


# DESIGN TECHNOLOGY LONG TERM PLAN CYCLE A

<b>YEARS 1 &amp; 2</b>		
<b>AUTUMN</b>	<p><b><u>Mechanisms</u></b>  <b>Sliders and levers</b>  <b>How can you make a picture move?</b>            Know common uses of sliders            Know the different methods to create card sliders            Know how sliders can create simple mechanisms            Be able to design and make a slider product            Be able to evaluate the success of their outcomes and recommend improvements</p>	
	<p><b><u>Structures</u></b>  <b>Freestanding structure</b>  <b>How can you stop a tower from toppling over?</b>            Know a freestanding structure that stands on its own foundation or base without attachment to anything else            Be able to build structures that are freestanding using a range of different materials</p>	
	<b>YEARS 3 &amp; 4</b>	
	<p><b><u>Textiles</u></b>  <b>Stiffening and strengthening fabric</b>  <b>How can you make a box out of cloth?</b>            Know fabric can be stiffened            Know stiffened fabric can hold form            Be able to select and apply solutions to stiffen fabric            Be able to make a box using stiffened fabric</p>	
	<p><b><u>Food and Nutrition</u></b>  <b>Individual diets</b>  <b>What do we mean by a balanced diet?</b>            Know what is meant by the term balanced            Know why fresh foods are better            Be able to make a fruit and yogurt dessert            Be able to make homemade chips            Be able to flavour foods to increase their sensory qualities</p>	
<b>YEARS 5 &amp; 6</b>		
<p><b><u>Food and Nutrition</u></b>  <b>Food choices</b>  <b>Why are our diets so different?</b>            Know some foods and key ingredients from other cultures            Know how other cultures food can be nutritious            Be able to prepare a range of vegetables            Be able to present foods to a high standard</p>	<p><b><u>Systems</u></b>  <b>Greener power</b></p> <div style="text-align: right; margin-top: 100px;">  </div>	

# CYCLE A

## YEARS 1 & 2

### Food and nutrition

#### **Exploring food senses**

#### **How does food affect your senses?**

Know why colourful food can be healthier  
Know how different foods can affect senses  
Be able to peel, chop and grate a selection of vegetables  
Be able to modify food to suit food senses

### Understanding materials

#### **Selecting materials**

#### **Can you build with bread?**

Know building materials have different properties which enable them to be used for different purposes  
Be able to identify, sort and select materials that can be used for construction  
Be able to combine materials

## YEARS 3 & 4

### Mechanisms

#### **Levers and linkages – mechanical advantage**

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

Know types of levers and linkages  
Know key terminology relating to levers and linkages  
Know how levers and linkages can change the direction of movement  
Be able to design and make simplistic lever and linkage products  
Be able to evaluate the success of outcomes and recommend improvements

### Food and Nutrition

#### **Food as medicine**

#### **How does food affect your body and mind?**

Know how to prepare and cook a range of vegetables  
Be able to peel and grate a range of vegetables  
Be able to add flavour and texture to foods

## YEARS 5 & 6

### Textiles

#### **Durability of fabric**

#### **Which fabric is ideal for creating a functional and hardwearing lunch bag?**

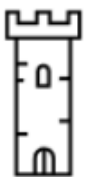
Know how to water proof cotton fabric  
Know which fabrics are both functional and hardwearing  
Be able to use beeswax to waterproof cotton fabric  
Be able to repurpose a pair of jeans

### Mechanisms

#### **Pulleys and gears – transferring rotational force**

#### **How can you lift a car onto a roof?**

Know common uses of pulleys and gears  
Know how pulleys and gears can change the direction of movement  
Be able to design and make products that use pulleys and gears to lift loads  
Be able to evaluate the success of outcomes and recommend improvements



SPRING

# CYCLE A

## YEARS 1 & 2

### Textiles

#### **Joining techniques**

#### **How can two squares of fabric keep you warm?**

Know fabric can be joined together using a running stitch  
Know the types and names of tools needed for sewing  
Be able to create a running stitch  
Be able to select tools for sewing  
Be able to thread a needle

### Food and Nutrition

#### **Vitamins in food**

#### **Why are vegetables the best?**

Know the importance of including a range of vegetables in a diet  
Be able to peel, grate, season and breadcrumb a range of vegetables

## YEARS 3 & 4

### Systems

#### **How are things powered**

#### **How are things powered?**

Know different types of energy  
Know why designers need to carefully consider energy sources  
Be able to identify how things are powered  
Be able to suggest appropriate energy sources for design problems

### Structures

#### **Spanning gaps**

#### **What makes a bridge strong?**

Know bridges are structures that allow people and vehicles to cross over an open space  
Know towers, piers and arches provide strength to a bridge  
Be able to design and build a beam bridge that can hold the weight of 100 pennies  
Be able to identify and name parts of a bridge

## YEARS 5 & 6

### Structures

#### **Develop structures that are fit for purpose**

#### **How are frames strengthened, reinforced and made right?**

Know engineers use a range of methods to strengthen and reinforce structures  
Be able to identify and describe ways that frames are strengthening and reinforced



### Food and Nutrition

#### **Cultural influences on diet**

#### **What can you learn from different cultures diets?**

Know how foods can be used as medicines  
Know how eating food from different countries can help us be healthy  
Be able to roll and shape ingredients  
Be able to slice and ribbon a range of vegetables  
Be able to stir-fry vegetables

**SUMMER**