

Bushfield Road Infant School

Design and Technology Policy

BUSHFIELD ROAD INFANTS

MISSION STATEMENT

At Bushfield Infants and Nursery we provide a positive, happy and safe learning environment where all children feel valued and secure. We are committed to providing a rich and exciting curriculum, which encourages all children to meet challenges with enthusiasm and inspires them to succeed. At the heart of our school is a strong commitment to raising children's self esteem and self confidence, which enables them to become confident life long learners.

COMMUNICATION AND INTERACTION

We spend a huge part of our lives talking, listening and responding to people around us. We should never just expect communication to happen; we should take personal responsibility for the quality of our conversations.

Almost everything we do, in and out of school depends on talking and listening. Speech, language and communication skills are crucial for their social and emotional wellbeing.

For that reason, across all of our areas of our creative curriculum, we provide opportunities to talk, to listen and to respond to what we see and hear. (Please refer to the Communication, Interaction and Literacy Policy for further information.)

DT POLICY

Aims

Design and technology offers opportunities for children to:

- ◆ develop their designing and making skills
- ◆ develop their ability to create high quality products
- ◆ develop knowledge and understanding of technological processes, products and their manufacture
- ◆ work independently and with others, listening to others' ideas and treating these with respect
- ◆ find enjoyment, satisfaction and purpose through designing and making
- ◆ develop language skills through questioning, describing and explaining, presenting their ideas in a variety of ways
- ◆ apply cross curricular skills eg ICT, Art, Maths, Science, PSHE

Objectives

To be able to:

- ◆ use a range of materials to design and make simple products
- ◆ select materials, tools and techniques and explain their choices
- ◆ understand simple mechanisms and structures
- ◆ measure, assemble, join and combine materials in a variety of ways using basic tools safely
- ◆ investigate and evaluate simple products, commenting on the main features

Design and Technology Curriculum Planning

Design and Technology is a foundation subject in the National Curriculum. The National Curriculum sets out 3 main areas of activity for pupils which the school follows:

- ◆ investigating and evaluating a range of familiar products
- ◆ focused practical tasks that develop a range of techniques, skills, processes and knowledge
- ◆ design and make assignments using a range of materials including food, items that can be put together to make a product and textiles

DT Long Term Planning

The schools long term plan for Design and Technology maps out the units of work covered in each term for each year group. This follows a 2 year cycle to avoid repetition.

DT Medium Term Planning

Our medium term plans, which we have adopted from the QCA scheme of work, give details of each unit of work for each term.

They identify learning objectives and outcomes for each unit, and ensure an appropriate balance and progression of work across the key stage.

DT Short Term Planning

Class Teachers complete short term planning for DT. Short term plans build on the ideas outlined in the QCA document and on the prior learning of the children.

The Foundation Stage

We encourage the development of skills, knowledge and understanding that help reception children make sense of their world as an integral part of the school's work. As the reception class is part of the Foundation Stage of the National Curriculum, we relate the development of the children's knowledge and understanding of the world to the objectives set out in the Early Learning Goals. These underpin the curriculum planning for children aged three to five. This learning forms the foundations for later work in design and technology. These early experiences include asking questions about how things work, investigating and using a variety of construction kits, materials, tools and products, developing making skills and handling appropriate tools and construction material safely and with increasing control.

We provide a range of experiences that encourage exploration, observation, problem solving, critical thinking and discussion. These activities, indoors and outdoors, attract the children's interest and curiosity.

Teaching and Classroom Organisation

The school uses a variety of teaching and learning styles in design and technology lessons. The principal aim is to develop children's knowledge, skills and understanding in design and technology. Teachers ensure that the children apply their knowledge and understanding when developing ideas, planning and making products and then evaluating them. We do this through a mixture of whole-class teaching and individual/group activities. Within lessons, we give children the opportunity both to work on their own and to collaborate with others, listening to other children's ideas and treating these with respect. Children critically evaluate existing products, their own work and that of others. They have the opportunity to use a wide range of materials and resources, including ICT.

Class teachers ensure that pupils are given tasks which match their ability. This is achieved through a range of strategies:

- ◆ Teacher support (spending more time with some pupils)
- ◆ Other support staff (parents, Teaching Assistants etc)
- ◆ By outcome (setting common tasks that are open ended and have a variety of results)
- ◆ Grouping children by ability and setting a variety of tasks for each group
- ◆ Setting tasks with extension activities (where not all children complete all tasks)
- ◆ Resources (by changing the number, variety and complexity of resources)

Teaching Design and Technology to children with Special Needs

We teach design and technology to all children, whatever their ability. Design and technology also forms part of our school curriculum policy to provide a broad and balanced education to all children. Teachers provide learning opportunities that are matched to the needs of children with learning difficulties. Work in design and technology takes into account the targets set for individual children in their Individual Education Plans (IEP's).

Assessment and Recording

It is the responsibility of the class teachers to monitor and assess children's progress. Teachers assess children's work by observing them working during lessons and by evaluating the work they produce. The children's work is assessed against the learning objectives for the lesson and is recorded in the outcome column of the teachers short term plans.

At the end of a unit of work the achievements of each pupil is recorded on the termly group record sheet. Each teacher passes this information on to the next teacher at the end of each year. The children's progress in design and technology is also commented on as part of the annual report to parents.

The design and technology co-ordinator keeps evidence of the children's work in a portfolio. This demonstrates what the expected level of achievement is in design and technology for each year group. Work is standardised against national exemplification material produced by the QCA and the DfEE.

Resources

The school has a wide range of resources to support the teaching of design and technology. Specialised equipment is held centrally in the main stock cupboard and is only accessible to members of staff. Resources are organised into project boxes for each year group. They include the appropriate tools and materials for each design project.

Health and Safety

The general teaching requirement for health and safety applies in this subject. Care should be taken that any adult supervising children with DT activities is adequately informed on health and safety issues. Children are taught how to follow proper procedures for food safety and hygiene.

Monitoring and Review

It is the responsibility of the design and technology co-ordinator to:-

- ◆ monitor the standards of the children's work and the quality of teaching in design and technology
- ◆ support and advise colleagues in planning and teaching design and technology
- ◆ attend any relevant INSET and co-ordinators meetings
- ◆ review and update the design and technology policy.

Design & Technology Project Boxes

Food

Oven gloves	Chopping boards
Rolling Pins	Measuring Jugs
Bowl	Detox
Vegetable knives	Peelers
Pastry brush	Spoons
Graters	Juicer
Hand Whisks	Various cutters

Yr 1 Structures and Mechanisms

Tool box (including reamer, hacksaws and woodblocks)	Pipe cleaners
Vice	Straws
String	Scissors
Dowel	Felt pens
Wheels	Masking tape
	Split pins

Y2 Structures and Mechanisms

Tool box (including reamer, hacksaws and woodblocks)	Vice
Pegs	Masking tape
Wheels	Straws
Cotton reels	Rubber washers
dowel	Sticky pads
	String

Yr 1 Textiles

Felt
Buttons
Foam Shapes
Sequins

Needles
Eyes
Scissors

Yr 2 Textiles

Felt
Thread
Zips
Buttons
Scissors

Wiggle eyes
Needles
Press studs
Stick on velcro
Wool

Construction kits

Ideas for knowledge and skills

Nursery/ reception

Exploring and experimenting freely with simple construction kits.

Replacing components and pieces correctly.

Using construction kit to make static object of child's choice.

Year 1/Year 2

Using construction kit to make static object directed by teacher.

Draw objects made.

Design objects intended to be made.

Follow a simple design or plan to make a static object.

Using construction kit to make a model incorporating movement.

Year 2

Design and list resources required.

Follow instructions accurately to make static object.

Follow instructions and plans accurately to make moving object.

Construction Materials

Nursery

mobilo, bricks, popoid, polidron, duplo

Reception

big meccano, lego, bricks, polidron.

Year 1

lego, bricks, octon, polidron.

Year 2

meccano, polydron.

Food Ideas for the Practical Activity

fruit salad
vegetable salad (coleslaw)
seasonal salad
breakfast cereal
sandwiches
biscuits
bread rolls
surprise gift for...
packed lunch item
milk shake
yoghurt
pizza
soup dips / spreads

* Place food activity in a context

eg Make a biscuit for a special occasion; make a small bread bun which will appeal to small children; make a fruit salad for your desert.

Consider packaging and methods of serving food attractively

Apply hygienic practices eg wash hands, clean nails, retrain from touching hair and face while making, refrain from tasting while making, roll up sleeves, wear an apron; Wash dry and store utensils, keep food surfaces clean, select clean equipment. Germs / bacteria can make people ill and can easily be spread during food preparation. Avoid touching hot surfaces, electrical appliances.

Ideas for Knowledge and Skills children should aim for.

Nursery/Reception

There are specific terms for tools, equipment, foods and techniques.

Recipes use various terms for incorporating ingredients eg beating, mixing, whisking, rubbing, kneading, whipping.

Discuss and describe appearance, smell, tastes, texture

Compare the same food prepared in different ways eg potato, apple

Evaluate products using appropriate sensory descriptor.

Prepare food for consumption eg wash, peel, pod, chop

Use a prepared base dough / mixture and incorporate additional ingredients not using a recipe

Shape dough by hand; Shape dough using a rolling pin.

Use flour sifters; Use pastry cutters.

Use a table knife.

Year 1

There are specific terms for tools, equipment, foods and techniques.

Recipes use various terms for incorporating ingredients eg beating, mixing, whisking, rubbing, kneading, whipping.

Temperature and microwaves change food -sometimes permanently.

Evaluate products using appropriate sensory descriptor.

Take part in the preparation of a base dough / mixture and incorporate additional ingredients.

Use handy measures.

Consider and work towards consistency in mixtures.

Choose and use appropriate equipment for a task.

Year 2

There is a large variety of recipe books which have common features in their format and in the language used.

Follow a simple recipe in picture form.

Follow a simple written recipe, with close supervision.

Follow a simple recipe with close supervision and incorporating additional ingredients.

Evaluate food products seeking the opinion of others.

Take part in the preparation of a base dough / mixture and incorporate additional ingredients.

Use scales and interpret gms, etc.

Observe use of the oven, putting in foods and removing them.

□

Suggestions and Skills

Textile Ideas for the Practical Task

Finger puppets,
paper bag puppets,
sock puppets
Stocking puppets with yoghurt pots
hand puppets,
T. shirt printing
Christmas decorations,
book marks
leaves with veins
autumn tree
calendar with a fabric picture
page for class book,
greetings card
body adornment, jewellery
weaving picture
decorate with press prints, fabric crayons, fabric felts.

Ideas for studies and Skills children should aim to do

Reception/Nursery

Study textiles for different purposes - clothes for protection, travel, special events, weather, sport.

Construct simple 2D article.

Draw picture of what intended product should look like.

Use simple, non-paper templates.

Use (temporary) felt fabric markers.

Use fabric scissors.

Stick fabric with glue/staples as a temporary fixing (NR only).

Thread needles.

Use knotted thread to anchor work.

Stab-stitching to attach trimmings to a base fabric.

Use some simple straight stitches to decorate article.

Year 1

Study textiles. Develop an awareness that fabrics are constructed in different ways eg. woven, felted, knitted, crocheted. (sort and classify)

Construct simple 2D article.

Draw picture of what intended product should look like.

Use simple, non-paper templates.

Use (temporary) felt fabric markers.

Use fabric scissors.

Thread needles.

Use simple backstitch to anchor work at start and finish.

Use some simple straight stitches to attach pieces of fabric.

Year 2

Study textiles. Develop an awareness that fabrics have different properties and characteristics eg. tendency to fray, openness weave, porosity, ability to stretch etc.

There are man-made fibres eg nylons, plastics and natural fibres eg. cotton, silk.

Investigate and test fabrics and fibres.

Look at fastenings.

Construct functional 3D article.

Draw and label picture. Use colour to show colour of fabric .

Indicate type of stitching.

Make and use a simple paper pattern

Use (temporary) felt fabric markers.

Use fabric scissors.

Thread needles.

Use pins as a semi- permanent fix.

Select appropriate needle

Use simple backstitch to anchor work at start and finish.

Use some simple straight stitches to attach pieces of fabric.

Use running stitch to finish edges.

Sheet, Wood, Mechanical Ideas for a Practical Task

Wood

stick puppet
jointed puppet (use string)
Wheeled vehicle
a simple wooden toy (for a little sister)
a person
an animal for the ark
Trojan horse

Ideas for Knowledge and Skills

At all levels

All children should have the opportunity to study the tools available for them to use, taught their names, function and safe, appropriate use.

Use vice and bench-hook to secure work;

Use hacksaw to cut accurately along predrawn straight lines;

Use hand drill to drill a hole in the right place

Use surfboards to shape wood;

Use sanders to smooth wood

Use a low temperature glue-gun to fasten together pieces of wood

Nursery / Reception

Construct functional static articles and models using block wood - resources given.

Draw picture / design of what they intend to make.

(R) Draw the separate component parts and number them to indicate the order in which they will be made.

Year 1

Constructing functional articles and models incorporating wheels and axles or dowling joints using block wood - resources given.

Draw the separate component parts and number them to indicate the order in which they will be made.

Use a ruler to draw straight lines.

Year 2

Sheet (card, paper)

jointed puppet (use card and links)

greetings card with simple links and levers

Label the design to show what the component parts are / what they are made from.

Select own tools.

Identify linkages and levers in everyday objects eg. scissors, see-saws, crowbars.

Recognise the purpose of linkages - changing an input motion and force into an output motion and force, sometimes of different sizes and sometimes in a different direction.

Use scissors, card snips, stapler, hole-punch paper drill safely under close supervision.

Copy a simple linkage having one input arm and one out put arm with one pivot point.

Experiment with the position of the pivot point and note the effect of positioning it further from the input arm.

Use equipment safely and appropriately under minimal supervision.

Score card before folding using ruler and scissors.

Copy a more complex linkage with , perhaps , two output arms and two pivot points.

Use a simple linkage, with a single pivot point to animate a card, scene or picture. The linkage may be exposed.

