

# Plan of Work Technology Studies (Design and Technology)

Grade 7

For examination from 2024

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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 [11/01/2024 – 05/04/2024]

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

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<p><b>Students should be able to:</b></p> <p>a) Describe what is Design?</p> <p>b) Describe what is Technology?</p> <p>c) Explain the importance of Design and Technology.</p>	page 1 case study	page 2 activity 1, page 4 activity 2, page 13 number 1, 2	Worksheets provided by teacher.	<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.		Questions provided by teacher, page 13 number 3	page 10 activity 3	
e) List the factors affecting Design.	Worked questions by teacher.	Page 11 activity 4, page 13 number 4	Page 14 number 5	
f) Differentiate between good and bad design.	Page 12 activity 5	Worksheets provided by teacher.	Page 14 number 6,7	

## Topic: 2 Pictorial Projection

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<b>Students should be able to:</b>	[Textbook]: page 18 example.			<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> <li>How to draw in isometric projection. <a href="https://www.youtube.com/watch?v=RhBmNdA6go">https://www.youtube.com/watch?v=RhBmNdA6go</a></li> </ul>
a) Introduction on the different types of pictorial projections.				
b) Identify oblique and isometric projections.	Page 17 examples.			
c) Drawing of cuboid and shaped blocks in oblique projections.	Page 21 activity 1 number 1, 3, 5. Page 25 activity 2 number 1,2,5	Page 21 activity 1 number 2, 4, 6. Page 25 activity 2 number 3,4,6	Page 21 activity 1 – add colours. Page 25- Further activity 2.	
d) Drawing of cuboid on shaped blocks in isometric projections.	Page 31 activity 3 number 1, 4, 6. Page 35 activity 4 number 1,4,5	Page 31 activity 3 number 2, 3, 5. Page 35 activity 4 number 2,3,6	Page 31 activity 3 add colours. Page 35 – further activity 4.	
e) Rendering of cuboid and shaped blocks using appropriate techniques using coloured pencils.		Page 38 activity 5		

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

Component	Time Allocation	Type	Maximum Mark
Design and Technology	1 hour	Short answer 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 [22/04/2024– 19/07/2024]

### Topic: 3 Safety in the DT Workshop

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<p><b>Students should be able to:</b></p> <p>a) Identify the different safety sign and symbols.</p> <p>b) Differentiate between prohibition, mandatory and warning signs.</p>	<p>Worksheets provided by teacher.</p>	<p>Page 39 – to copy sign.</p> <p>Page 40 – to copy signs.</p> <p>Questions provided by teacher.</p>	<p>Page 40 activity 1</p>	<p>Safety precautions in a DT workshop.</p> <p><a href="https://www.youtube.com/watch?v=g64NJ9k1-Lo">https://www.youtube.com/watch?v=g64NJ9k1-Lo</a></p>
<p>c) Use appropriate safety equipment when required.</p>		<p>Page 46 number 1</p>	<p>Page 44 activity 2</p>	<p><a href="http://www.notesandsketches.co.uk/Safety%20in%20design%20and%20technology.html">http://www.notesandsketches.co.uk/Safety in design a nd technology.html</a></p>
<p>d) Describe the characteristics of a safe working environment.</p>	<p>Questions provided by teacher</p>	<p>page 46 number 2-3</p>		
<p>e) List the safety rules and regulations while working in a DT Workshop.</p>		<p>Page 48 number 4-5</p>	<p>Page 48 number 6</p>	

## Topic: 6 The Design Process

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<p><b>Students should be able to:</b></p> <p>a) Describe the main stages of the Design Process.</p>	<p>Page 90 - Design situation</p> <p>Page 91 – Design brief</p>	<p>Page 100 number 1</p>	<p>Page 100 number 2</p>	<p>The design process.  <a href="http://www.technologystudent.com/designpro/despro1.htm">http://www.technologystudent.com/designpro/despro1.htm</a></p>
<p>b) Apply the Design process to solve problematic situation using card and paper.</p>	<p>Page 92 - analysis of existing products</p> <p>Page 93 – specification</p> <p>Page 94 – Generation of ideas</p>	<p>To do new design brief.</p> <p>Page 92 activity 2</p> <p>Page 93 activity 3</p> <p>Page 94 activity 4,5</p>		
<p>c) Use basic tools and techniques in the realisation of a proposed solution.</p>		<p>Page 96 – Realisation.</p> <p>Page 99 – Testing and evaluation.</p>		

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

Component	Time Allocation	Type	Maximum Mark
Design and Technology	1 hour	Short answer 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.

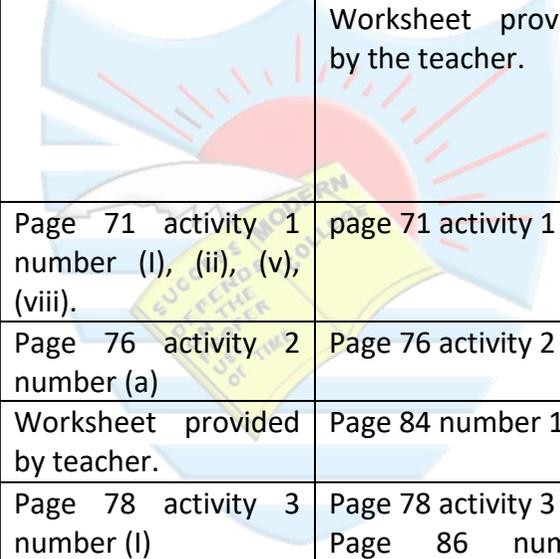
Candidates are expected to cover the PROPOSED syllabus. The paper may contain questions on any part of the syllabus and questions will not necessarily be restricted to a single topic.

## THIRD TERM [12/08/2024 – 30/10/2024]

### Topic: 4 Material Technology

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<p><b>Students should be able to:</b></p> <p>a) List the different types of materials available.</p> <p>b) Describe the properties and uses of paper and cards.</p>	<p>page 51 Activity 1 Page</p>	<p>Page 53 activity 2 Page 55 activity 3 Page 64 number 1</p>	<p>Page 51 activity 1</p>	<p>Different types of paper. <a href="https://www.youtube.com/watch?v=h2n7MrCol44">https://www.youtube.com/watch?v=h2n7MrCol44</a></p>
<p>c) Identify smart materials in Design.</p>	<p>Questions given to students.</p>	<p>Page 64 number 2 Page 65 number 3</p>	<p>Page 58 activity 4</p>	
<p>d) Use basic tools and Techniques for marking out, cut, join, and finish paper and cards in the realisation of artefacts.</p>	<p>Page 63 activity 6</p>	<p>Page 62 activity 5 Page 66 number 4</p>	<p>Page 66 number 5</p>	

## Topic: 5 Geometrical Construction

Learning Objectives	Worked Examples	Classwork & Homework	Extra Work	Resources
<p><b>Students should be able to:</b></p> <p>a) Identify different equipment use in geometrical construction.</p>		Worksheet provided by the teacher.		<p>How to construct angles using a compass.</p> <p><a href="https://www.youtube.com/watch?v=5l8bltVeIE">https://www.youtube.com/watch?v=5l8bltVeIE</a></p>
b) Use protractor to measure and draw angles.		Page 71 activity 1 number (i), (ii), (v), (viii).		
c) Use compasses to construct angles.	Page 76 activity 2 number (a)	Page 76 activity 2	Page 87 number 6 (b)	<p>How to draw a regular octagon</p> <p><a href="https://www.youtube.com/watch?v=X7Z7y9gOQFk">https://www.youtube.com/watch?v=X7Z7y9gOQFk</a></p>
d) Use compasses to bisect angles and lines.	Worksheet provided by teacher.	Page 84 number 1,2		
e) Construct perpendicular lines using compasses.	Page 78 activity 3 number (i)	Page 78 activity 3 Page 86 number 4,5,6(a)		
f) Drawing of regular polygons.	Worksheet provided by teacher.	Page 85 number 3		

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

Component	Time Allocation	Type	Maximum Mark
Design and Technology	1 hour	Short answer questions	50 (35%)
Portfolio			(15%)

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.

15% 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.