

# Manor Primary School

## Design Technology Year 1:– Designing and Making a Moving Vehicle

### Overview of the Learning:

In this unit of learning children will investigate and learn about wheels and axles and how to use these when making wheeled vehicles for a specific purpose. They are encouraged to develop their design ideas based on investigating vehicles in the world around them. Work in this unit also offers opportunities to use construction kits, and computer generated graphics or text to enhance their finished products, to apply basic measuring skills and to draw on knowledge of forces from science.

### Core Aims

#### 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 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.

Pupils should be taught to knowledge, skills and understanding by exploring and developing ideas ... They will:

- Observe and explore and generate ideas, define problems and pose questions in order to develop investigations and products.
  - To identify the needs of the end user by exploring the existing market and asking questions about what bags are popular and why and where there are gaps in the market which could generate a profit.
  - Apply practical skills to design, make and improve products safely, taking account of users and purposes.
  - Children will become familiar with how to create their own design specification with the needs of the end user in mind.
  - Communicate and model in order to explain and develop ideas, share findings and conclusions.
  - To continually make systematic evaluations when designing and making, to bring about improvements in processes and outcomes
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Pupils should be taught about creating vehicles.

- To investigate and understand how parts are put together in order to make a moving vehicle.
- To understand that wheels and axels can be assembled in different ways.
- To understand how wheels work and how the wheel and axel are positioned.



### Expectations

Examine a range of moving vehicles and identify the purpose, suitability appearance and function and how they work.

To investigate and understand how wheels and axels are assembled and how they work.

To create a moving vehicle.

Identify the suitability of materials ensuring they are fit for purpose.

Create a design specification for their own vehicle.

To test and evaluate the vehicle thinking about purpose and suitability.

Suggest improvements during and after the design and making process.

Manor Primary School

Design Technology Year 1: Designing and Making Puppets – textiles

### Overview of the Learning:

In this unit children will make a textile product by marking out, cutting and joining pieces of fabric. Children look at a selection of hand puppets and base their design on their investigations into how the puppets have been made and who they have been designed for.



### Core Aims

#### 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

### Pupils should be taught to develop their design and making skills They will:

Observe and explore and generate ideas, define problems and pose questions in order to develop investigations and products.

Take ownership of the whole design process: investigating existing products, designing, creating a prototype, making improvements, creating an end product and evaluating.

To identify the needs of the end user by exploring existing products and asking questions about what people would like to see in a puppet.

Apply practical skills to design, make and improve products safely, taking account of users and purposes.

Children will become familiar with how to create a design specification with the needs of the end user in mind taking into consideration the products they have examined.

Communicate and model in order to explain and develop ideas, share findings and conclusions.

To continually make evaluations when designing and making, to bring about improvements in processes and outcomes

### Pupils should be taught about making pencil cases, wallets and purses.

- To identify the qualities of a range of materials thinking about the, suitability and aesthetic qualities
- To create a prototype of a puppet identifying how the pattern fits together and understand the importance of this in the design process.
- To use a range of techniques to line and join materials together in order to create a quality end product.
- To use decorative finishes.

### Expectations

Examine a range of existing puppets and identify how they work, what their purpose is and how they have been made.

To test and identify the suitability of materials ensuring they are fit for purpose.

To investigate ways of joining materials and strengthening their product.

Create a design specification for a puppet thinking about the end user.

To create a pattern and prototype using the design specification.



To decorate the product.

To present and evaluate their product with the views of the end user in mind.

## Manor Primary School Design Technology Year 1: Fantastic Fruit Snacks

### Overview of the Learning:

This unit is designed to help children learn more about fruit. They will learn about the wide variety of fruit available; how it is prepared; how to create a fruit based dish and the role of fruit in a balanced diet. They will have the opportunity to explore fruit using their senses and develop appropriate vocabulary. The knowledge gained will allow them to plan and make a creative and healthy dish which promotes 5 a day.

### Core Aims

#### Design

design purposeful, functional, appealing fruit product for themselves and other users based on design criteria

generate, develop, model and communicate their ideas through talking, drawing, templates.

#### Make

select from and use a range of tools and equipment to perform practical tasks such as cutting, peeling and chopping the fruit.

select from and use a wide range of materials ingredients, according to their characteristics

#### Evaluate

explore and evaluate a range of existing fruit snack product

evaluate their ideas and products against design criteria

### Pupils should be taught to develop their design and making skills They will:

Observe and explore and generate ideas, define problems and pose questions in order to develop investigations and products.

Take ownership of the whole design process: investigating existing products, designing, preparing and making a **RANGE** of fruit products, designing an end product, making improvements and evaluating

To identify the needs of the end user by exploring existing products and asking questions about what people would like to see in a fruit snack.

Apply practical skills to design, make and improve products safely, taking account of users and purposes.

Children will become familiar with how to create a design specification with the needs of the end user in mind taking into consideration the products they have examined.

Communicate and model in order to explain and develop ideas, share findings and conclusions.



To continually make evaluations when designing and making, to bring about improvements in processes and outcomes **Error! Reference source not found.**

**Pupils should be taught about fruit.**

To identify a range of fruit and discuss the characteristics and qualities.

To identify where different fruit products come from.

How to cut, chop, peel and prepare a range of fruit.

How to use fruit to design and prepare a healthy snack.

The benefits of eating 5 pieces of fruit/veg a day.

### Expectations

To taste test and examine a range of fruits thinking about the colour, texture, flavour, appearance, identify what a portion of fruit looks like and why we should eat 5 portions of fruit and vegetables a day.

Examine a range of existing fruit snacks and related products and identify how they have been made and their qualities. (taste, texture, appearance)

Create a design specification for a fruit snack thinking about the end user.

To be able to peel, chop and prepare a range of different fruits for their product.

To present and evaluate their product with the views of the end user in mind.

