

# Plan of Work Technology Studies (Design and Technology)

Grade 7

For examination from 2025

Head of Department: Mr Sheoraj

Prepared by: Mr Bhondoo

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## Introduction

### Prescribed textbooks:

- Technology Studies Grade 7 by MIE

### Reference book:

- Reference book – Technology studies grade 7
- Videos
- Pictures
- Magazines

*Students are **STRONGLY** advised to look for this reference book and to make judicious use of it.*

### Websites and videos

This plan of work includes website links providing direct access to internet resources. Modern College is not responsible for the accuracy or content of information contained in these sites. The inclusion of a link to an external website should not be understood to be an endorsement of that website or the site's owners (or their products/services).

The website pages referenced in this plan of work were selected when the plan of work was produced. Other aspects of the sites were not checked and only the particular resources are recommended.

**IMPORTANT NOTE:** The objectives set in this plan of work is achievable if we have normal school days.

## FIRST TERM [10/01/2025 – 11/04/2025]

### Topic 1: Design Fundamentals in Design and Technology

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<b><i>Students should be able to:</i></b> a) Describe what is Design? b) Describe what is Technology? c) Explain the importance of Design and Technology.	Page 1 case study	Page 2 Activity 1 Page 4 Activity 2	Worksheets will be provided.	<ul style="list-style-type: none"><li>The Design Fundamentals <a href="https://www.youtube.com/watch?time_continue=144&amp;v=YqQx75OPRa0">https://www.youtube.com/watch?time_continue=144&amp;v=YqQx75OPRa0</a></li></ul>
d) List the practical applications of Design and Technology.	Page 7, 8, 9 & 10 case study	Page 12 Exercise 1-3	Worksheets will be provided.	
e) List the factors affecting Design.	Page 10-11 case study	Page 12 Exercise 4-6	Worksheets will be provided.	

## Topic 2: Pictorial Projection – Oblique projection

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<b><i>Students should be able to:</i></b> a) Introduction on the different types of pictorial projections.	Page 15 Example	-	Worksheets will be provided.	<ul style="list-style-type: none"> <li>How to draw in oblique projection  <a href="https://www.youtube.com/watch?v=OIUqDs7LmEg">https://www.youtube.com/watch?v=OIUqDs7LmEg</a> </li> </ul>
b) Materials and equipment used for drawing.	Page 16 Example	-	Worksheets will be provided.	
c) Identify oblique projection.	Page 16 Examples	-	Worksheets will be provided.	
d) Drawing of cuboid in oblique projection.	Page 21 Activity 1 Ex 1	Page 21 Activity 1 Ex 2-6	Worksheets will be provided.	
e) Drawing of shaped blocks in oblique projection.	Page 25 Activity 2 Ex 1	Page 31 Activity 2 Ex 2-6	Worksheets will be provided.	

## Topic 6: The Design Process

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<b><i>Students should be able to:</i></b> a) Describe the main stages of the Design Process.	Page 81 case study	Page 92 Exercise 1	Coursework	<ul style="list-style-type: none"> <li>The design process.  <a href="http://www.technologystudent.com/designpro/despro1.htm">http://www.technologystudent.com/designpro/despro1.htm</a> </li> </ul>
b) Identify and describe a problematic situation.	Page 82 Example	Coursework	Coursework	
c) Write a concise design brief.	Page 82 Example	Coursework	Coursework	
d) Conduct a thorough brainstorming.	Teacher's Example	Coursework	Coursework	
e) Analyse Existing products and write a list of specifications.	Page 85 Example	Coursework	Coursework	

## 1<sup>st</sup> Term Assessment

Component	Time Allocation	Type	Maximum Mark
Design and Technology	1 hour	Lower order to higher order questions	50

The paper will consist of about 8-10 short answer questions. Additional equipment needed for this paper will be square grid or isometric paper. Omission of essential working will result in loss of marks.

Candidates should answer **all** questions.

Candidates are expected to cover the PROPOSED syllabus. The paper may contain questions on any part of the syllabus and questions will not necessarily be restricted to a single topic.

## SECOND TERM [28/04/2025– 18/07/2025]

### Topic: 3 Safety in the DT Workshop

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<b><i>Students should be able to:</i></b> a) Identify the different safety sign and symbols. b) Differentiate between prohibition, mandatory and warning signs.	Page 37 - 38	Page 37 – to copy sign. Page 38 – to copy signs. Questions – provided by teacher.	Page 40 activity 1	<ul style="list-style-type: none"> <li>Safety precautions in a DT workshop.  <a href="https://www.youtube.com/watch?v=g64NJ9k1-Lo">https://www.youtube.com/watch?v=g64NJ9k1-Lo</a></li> <li><a href="http://www.notesandsketches.co.uk/Safety_in_design_and_technology.html">http://www.notesandsketches.co.uk/Safety in design and technology.html</a></li> </ul>
c) Use appropriate safety equipment when required.	Page 39 - 40	Page 43 Exercise 1	Page 44 activity 2	
d) Describe the characteristics of a safe way to work.	Page 42	page 45 Exercise 6	Worksheets will be provided.	
e) List the safety rules and regulations while working with paper.	Page 41 - 42	Page 48 number 4-5	Worksheets will be provided.	



## Topic 2: Pictorial Projection – Isometric projection

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<b>Students should be able to:</b> a) Introduction on the isometric projections.	Page 26 Example	-	Worksheets will be provided.	<ul style="list-style-type: none"> <li>How to draw in isometric projection.  <a href="https://www.youtube.com/watch?v=Rh_BmNdA6go">https://www.youtube.com/watch?v=Rh_BmNdA6go</a> </li> </ul>
b) Materials and equipment used for drawing.	Page 16 Example	-	Worksheets will be provided.	
c) Identify isometric projection.	Page 26 - 27 Examples	-	Worksheets will be provided.	
d) Drawing of cuboid in oblique projection.	Page 28 Worked example	Page 31 Activity 3 Ex 1-6.	Worksheets will be provided.	
e) Drawing of shaped blocks in isometric projection.	Page 34 Worked example	Page 35 Activity 4 Ex 1-6.	Worksheets will be provided.	

## Topic: 6 The Design Process

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<b>Students should be able to:</b> f) Draw and annotate 2 ideas, select 1 idea and draw a final solution.	Page 86	Coursework	Coursework	<ul style="list-style-type: none"> <li>The design process.  <a href="http://www.technologystudent.com/designpro/despro1.htm">http://www.technologystudent.com/designpro/despro1.htm</a> </li> </ul>
g) Design an action plan table.	-	Coursework		
h) Use basic tools and Techniques for marking out, cut, join, and finish paper and cards in the realisation of artefacts.	Page 87-90	Coursework		

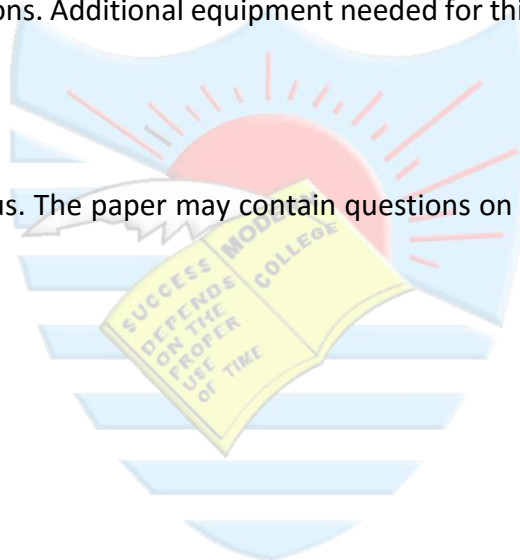
## 2<sup>nd</sup> Term Assessment

Component	Time Allocation	Type	Maximum Mark
Design and Technology	1 hour	Lower order to higher order questions	50

The paper will consist of about 8-10 short answer questions. Additional equipment needed for this paper will be square grid or isometric paper. Omission of essential working will result in loss of marks.

Candidates should answer **all** questions.

Candidates are expected to cover the PROPOSED syllabus. The paper may contain questions on any part of the syllabus and questions will not necessarily be restricted to a single topic.



## THIRD TERM [11/08/2025 – 31/10/2025]

### Topic: 6 The Design Process

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<b><i>Students should be able to:</i></b> a) Conduct appropriate tests of their product.	Page 91	Coursework	Coursework	<ul style="list-style-type: none"> <li>The design process.  <a href="http://www.technologystudent.com/designpro/despro1.htm">http://www.technologystudent.com/designpro/despro1.htm</a> </li> </ul>
b) Evaluate their product against their specifications and conduct a personal evaluation.	-	Coursework		

## Topic: 4 Material Technology

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<b><i>Students should be able to:</i></b> a) List the different types of materials available. b) Describe the properties and uses of paper and cards.	Page 49-53	Page 60-62	Worksheets will be provided.	<ul style="list-style-type: none"> <li>Different types of paper.  <a href="https://www.youtube.com/watch?v=h2n7MrCoI44">https://www.youtube.com/watch?v=h2n7MrCoI44</a> </li> </ul>
c) Identify smart materials in Design.	Page 54	Page 60-62	Worksheets will be provided.	

## Topic: 5 Geometrical Construction

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<b>Students should be able to:</b>				
a) Identify different equipment use in geometrical construction.	Page 63-64	Worksheet provided by the teacher.	Worksheet provided by the teacher.	<ul style="list-style-type: none"> <li>How to construct angles using a compass.  <a href="https://www.youtube.com/watch?v=5l8bltVeIE">https://www.youtube.com/watch?v=5l8bltVeIE</a> </li> </ul>
b) Use protractor to measure and draw angles.	Page 66-67	Worksheet provided by the teacher.		
c) Use compasses to construct angles.	Page 68-69	Worksheet provided by the teacher.		
d) Use compasses to bisect angles.	Page 70-71	Worksheet provided by the teacher.		<ul style="list-style-type: none"> <li>How to draw a regular octagon  <a href="https://www.youtube.com/watch?v=X7Z7y9gOQFk">https://www.youtube.com/watch?v=X7Z7y9gOQFk</a> </li> </ul>
e) Bisection of lines using compasses.	Page 72	Page 73 Activity 3		
f) Identify regular polygons.	Page 73-74	Page 78 Exercise 3(b), 79 Exercise 4(b).		
g) Construct equilateral and isosceles triangles.	Page 75-76	Page 80 Exercise 6(b)		

## 3<sup>rd</sup> Term Assessment

Component	Time Allocation	Type	Maximum Mark
Design and Technology	1 hour	Lower order to higher order questions	50
Portfolio		Coursework	25%

The paper will consist of about 8-10 short answer questions. Additional equipment needed for this paper will be square grid or isometric paper. Omission of essential working will result in loss of marks.

Candidates should answer **all** questions.

25% marks will be allocated for the Portfolio which will be added with the marks given for the exams.

Candidates are expected to cover the PROPOSED syllabus. The paper may contain questions on any part of the syllabus and questions will not necessarily be restricted to a single topic.