



**Intent**

# **Design and Technology**

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# Design and Technology

## Why is DT important?

At Ivegill C of E Primary School, all of our teaching and learning builds on our core values; Endurance, Trust and Community. We recognise the importance of DT in every aspect of daily life and we encourage children to be inquisitive throughout their time at our school and beyond. The DT curriculum fosters a natural curiosity of the child, ensures that pupils are equipped to successfully think, work and communicate like a designer . We believe that DT fosters creativity, and allows children to solve real and relevant problems while drawing on a range of skills from mathematics, science, computing and art.



## DT

### Aims of the DT Curriculum

The national curriculum for DT aims to ensure that all pupils:

- Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- Critique, evaluate and test their ideas and products and the work of others
- Understand and apply the principles of nutrition and learn how to cook



# Intent

At Ivegill C of E Primary School children will gradually build on their DT skills throughout the Key Stages based on National Curriculum expectations.

## **Key Stage 1:**

- Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making.
- They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

### **Design**

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.

### **Make**

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

### **Evaluate**

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

### **Technical knowledge**

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products



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## Key Stage 2:

### Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

### Make

- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

### Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world

### Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products



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## Cooking and Nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Pupils should be taught to:

### Key Stage 1

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.

### Key Stage 2

- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed



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## The Vertical Progression Approach

Our DT curriculum is delivered through a series of modules which are deliberately spaced throughout the academic year with opportunities to introduce and revisit key concepts. Each module covers a particular set of disciplines including:

- Food and nutrition,
- Mechanisms,
- Structures,
- Systems,
- Electrical systems,
- Understanding materials
- Textiles.

Vertical progression in each discipline has been deliberately woven into the fabric of the curriculum so that pupils revisit key concepts throughout their Primary journey at increasing degrees of challenge and complexity.



## Working as a Designer

In addition to the core knowledge required to be successful within each discipline, the curriculum outlines key aspects of development in the Working as a Designer section. Each module will focus on promoting different aspects of these competencies.

<b>Working as a Designer</b>			
<b>Design</b>	<b>Make</b>	<b>Evaluate</b>	<b>Apply</b>
The art or process of deciding how something will look or work.	Create something by combining materials or putting parts together.	Form an opinion of the value or quality of something after careful thought.	Use something or make something work in a particular situation.



# Intent

## Early Years

In Early Years, DT is taught through Expressive Arts and Design. The children learn about Design and Technology and develop a wide range of skills through their play and adult led activities.

The EYFS Framework in relation to DT aims for our pupils to:

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function
- Share their creations, explaining the process they have used.
- Make use of props and materials when role playing characters in narratives and stories.



## DT in the EYFS

# Intent





# Intent

## Content and sequence – Core DT Content from Year 1-6

Year	Units						
Year 1 and 2	<b>Core discipline:</b> Mechanisms  <b>Key Concept:</b> Sliders and levers	<b>Core discipline:</b> Structures  <b>Key Concept:</b> Freestanding structures	<b>Core discipline:</b> Food and nutrition  <b>Key Concept:</b> Preparing fruit and vegetables	<b>Core discipline:</b> Understanding materials  <b>Key Concept:</b> Selecting materials <b>CUSP link:</b> <a href="#">Materials</a>	<b>Core discipline:</b> Textiles  <b>Key Concept:</b> Templates and joining techniques <b>CUSP link:</b> <a href="#">Hot and cold places</a>	<b>Core discipline:</b> Food and nutrition  <b>Key Concept:</b> Understanding a recipe	
	<b>Core discipline:</b> Textiles  <b>Key Concept:</b> Exploring shape and texture	<b>Core discipline:</b> Food and nutrition  <b>Key Concept:</b> Following a recipe <b>CUSP link:</b> <a href="#">Animals, including humans (Keeping healthy)</a>	<b>Core discipline:</b> Mechanisms  <b>Key Concept:</b> Axles and wheels	<b>Core discipline:</b> Understanding materials  <b>Key Concept:</b> Manipulating materials <b>CUSP link:</b> <a href="#">Use of everyday materials</a>	<b>Core discipline:</b> Food and nutrition  <b>Key Concept:</b> Increasing our intake of fruit and vegetables	<b>Core discipline:</b> Structures  <b>Key Concept:</b> Freestanding structures with moving parts	
Year 3 and 4	<b>Core discipline:</b> Textiles  <b>Key Concept:</b> Combining materials	<b>Core discipline:</b> Food and nutrition  <b>Key Concept:</b> A balanced and varied diet <b>CUSP link:</b> <a href="#">Animals, including humans</a>	<b>Core discipline:</b> Mechanisms  <b>Key Concept:</b> Levers and linkages <b>CUSP link:</b> <a href="#">Forces and magnets</a>	<b>Core discipline:</b> Electrical systems  <b>Key Concept:</b> Switches and circuits <b>CUSP link:</b> <a href="#">Light</a>	<b>Core discipline:</b> Food and nutrition  <b>Key Concept:</b> Adapting a recipe	<b>Core discipline:</b> Structures  <b>Key Concept:</b> Developing strength in structures	
	<b>Core discipline:</b> Food and nutrition  <b>Key Concept:</b> Food choices	<b>Core discipline:</b> Mechanisms  <b>Key Concept:</b> Hinges	<b>Core discipline:</b> Electrical systems  <b>Key Concept:</b> Switches and circuits revisited <b>CUSP link:</b> <a href="#">Electricity</a>	<b>Core discipline:</b> Structures  <b>Key Concept:</b> Designing structures	<b>Core discipline:</b> Textiles  <b>Key Concept:</b> Fixings and fastenings	<b>Core discipline:</b> Food and nutrition  <b>Key Concept:</b> Understanding dietary requirements <b>CUSP link:</b> <a href="#">Animals, including humans (Digestion)</a>	
Year 5 and 6	<b>Core discipline:</b> Food and nutrition  <b>Key Concept:</b> Eating seasonally	<b>Core discipline:</b> Electrical systems  <b>Key Concept:</b> Complex switches and circuits	<b>Core discipline:</b> Textiles  <b>Key Concept:</b> Making clothes last longer	<b>Core discipline:</b> Mechanisms  <b>Key Concept:</b> Pulleys <b>CUSP link:</b> <a href="#">Forces</a>	<b>Core discipline:</b> Structures  <b>Key Concept:</b> Developing stability in structures	<b>Core discipline:</b> Food and nutrition  <b>Key Concept:</b> Celebrating culture <b>CUSP link:</b> <a href="#">World countries</a>	
	<b>Core discipline:</b> Food and nutrition  <b>Key Concept:</b> Eating ethically	<b>Core discipline:</b> Mechanisms  <b>Key Concept:</b> Gears	<b>Core discipline:</b> Food and nutrition  <b>Key Concept:</b> Eating on a budget	<b>Core discipline:</b> Structures  <b>Key Concept:</b> Designing structures revisited	<b>Core discipline:</b> Electrical systems  <b>Key Concept:</b> Complex switches and circuits <b>CUSP link:</b> <a href="#">Electricity</a>	<b>Core discipline:</b> Textiles  <b>Key Concept:</b> Sustainable materials	



# Content and Sequence – Year 1/2

# Intent

DESIGN TECHNOLOGY National Curriculum Expectations KS1	Year A 2022/23			Year B 2023/24		
	Autumn	Spring	Summer	Autumn	Spring	Summer
<b>Design</b> <ul style="list-style-type: none"> <li>Purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>Generate, develop, model and communicate their ideas through talking, drawing, templates, mockups and where appropriate, information and communication technology</li> </ul>						
<b>Make</b> <ul style="list-style-type: none"> <li>Select from and use a range of tools and equipment to perform practical tasks eg. cutting, shaping, joining and finishing</li> <li>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> </ul>						
<b>Evaluate</b> <ul style="list-style-type: none"> <li>Explore and evaluate a range of existing products</li> <li>Evaluate their own ideas and products against design criteria</li> </ul>						
<b>Technical knowledge</b> <ul style="list-style-type: none"> <li>Build structures, exploring how they can be made stronger, stiffer and more stable</li> </ul>						
<ul style="list-style-type: none"> <li>Explore and use mechanisms eg. levers, sliders, wheels and axles in their products</li> </ul>						
<b>Cooking and nutrition</b> <ul style="list-style-type: none"> <li>Use the basic principles of a healthy and varied diet to prepare dishes • Understand where food comes from</li> </ul>						



# Intent

## Content and Sequence – Year 3/4

DESIGN TECHNOLOGY National Curriculum Expectations KS2	Year A/C			Year B/D		
	Autumn	Spring	Summer	Autumn	Spring	Summer
<b>Design</b> <ul style="list-style-type: none"> <li>use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</li> <li>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> </ul>						
<b>Make</b> <ul style="list-style-type: none"> <li>select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li> </ul>						
<ul style="list-style-type: none"> <li>select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</li> </ul>						
<b>Evaluate</b> <ul style="list-style-type: none"> <li>investigate and analyse a range of existing products</li> <li>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>understand how key events and individuals in design and technology have helped shape the world</li> </ul>						
<b>Technical knowledge</b> <ul style="list-style-type: none"> <li>apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>apply their understanding of computing to program, monitor and control their products.</li> </ul>						
<b>Cooking and nutrition</b> <ul style="list-style-type: none"> <li>understand and apply the principles of a healthy and varied diet</li> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> </ul>						



# Intent

## Content and Sequence – Year 5/6

DESIGN TECHNOLOGY National Curriculum Expectations KS2	Year A/C			Year B/D		
	Autumn	Spring	Summer	Autumn	Spring	Summer
<b>Design</b> <ul style="list-style-type: none"> <li>use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</li> <li>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> </ul>						
<b>Make</b> <ul style="list-style-type: none"> <li>select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li> <li>select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</li> </ul>						
<b>Evaluate</b> <ul style="list-style-type: none"> <li>investigate and analyse a range of existing products</li> <li>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>understand how key events and individuals in design and technology have helped shape the world</li> </ul>						
<b>Technical knowledge</b> <ul style="list-style-type: none"> <li>apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>apply their understanding of computing to program, monitor and control their products.</li> </ul>						
<b>Cooking and nutrition</b> <ul style="list-style-type: none"> <li>understand and apply the principles of a healthy and varied diet</li> <li>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> </ul>						



**Implementation**

# **Design and Technology**

## **Implementation**



## Modular Approach – Knowledge

At Ivegill C of E Primary School, DT is taught across each mixed aged class in modules that enable pupils to study in depth key understanding, skills and vocabulary. Each module aims to activate and build upon prior learning, including EYFS, to ensure better cognition and retention.

Each module is revisited either later in the year or in the following year as part of a spaced retrieval practice method to ensure pupils retain key knowledge and information.



## Minimum Lesson Expectations

All DT lessons will incorporate the following elements:

- Explicit teaching of vocabulary
- Revisiting of prior learning
- Use of subject-specific technical vocabulary in learning
- Element(s) of 'Working as a Designer'
- Use of knowledge notes
- Time for Reflection/Evaluation at the end of the lesson
- Evidence of learning in pupil's books
- Specific questions used for assessment



## Vocabulary

### EYFS

At Ivegill C of E Primary School, we want our children to have an expansive vocabulary and through teacher modelling and planning, children are given opportunities to use and apply appropriate vocabulary. Subject-specific language is taught and built upon with vocabulary being a focus.



# Vocabulary modules in Years 1 - 6

Vocabulary instruction is at the heart of the curriculum and subject specific words are incorporated in each module.

## Y3 Mechanisms – Block C

An example of the specific vocabulary taught to Year 3 Children in their Mechanisms Module

Core Knowledge	Explanation
lever	The lever is one of the most basic forms of a machine. A lever is a rigid body that has a fulcrum along its length. The fulcrum is the point where the lever pivots.
linkage	A mechanical linkage is a series of connected levers and pivots.
mechanism	A mechanism is a system of parts working together in a machine.

Technical Vocabulary	Definition
force	pushes or pulls, measured in Newtons
load	the weight of an object or objects being moved
effort	the force applied to make something move



## Use of Knowledge Notes

Accompanying each module is a Knowledge Note which contains key vocabulary, information and concepts which all pupils are expected to understand and retain. They support vocabulary and concept acquisition through a well-structured sequence that is cumulative.

Knowledge Notes are dual coded to provide pupils with visual calls to aid understanding and recall.

The knowledge notes are given to children in their first lesson of a new DT module, these are then used and referred back to in each subsequent lesson.



# Implementation

## Example Knowledge Notes

Year 2: Food and Nutrition  
What does healthy mean?



### Core content:

Learn what healthy means.  
Learn that eating a variety of vegetables provides the body with the nutrients it needs.  
Make products that use a range of vegetables and minimally processed foods.

### Technical vocabulary:

**Free-range** – food that comes from animals who have access to the outdoors.



**Processed** – to treat raw food in order to change it or preserve it.



**Coagulate** – to become thick or partly solid.



**Vitamins** – a group of natural substances in food that are necessary for the growth and good health of the body.



**Protein** – a nutrient found in food such as meat, milk and eggs.



**Wholemeal** – made from whole grains of wheat, including the husk or outer layer.



### Techniques:



claw



ribboning



bridge

Year 4: Electrical Systems  
How useful are switches?



### Core content:

Learn how different types of switches work within electrical circuits.  
Learn how switches can be used to perform a function in a product.

### Technical vocabulary:

**Switch** – a device for making or breaking the connection in an electrical circuit.



**Circuit** – a complete path of wires and equipment along which an electric current flows.



**Component** – one of the parts of an electrical circuit such as a bulb or battery.



**Current** – the movement of water, air or electricity in a particular direction.



**Interruption** – an occasion when someone or something stops something from happening for a short period.



**Unbroken** – continuous with no pauses.



**Conductor** – a material that allows electrical energy to pass through it.



**Multi-purpose** – having many different uses.



### Connections:

Samuel Bagno (1906 – 1967)  
American inventor



Year 6: Textiles  
How can we reduce, recycle and repurpose?



### Core content:

Learn how to reduce waste by recycling and repurposing snack packets and plastic bags into useful items.

### Technical vocabulary:

**Recycle** – to collect and treat used objects and materials in order to use them again.



**Reduce** – to become or to make something smaller in terms of size, degree of importance or quantity.



**Repurpose** – to change something slightly in order to make it suitable for a different use.



**Chain** – a crochet stitch where connected loops of yarn or thread form a chain.



**Seal** – to fasten or close securely.



**Skein** – a loosely coiled length of yarn.



### Connections:

Isatou Ceesay  
(born 1972)  
Gambian activist and  
social entrepreneur





# Planning using CUSP materials

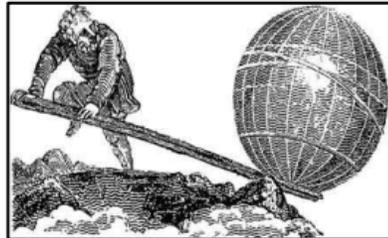
Lesson planning is completed with the use of the CUSP suggested lesson sequence, in conjunction with prior quizzing and content from the Knowledge Notes.

## Mechanisms – Block C

### How can you do a lot of work with little effort?

- This block is set in the context of the CUSP Science unit 'Forces and magnets'.
- The outline and structure of the block is as follows:

Lesson 1	Lesson 2	Lesson 3
Exploring levers and their applications	Exploring linkages and their applications	Making a linkages and levers product
Developing practical skills	Developing practical skills Developing design skills	Evaluating outcomes

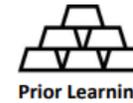


Archimedes (287BC – 212BC)

At the end of this block, pupils will ...	
Know:	Be able to:
Types of levers and linkages	Design and make simplistic lever and linkage products
Key terminology relating to levers and linkages	Evaluate the success of their outcomes and recommend improvements
How levers and linkages can change the direction of movement	

In this block, pupils will investigate various linkages and levers to design and make their own linkages and levers product. Pupils will select and use a variety of modelling materials to create their final outcomes.

- Pupils will be able to:
- identify simple mechanisms and their uses



Design or Technology History:
The Greek mathematician Archimedes lived for 75 years, between 287BC – 212BC. He is considered one of the greatest mathematicians of all time and carried out extensive studies into the power of levers. He was so confident in his ideas that he once famously said, "Give me a place to stand on, and I will move the Earth."
Links to Literature:
<i>Simple Machines: Forces in Action</i> by Buffy Silverman (teacher resource) <i>Levers</i> by Martha E.H Rustad <i>Making Machines with Levers</i> by Chris Oxlade <i>How Machines Work</i> by Allan Sanders
Materials:
Flat strips of wood or man-made board, paper or plastic cups, bottle tops, lollipop sticks, elastic bands, marbles or weights, corrugated card, masking tape, double-sided tape, split pins, scissors, card (cereal boxes), paper, felt tip pens, double-sided tape, adhesive putty



# DT Planning

## Example of Year 3/4 Mechanisms planning

Implementation

Revisiting prior learning 	Taught content 	Point of practice 	Point of reflection 
<p>1. Identify simple mechanisms and their uses</p>	<p>Learn how levers provide a mechanical advantage by creating a force that can move a load with minimal effort</p> <p>Identify the components of a lever: fulcrum, effort and load</p> <p>Identify the load, fulcrum and effort in three classes of lever</p> <p>Construct a class one and class three lever (see-saw and catapult)</p> <p>Evaluate outcomes and explore adaptations to increase the mechanical advantage</p>	<p>Introduce the key question for this unit: <b>How can you do a lot of work with little effort?</b> Also introduce the Knowledge Note.</p> <p>Show examples of levers and explain how these simple mechanisms provide a mechanical advantage. Show examples of different classes of lever, identifying the load, effort and fulcrum in each case. Ask pupils to identify the class of lever found in a range of everyday mechanisms.</p> <p>Demonstrate, using a class one lever (see-saw), how moving the fulcrum from the central point affects the amount of force required to move the load. In groups, pupils construct their own see-saw from cardboard. Teachers may choose to prepare templates or pre-cut sections for the construction of the fulcrum. Encourage pupils to explore the effects of moving the fulcrum to various positions along the lever, noting the force (number of marbles) required to move a given load each time.</p> <p>Demonstrate the construction of a catapult and explain its origins. Pupils construct their own catapults in pairs and evaluate the success of their construction. If time allows, challenge pupils to improve the mechanical advantage such as lengthening the lever or changing the size of the elastic band to create a larger force.</p> <p>Using photos, diagrams and annotations, pupils record what they have learned, their evaluations of their constructions and the results from their experiments.</p>	<p>Can identify the parts of a lever and explain how a lever works and how it provides a mechanical advantage</p> <p>Can identify different classes of lever and apply this knowledge to simple mechanisms</p> <p>Can construct simple mechanisms and explain the effects of making adaptations such as lengthening the lever or using a smaller elastic band</p>



## Tailoring for SEND

At Ivegill C of E Primary School we aim for all DT lessons and learning questions to be accessible to all pupils. Activities are differentiated where necessary to ensure they are accessible to all children and any barriers to learning are overcome. The class teacher or trained support staff work closely with the children to support, address misconceptions or fill gaps in knowledge.

The use of dual coded Knowledge Notes provide visuals to aid understanding and recall. In addition, knowledge notes are utilised in all lessons to minimise cognitive overload, so children can use and apply their knowledge more easily. Sentence stems can be used where necessary to aid with written evidence.



## **Oracy**

When discussing their findings or presenting information, pupils are encouraged to speak using full sentences and incorporating key subject-specific vocabulary. This is modelled by teachers e.g. using a my turn, your turn approach.

## **Writing**

Pupils are expected to write across all areas of the curriculum with teachers modelling how to write purposefully in each subject.



# Implementation

## **Continuous Professional Development**

All staff have undergone CPD in Cognitive Load Theory, Spaced Practice Retrieval Theory and planning the wider curriculum through the use of Knowledge Notes. This has supported the development of the wider curriculum.



**Impact**

# **Design and Technology**

## **Impact**



## How do we measure the impact of DT teaching?

Teachers make assessments of children in each lesson through;

- Regular marking of work.
- Analysing errors and picking up on misconceptions.
- Asking questions and listening to answers.
- Facilitating and listening to discussions.
- Making observations

These ongoing assessments inform future planning and teaching. This allows lessons to be readily adapted following these assessments.

Lead's also monitor the delivery of DT through book looks, learning walks and discussions with pupils.



# Impact

## Can you build with bread?



• Observe cement in its different stages of change.

• Add water and mix



• Allow to settle

• Add buttons

• Leave to dry



• Finally the cement has solidified.

We walked around our school to see what it was built from.



We saw that our school is built from bricks and cement.



We read the story and discussed the material choices of the little pigs.

We also considered the pigs as architects and found out what an architect was...

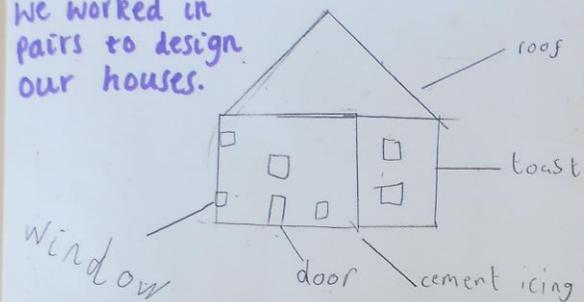


Frank Lloyd Wright was an architect who combined cement, concrete, steel and other materials to create his amazing buildings.

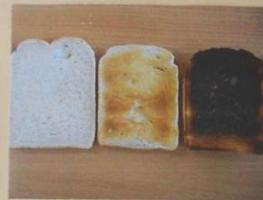


Fallingwater is a signature design of Frank Lloyd Wright. His idea was integrating architecture into nature.

We worked in pairs to design our houses.



We carefully toasted the bread.



The bread was soft, delicate, flexible and bendy. After it was toasted it was hard, crisp, rigid and rough. We made 'cement' using icing sugar, water, golden syrup and cream of tartar.

### THEN... WE STARTED BUILDING!



We had lots of fun!!





# Impact

## Some of the finished houses:



## Finally we evaluated our work.

Colour in the face that best describes how you feel about your completed house model.

excited	cheerful	annoyed	anxious	frustrated	proud	shocked

1. Explain to a partner the changes you made to your house and why.  
*No because it kept getting apart*
2. Was building with bread a success? Is bread a suitable building material? Explain your opinion to your partner.  
*Yes because it was steady in use.*
3. Can you suggest a better material to use for building a model house? What would you choose and why? *brick and stone because it will be stronger*

What went well?

*I think it went well because it didn't fall down in the ends.*

What didn't go well?

*I think it didn't go well because it kept falling down but it did stand up in the ends.*

How could you have made your house stronger?

*Put a base on the.*

Colour in the face that best describes how you feel about your completed house model.

excited	cheerful	annoyed	anxious	frustrated	proud	shocked

1. Explain to a partner the changes you made to your house and why.
2. Was building with bread a success? Is bread a suitable building material? Explain your opinion to your partner. *yes because it was steady in use.*
3. Can you suggest a better material to use for building a model house? What would you choose and why? *brick and stone because it will be stronger*

11.2.22  
I can evaluate my work



What went well?

*I think I worked well because it did not fall down.*

What didn't go well?

*I think that the cement did not go well because it was too heavy.*

How could you have made your house stronger?

*You could have made it with brick.*

An example of the Year 1/2 class scrapbook following the completion of their Materials Unit.



# Impact

Task 2:  
Colour in the face that best describes how you feel about your completed house model.

excited	cheerful	annoyed	anxious	frustrated	proud	shocked

1. Explain to a partner the changes you made to your house and why.  
*No because it kept falling apart.*
2. Was building with bread a success? Is bread a suitable building material?  
Explain your opinion to your partner.
3. Can you suggest a better material to use for building a model house?  
What would you choose and why? *Brick because it would be stronger*

What went well?  
*I think it went well because it didn't fall down in the end. ✓*

What didn't go well?  
*I think it didn't go well because it kept falling down but it did stand up in the end. ✓*

How could you have made your house stronger?  
*Put a base on it. ✓*

An example of a Year 2's project evaluation.