

# Year 7 Spinning Top (Wood)

# Design Technology Curriculum Road Map



**ABC** **Links to literacy:** Writing and comprehending research into a condensed piece of writing  
Literacy- news and current inventors

2  
Topic Name: Spinning Top introduction  
Why study this project?  
To understand forces and motion

4  
Topic name: Marking Out and Manufacturing  
Why study this project?  
To understand the process of manufacturing using traditional woodworking methods

6  
Topic name: Introduction to CAD  
Why study this project?  
To gain knowledge of Computer Aided Design and why it's so important in design and technology

7  
Topic name: 2D Designed Ruler  
Why study this project?  
To practice CAD and CAM to create a product that can be used in your daily school life.

*"The Design and Technology rotation has been designed to encourage you to use your creativity and imagination to solve problems, both as individuals and as members of a team. Through studying Design and Technology in Key Stage 3, you will be using your mathematical and scientific knowledge to learn about new and exciting disciplines such as engineering, computing and art."*

1  
Topic name: Health & Safety  
Why study this project?  
To make sure we are being safe in the workshop, Students become aware of Do & Don'ts in the workshop.

3  
Topic name: Where does Paper and Timber come from  
Why study this project?  
To understand where our materials come

5  
Topic name: Design Ideas, Product Testing and Evaluation  
Why study this project?  
To research design ideas and create their own in the form of Biomimicry. To test and evaluate the success of their spinning Top

8  
Topic name: End of rotation Test  
Why study this project?  
To assess how you've done in the subject. To gain knowledge ready for next years new rotation

**123** **Links to Numeracy**  
In Design & Technology , we use Math to be able to hold a compass and make accurate marks in readiness for measuring. Students will have a better understanding of measurements and conversions.

# Year 8 Coat Hook (Metal)

## Design Technology Curriculum Road Map



Links to literacy: comprehending text **and** making comparisons

Topic Name: What is a Design Brief/ Specification?

Why study this project?  
To understand context and auctioning a piece of writing

2

Topic Name: Design Ideas

Why study this project?  
To research design ideas and create their own product from Metal, specifically Aluminium, which is Non Ferrous metal.

4

Topic Name: Evaluation

Why study this project?  
Work out strengths and weaknesses, self-assess own practical work

6

*"The Design and Technology rotation has been designed to encourage you to use your creativity and imagination to solve problems, both as individuals and as members of a team. Through studying Design and Technology in Key Stage 3, you will be using your mathematical and scientific knowledge to learn about new and exciting disciplines such as engineering, computing and art."*

1

Topic name: Health and Safety Recap

Why study this project?  
To make sure we are being safe in the workshop

3

Topic Name: Product Analysis

Why study this project?  
To understand key aspects of a product (ACCESS FM)

5

Topic Name: Manufacturing

Why study this project?  
To understand the process of manufacturing, as well as a number of new tools and properties of metal



Links to Numeracy

Comprehending scale from 2D-3D

# Year 9 Wind Chime (Plastic)

## Design Technology Curriculum Road Map



Links to literacy: comprehending text **and** making comparisons

Topic Name: What is a Design Brief/ Specification?

Why study this project?  
To understand context and actioning a piece of writing

2

Topic Name: Design Ideas

Why study this project?  
To research design ideas and create their own product from Plastic. We will be using a thermo Plastic called Acrylic, as we have the option to manipulate its shape.

4

Topic Name: Evaluation

Why study this project?  
Work out strengths and weaknesses, self-assess own practical work

6

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1

Topic Name: Health and Safety Recap

Why study this project?  
To make sure we are being safe in the workshop

3

Topic Name: Product Analysis

Why study this project?  
To understand how to do an In-depth analysis using (ACCESS FM)

5

Topic Name: Manufacturing

Why study this project?  
To understand the process of manufacturing, as well as a number of new tools and properties of metal



Links to Numeracy

Comprehending scale from 2D-3D

# Year 10 & 11 Design Technology Curriculum Road Map

## BTech



**Links to literacy:** Writing and comprehending research into a condensed piece of writing  
Literacy- Evaluation of art movements.

Topic Name: Project Planning

Why do we study this?  
To be able to set out the next two years of work. To form a team and brainstorm ideas

2

Topic Name: Focused Research

Why do we study this?  
Now that we have chosen our product that will be moving forward with, with do focused research to understand all aspects of it. From cost and material, to end users and aesthetics.

4

Topic Name: Design Ideas (Drawn/CAD)

Why do we study this?  
To show clients our ideas and brainstorm with our peers on improvements. To produce high end selected designs in CAD.

6

Topic Name: Manufacturing

Why study this project?  
To understand the process of manufacturing, as well as a number of new tools and properties of metal

7

*The Design and Technology BTech has been designed to **nurture** and encourage you to use your creativity and imagination to solve problems, both as individuals and as **leaders** or members of a team. Through our **aspirational** KS4 curriculum, you will be using your design, mathematical and scientific knowledge to learn about new and exciting disciplines such as engineering, computing and art. The practical elements of this course will build your **resilience** and prepare you to **excel** in the working world.*

1

Topic Name: Department Store Retrospective – Looking at Context & Design Brief .

Why Do we study this?  
To understand the task set to us by the exam board.

3

Topic Name: Primary & Secondary Research

Why do we study this?  
To understand what products will be successful and which won't To gain further knowledge into the chosen items

5

Topic Name: Product Analysis and Mood Board

Why do we study this ?  
To gain knowledge on existing products and to gather inspiration for future design ideas.

8

Topic Name: Evaluation

Why study this project?  
Work out strengths and weaknesses, self-assess own practical work



**Links to Numeracy**

2d design shows Scale in mm – with regards to dimensions. Working out Volume for Birdhouse occupancy. . Producing cutting lists and cost list of materials