



# Schemes of work

Year: Year 9

Subject: RMT

Mrs Rigler

# Rotation 1: Cam Toy

Be able to identify the symbols used for a plan of making flow chart.

Add labels to my design to identify some of the features.

Cut and join with accuracy ensuring a good quality finish to the product.

Explain their choice of tools and equipment in relation to the techniques they will be using.

Learn how to create a plan of making before creating my product

Be able to create a range of ideas and develop their drawing skills and creativeness.

Learn how to work from a cutting list and use Jigs to create their product

Learn how to join materials together using different techniques.

Progress	Designing and Modelling	Making
Oakwood Learning Stage 1 and 2	<p>With support I can come up with a range of design ideas and think of my own describing words to describe what I have done.</p> <p>I can with support write a basic plan of making for my product in the correct order with some materials and tools I will use.</p> <p>With support I can add labels to my design identifying the basic features of my Cam Toy.</p>	<p>I can with support name and describe the qualities of two materials I am using in my making. I can with support join together a range of materials to create my product.</p> <p>I can with support give a reason for the choice of some tools and equipment in relation to the techniques used.</p>
Oakwood Learning Stage 3 and 4	<p>With some support I can come up with a range of creative ideas and use my own describing words to explain my designs and the movements they create.</p> <p>With support I can identify the correct symbols for a planning flow chart. With some support I can put the right processes into the correct shapes for the main stages of manufacture and add some materials and tools I will use.</p> <p>With minimal support I can add labels to my design identifying the basic features of my Cam Toy.</p>	<p>I can with some support describe a range of materials and explain their good and bad qualities.</p> <p>I can with minimal support be able to join together a range of materials to create my product.</p> <p>I can with some support give a reason for the choice of some tools and equipment in relation to the techniques used.</p> <p>I can with support use a cutting list to help me create my product. I can identify what a Jig is and what it is used for. I am able to with support use a jig to help me with my work.</p>
Oakwood Learning Stage 5 and 6	<p>With some support I can come up with a range of creative ideas and use my own describing words to explain my designs and the movements they create.</p> <p>I can identify the correct symbols for a planning flow chart. With minimal support I can put the right processes into the correct shapes for the main stages of manufacture and add some materials and tools I will use.</p> <p>I can independently add labels to my designs identifying some of the features of my Cam Toy.</p>	<p>I can independently describe a range of materials and describe some of their good and bad qualities.</p> <p>I can with some support give reasons for the choices of tools and equipment in relation to the techniques used.</p> <p>I can Independently use a cutting list to help me create my product.</p> <p>I can identify what a Jig is and describe what it is used for. I am able to with minimal support use a jig to help me with my work.</p>



## Rotation 1: Cam Toy

I am starting to identify some temporary and permanent fixings

Develop their practical skills through testing and experimentation

Identify a range of CAMS and the movements they create.

Test the constraints of my product against my plan of making

Actively involve others in the testing of their products.

### Progress

### Technical Knowledge

### Evaluating

Oakwood Learning Stage 1 and 2

With support I can identify a permanent and temporary fixing and what it is used for.  
With support I am able to identify some basic CAMs and the movements they create.  
I can with support develop my practical skills by experimenting with a range of different materials, techniques and finishes to create my product.

With support I can use a picture of my final product to record my evaluations using drawings and labels to identify some strengths and weaknesses.  
With support I am able to test the constraints of my product against my Plan of making and talk about what points that have been met successfully.  
With support I am able to create a simple questionnaire to gain other pupils/peers views of my work which will help me to further develop my future products.

Oakwood Learning Stage 3 and 4

With minimal support I can identify/describe some types of permanent and temporary fixings and talk about where on a product they may be used.  
With some support I am able to identify a range of CAMs and the movements they create.  
I can with minimal support develop my practical skills by experimenting with, and testing the qualities of a range of different materials, techniques and finishes. To create my product.

With some support I can use a picture of my final product to record my evaluations using drawings and labels to identify main strengths and weaknesses.  
With some support I am able to test the constraints of my product against my plan of making and discuss some points that have been met successfully.  
With some support I am able to create a more detailed questionnaire to gain other pupils/peers views of my work which will help me to further develop my future products.

Oakwood Learning Stage 5 and 6

With minimal support I can identify/describe a range of permanent and temporary fixings and explain where on a product they may be used.  
With minimal support I am able to identify a wide range of CAMs and the movements they create.  
I can independantly develop my practical skills by experimenting with, and testing the qualities of a range of different materials, techniques and finishes to create my product.

With minimal support I can use a picture of my final product to record my evaluations using drawings and labels to identify main strengths and weaknesses and make suggestions for improvements.  
With minimal support I am able to test the constraints of my product against my plan of making and explain what points have been met successfully and why.  
With minimal support I am able to create a detailed questionnaire (with bar/pie charts) to gain other pupils/peers views of my work which will help me to further develop my future products.



## Rotation 2 Memphis Clock

Be able to analyse work from different designers

Be able to create a design for an intended purpose

Investigate the different properties of plastics and their uses

Learn how the 3D printer works and how to use it

Begin to use technology to help the aesthetics of their product

Identify and solve their own design problems

Create a model/mock/prototype up of their Design idea

Be able to use Tinker cad/Autocad to create their 3D product

Understand about different structural elements in order to achieve functional products

Begin to explain their choice of materials or components

### Progress

### Designing and Modelling

### Making

Oakwood Learning Stage 1 and 2

With support I can start to generate some design ideas considering the purposes for which I am designing (For example aerodynamics, links with Science)  
With support I am beginning to create labelled drawings from more than one view point.  
With support I can cut out and make a model of my design and use a suitable finish to decorate it with.

With support I am able to identify some different plastics, talk about their uses and investigate some of the different properties of them.  
With support I am beginning to use a computer drawing package (For example Tinkercad/Autocad) to create a model of my product.  
When planning my product I can with support describe identify a reason as to why I have chosen to us a particular material or component including reasons for function or aesthetics.

Oakwood Learning Stage 3 and 4

With support I can start to generate some design ideas considering the purposes for which I am designing (For example aerodynamics, links with Science)  
With support I am beginning to create labelled drawings from more than one view point.  
With some support I can mark out, cut and make a model of my design and decorate it using a suitable finish.

With some support I am able to identify a range of different plastics, describe what they can be used for and investigate some of the different properties of them.  
With some support I can use some simple tools within a computer drawing package. (For example Tinkercad/Autocad) to create a model of my product.  
When planning my product I can with minimal support describe some of the reasons why I have chosen to us a particular material or component including reasons for function and aesthetics.

Oakwood Learning Stage 5 and 6

I can independently generate some design ideas considering the purposes for which I am designing (For example aerodynamics, links with Science)  
With minimal support I can confidently create labelled drawings from different views showing specific features and materials to be used.  
With minimal support I can identify a range of different designers and describe some old and modern products they have created and explain some difference between them.  
With minimal support I can mark out, cut and make a model of my design and accurately decorate it with a suitable finish.

With minimal support I am able to identify a range of different plastics, explain what they can be used for and investigate and demonstrate some of the different properties of them.  
With minimal support I can use a range of tools within a computer drawing package. (For example Tinkercad/Autocad) to create a model of my product.  
When planning my product I can with minimal support explain some of the reasons why I have chosen to us a particular material or component including reasons for function and aesthetics.



Rotation 2 : Memphis Clock



Investigate different types of 3D printing techniques

Gain knowledge of some Smart materials and how they work.

Start to record some evaluations using pictures/drawings and labels

To start to understand how much products cost to make and their impact on the environment

Progress	Technical Knowledge	Evaluating
----------	---------------------	------------

Oakwood Learning Stage 1 and 2	<p>With support I am able to respond to stimuli about different 3D printing techniques, products and materials.                      With support I am able to respond to stimuli about different Smart materials and talk about some of their uses and how they can be used in everyday products.                      With support respond to stimuli about different designers and compare old and modern products they have created and identify differences between them.</p>	<p>With support I am starting to gain knowledge of how much some products might cost to make.                      With support I can respond to stimuli as to how sustainable their product is and the impact it may have on the environment.                      With support I am starting to record some evaluations using pictures/drawings and labels and compare it against my final product.</p>
--------------------------------	--	---

Oakwood Learning Stage 3 and 4	<p>With some support be able to identify some different 3D printing techniques, products and materials.                      With some support I am able to identify some different types of Smart materials and describe some of their uses and how they can be used in everyday products.                      With some support identify some different designers and look at/talk about some old and modern products they have created and describe the differences between them.</p>	<p>With some support I am starting to understand how much some products might cost to make.                      With support I can gain some knowledge of what sustainable means and the impact their product may have on the environment.                      With minimal support I am starting to record some evaluations using pictures/drawings and labels and compare it against my final product.</p>
--------------------------------	---	--

Oakwood Learning Stage 5 and 6	<p>With minimal support I can identify a range of different 3D printing techniques, products and materials.                      With minimal support I am able to identify a range of different Smart materials and explain about some of their uses and how they can be used in everyday products.                      With minimal support I can identify a range of different designers and describe some old and modern products they have created and explain some difference between them</p>	<p>With minimal support I am starting to understand how much some products might cost to make.                      With minimal support I can understand what sustainable means and the impact different products may have on the environment.                      I can independently record some of my evaluations using pictures/drawings and labels and compare these against my final product.</p>
--------------------------------	---	---