



# DT Year 1 Curriculum Overview

DT must be covered in Autumn 2, Spring 2, Summer 2 and is alternated with Art (in remaining half terms)

## The Big Picture

Within structures, children will be exposed to different well-known architects and will begin to understand that structures are researched, designed, made and evaluated. They will have the opportunity to research different free-standing structures from around the world, as well as architects who built the magnificent buildings. Before designing their product, they will look at the materials used within structures, what makes them tall, what makes them strong and stable. They will design their own structures for a purpose, for someone or something, based on what they have seen and discussed. Children will add notes and annotations to their drawings. They will have free choice of materials when creating their sculptures and will be able to use different fixing techniques. After the make process, the children will be given the opportunity to discuss their sculptures, what they liked and didn't like, and what they would change next time.

## What do we already know? What can we already do?

- How to make a free-standing structure from blocks/ boxes
- How to make a structure taller
- How to fasten structures together
- Naming different structures from around the world – big ben, London bridge, London eye, great wall of China

### Year 1 DT- Structures Free- Standing Structures Autumn 2

#### NC objectives – Key Stage 1

##### Pupils should be taught:

##### 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].

When designing and making, pupils should be taught to:

##### 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.

#### Specific unit objectives

##### Structures- Free standing structures

- To know what a structure is.
- To know the simple order of making a structure.
- To understand how and to make a free-standing structure stronger, stiffer and more stable.
- To know and use some simple finishing techniques to complete their structure.
- To know the names of and spot some simple 3D shapes seen within their structures.

##### Research (objectives to cover all year)

- To explore some existing products- Who is it for? What is the product used for? Where might you find the product?

##### Design (objectives to cover all year)

- To suggest ideas and explain what product they will be designing and making to others.
- To identify a target group for who they intend to design and make their product for.
- To model their ideas on paper and card creating simple designs.

##### Make (objectives to cover all year)

- To select from and use simple utensils, tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing.
- To use a range of tools to cut, join and combine materials safely and correctly e.g. scissors.
- To use techniques such as cutting, chopping and peeling to prepare fruits and vegetables.

##### Evaluate (objectives to cover all year)

- To talk about their design ideas and what they have made.
- To identify strengths and weaknesses in relation to its intended purpose.

#### Key vocabulary and understanding for concept connectors

Structures: structure, order, stronger, stiffer, more stable, finishing techniques, 3D shapes.

#### Sticky Knowledge

- A structure us a building constructed from several parts.
- The stability of a structure can be increase by making the base wider.

#### Key Questions

- Do they know what a structure is?
- Do they know the simple order of making a structure?
- Can they make structures stronger, stiffer and more stable?
- Can they use simple finishing techniques?
- Can they spot 3D shapes in their structures?
- Can they research, design, make and evaluate a product?

#### Key designers/ architects/ inventors:

Sir William Chambers



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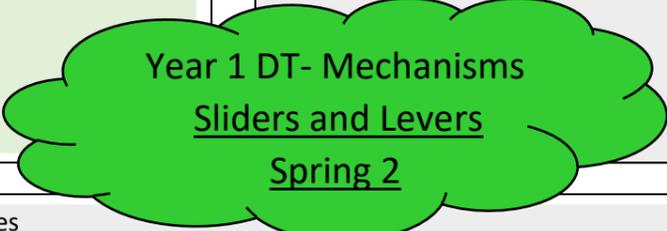
DT must be covered in Autumn 2, Spring 2, Summer 2 and is alternated with Art (in remaining half terms)

## The Big Picture

Within mechanisms, children will be exposed to different well-known designers and will begin to understand that mechanisms are researched, designed, made and evaluated. They will have the opportunity to research different mechanisms, sliders and levers in particular from around the world, which help things to move and slide. They will look at sliders and levers specifically and will have a go at making their own, before designing their product. Once they have explored making their own, they will design their own cards which include mechanisms (sliders and levers) for a purpose, for someone or something, based on the ones they have seen and discussed. Children will add notes and annotations to their drawings. They will have free choice of materials when creating their sliders and levers and will be able to use different fixing techniques. After the make process, the children will be given the opportunity to discuss their sculptures, what they liked and didn't like, and what they would change next time.

## What do we already know? What can we already do?

- Know how to manipulate paper in different ways by curling, bending and tearing
- Name basic construction tools e.g. glue, tape, scissors
- Able to use scissors to cut
- Able to use hole punches, split pins
- Experience of making simple flaps and hinges



## NC objectives – Key Stage 1

### Pupils should be taught:

#### 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].

When designing and making, pupils should be taught to:

#### 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.

## Specific unit objectives

### Mechanisms – Sliders and Levers

- To understand what a mechanism is – creates different types of movements.
- To understand what sliders and levers do and use these.
- To know and use different fixing techniques.

### Research (objectives to cover all year)

- To explore some existing products- Who is it for? What is the product used for? Where might you find the product?
- To look at famous inventors and designers.

### Design (objectives to cover all year)

- To suggest ideas and explain what product they will be designing and making to others.
- To identify a target group for who they intend to design and make their product for.
- To model their ideas on paper and card creating simple designs.

### Make (objectives to cover all year)

- To select from and use simple utensils, tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing.
- To use a range of tools to cut, join and combine materials safely and correctly e.g. scissors.
- To use techniques such as cutting, chopping and peeling to prepare fruits and vegetables.

### Evaluate (objectives to cover all year)

- To talk about their design ideas and what they have made.
- To identify strengths and weaknesses in relation to its intended purpose.

## Key vocabulary and understanding for concept connectors

Mechanisms: mechanism, lever, slider, slot, pivot, guide/bridge, masking tape, fastener, movement, fixing techniques

## Sticky Knowledge

- Mechanisms create different types of movements.
- Levers and sliders make things move.

## Key Questions

- Do they know what a structure is?
- Do they know what a slider and lever is and can they use them?
- Do they know and can they use different fixing techniques?
- Can they research, design, make and evaluate a product?

## Key designers/ architects/ inventors:

N/A



# DT Year 1 Curriculum Overview

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## The Big Picture

Within food, children will develop an understanding of where foods come from, whether they are farmed or reared, to address any misconceptions which may appear. They will begin to understand the need for a variety of foods in their diet, especially those healthier foods including lots of fruits and vegetables. Children will develop an understanding around the importance of hand washing before preparing foods and the link with germs and being hygienic.

They will follow the process of researching foods, designing a product (fruit salad) for a purpose, for someone or something, they will make it by chopping and cutting fruits safely and after, they will evaluate it.

They will have the opportunity to research a well-known chef and look at different recipes and foods. They will design their own fruit salad or a purpose, for someone or something. They will add notes and annotations. They will use a range of tools and methods to make their fruit salad, following hygiene and safety procedures. Once made they will evaluate their product.

## What do we already know? What can we already do?

- An understanding of the importance of handwashing before cooking to remove germs
- Able to use tools correctly and safely e.g. scissors, spoons
- Understanding of healthy and unhealthy foods
- Understanding of eating well contributing to good health



## NC objectives – Key Stage 1

### Pupils should be taught:

#### 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].

When designing and making, pupils should be taught to:

#### Design

☑ design purposeful, functional, appealing products for themselves and other users based on design criteria

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#### 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.

#### Cooking & Nutrition

use the basic principles of a healthy and varied diet to prepare dishes

☑ understand where food comes from.

## Specific unit objectives

### Food- Preparing Fruits and Vegetables

- To understand where food comes from e.g. farm, grown.
- To understand the need for a variety of foods in the diet.
- To understand the importance of hand washing and wearing an apron when preparing food.
- To know how to follow a recipe.

### Research (objectives to cover all year)

- To explore some existing products- Who is it for? What is the product used for? Where might you find the product?

### Design (objectives to cover all year)

- To suggest ideas and explain what product they will be designing and making to others.
- To identify a target group for who they intend to design and make their product for.
- To model their ideas on paper and card creating simple designs.

### Make (objectives to cover all year)

- To select from and use simple utensils, tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing.
- To use a range of tools to cut, join and combine materials safely and correctly e.g. scissors.
- To use techniques such as cutting, chopping and peeling to prepare fruits and vegetables.

### Evaluate (objectives to cover all year)

- To talk about their design ideas and what they have made.
- To identify strengths and weaknesses in relation to its intended purpose.

## Key vocabulary and understanding for concept connectors

Food: fruit, vegetables, healthy, unhealthy, taste, smell, texture, appearance, safety, hygiene, hand washing, apron, health, recipe

## Sticky Knowledge

- Healthy foods are good for your health.
- To many unhealthy foods are bad for your health.
- Washing your hands helps to remove germs.

## Key Questions

- Do they know where food comes from?
- Do they understand the need for a variety of foods in the diet?
- Do they know the importance of hand washing and wearing an apron when preparing food?
- Do they know how to follow a recipe?
- Can they research, design, make and evaluate a product?

## Famous chef:

Nadiya Hussain