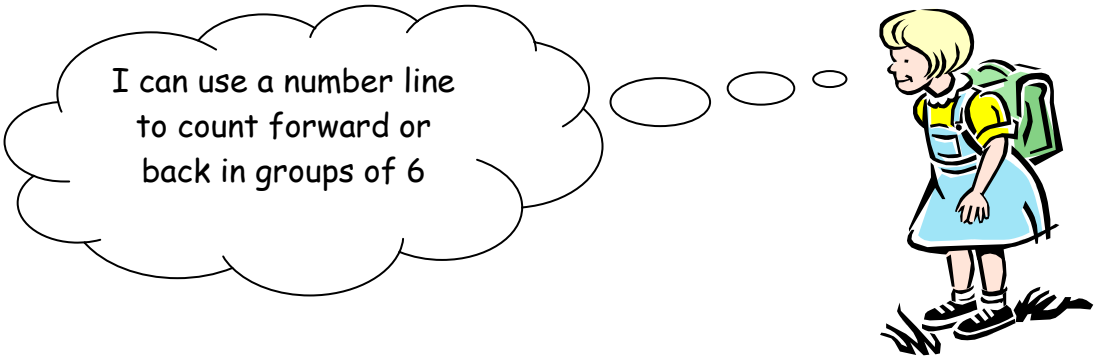
There are 36 apples in a box. How many bags of 6 apples can we fill?

36 ÷ 6 = 6 groups



36 ÷ 6 = 6 groups





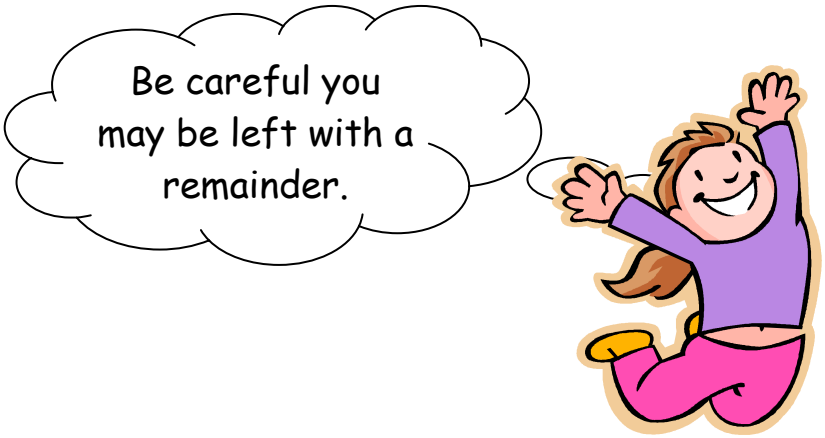
Interpret 8 ÷ 2 as 'how many 2's make 8?'

(The methods above are used for KS1 only)

Short Division (dividing by a 1-digit number)

$$\begin{array}{r} 1\ 6 \\ 6\overline{)\ 9\ {}^{3}6} \end{array}$$

Answer: 16



With Remainders

As a whole number

$$\begin{array}{r} 4\ 6\ \text{r}\ 3 \\ 6\overline{)\ 2\ 7\ {}^{3}9} \end{array}$$

As a fraction

$$\begin{array}{r} 4\ 6\ \frac{1}{2} \\ 6\overline{)\ 2\ 7\ {}^{3}9} \end{array}$$

As a decimal

$$\begin{array}{r} 2\ 2\ 9\ .\ 5 \\ 6\overline{)\ 2\ 7\ {}^{3}9\ .\ {}^{3}0} \end{array}$$

Long Division (dividing by a 2 – digit number)

Expanded Written Method

$$\begin{array}{rr} & 3\ 2\ 4\ \text{r}\ 4 \\ 1\ 8\overline{)} & 5\ 8\ 3\ 6 \\ - & 5\ 4\ 0\ 0 \quad (18 \times 300) \\ & {}^{3}\not{4}\ {}^{1}3\ 2 \\ - & 3\ 6\ 0 \quad (18 \times 20) \\ & 7\ 6 \\ - & 7\ 2 \quad (18 \times 4) \\ & 4 \end{array}$$

5836 ÷ 18 = 324 r 4 or 324 2/9.
Can also go further to turn the remainder into a decimal.

Formal Written Method

$$\begin{array}{rr} & 3\ 2\ 4\ \text{r}\ 4 \\ 1\ 8\overline{)} & 5\ 8\ 3\ 6 \\ - & 5\ 4 \\ & {}^{3}\not{4}\ {}^{1}3 \\ - & 3\ 6 \\ & 7\ 6 \\ - & 7\ 2 \\ & 4 \end{array}$$

5836 ÷ 18 = 324 r 4 or 324 2/9
Can also go further to turn the remainder into a decimal.

The formal written method for short and long division of decimal numbers can be seen in the Year 6 Calculation Booklet.