



***EXCELSIOR HIGH SCHOOL***

***INDUSTRIAL TECHNIQUES***

***CURRICULUM GUIDE***

***GRADE: 9***

***INDUSTRIAL ARTS DEPARTMENT***

Revised July 2012  
By D. Burrell  
D. Hall

***INDUSTRIAL TECHNIQUES******GRADE: 9*****FIRST TERM - CHRISTMAS TERM****GENERAL OBJECTIVE 1: Understand the structure and classification of resources**

<b>Teaching Sessions (40 mins / session)</b>	<b>Topics/Content Outline</b>	<b>Expected Outcomes &amp; Skills</b>	<b>Suggested Activities</b>	<b>Evaluation</b>
<b>Weeks 1 - 3</b> 6 Sessions  <b>Weeks 4 - 5</b> 4 Sessions	<b>1.1 CHARACTERISTICS OF COMMON PHYSICAL RESOURCES</b>  (a) Metals i. Malleability ii. Ductility iii. Hardness iv. Toughness v. Brittleness  (b) Wood  cell structure	Understand the characteristics of common physical resources.  Differentiate between different characteristics of physical resources.	Collection of samples of materials and classifying them on the basis of selected characteristics.  Match definition with characteristics	Grading of samples collected and classified.  Grading of students' work.
<b>Week 6</b>	<b>Revision</b>			
<b>Week 7</b>				<b>First Monthly Test</b>

**GENERAL OBJECTIVE 1 (CONT'D): Understand the structure and classification of resources**

<b>Teaching Sessions (40 mins / session)</b>	<b>Topics/Content Outline</b>	<b>Expected Outcomes &amp; Skills</b>	<b>Suggested Activities</b>	<b>Evaluation</b>
<b>Weeks 8-9</b> 4 Sessions	Plastic i. malleability ii. ductility			
<b>Weeks 10 - 12</b> 6 Sessions	<b>1.2 CLASSIFICATION OF TOOLS AND EQUIPMENT</b>  i machine tools ii power tools iii portable tools iv other equipment	Classify tools and equipment.  Appreciate safety rules for tools and equipment	Compilation of a scrapbook illustrating various classes of tools and equipment.  Compilation of list of various safety rules.	Grading of scrapbook
<b>Week 13</b> s	<b>Revision</b>			
<b>Week 14</b>				<b>Second Monthly Test</b>

**SECOND TERM - EASTER****GENERAL OBJECTIVE 2:- Principles and practices of design and construction**

<b>Teaching Sessions (40 mins / session)</b>	<b>Topics/Content Outline</b>	<b>Expected Outcomes &amp; Skills</b>	<b>Suggested Activities</b>	<b>Evaluation</b>
<b>Weeks 1-5</b> 10 Sessions	<b>2.1 TECHNICAL DRAWING CONSTRUCTION OF POLYGONS</b> i. triangles ii. rectangles iii. squares iv. hexagons	Construct polygons	Construction of polygons in notebook.	Grading of students' work
<b>Week 6</b>	<b>Revision</b>			
<b>Weeks 7-8</b>				<b>Mid YEAR Exams</b>
<b>Week 9</b> 4 Sessions	<b>2.2-SKETCHING</b> i. Two-dimensional ii. Three-dimensional	Sketch objects	Sketching of objects in two and three dimensional projection.	Grading of sketches.
<b>Week 10-12</b> 6 Sessions	<b>2.3 BASIC ISOMETRIC DRAWING</b>  (a) Plain (b) Block pattern	Draw objects in Isometric projections.	Production of isometric drawing	Grading of drawing

**THIRD TERM - SUMMER TERM****GENERAL OBJECTIVE 2 (CONT'D):- Principles and practices of design and construction**

<b>Teaching Sessions (40 mins / session)</b>	<b>Topics/Content Outline</b>	<b>Expected Outcomes &amp; Skills</b>	<b>Suggested Activities</b>	<b>Evaluation</b>
<b>Weeks 1-2</b> 4 Sessions	<b>2.3 BASIC ISOMETRIC DRAWING (cont'd)</b>  (a) Plain (b) Block pattern	Draw objects in Isometric projections.	Production of isometric drawing	Grading of drawing
<b>Weeks 3-4</b> 4 Sessions	<b>2.4 DESIGNING AND CONSTRUCTING ARTICLES</b>  a) Preparation of working drawing.	Prepare working drawing. .	Preparation of working drawing for given project.	Grading of working drawing.
<b>Week 5</b>				<b>3<sup>rd</sup> Monthly Test</b>
<b>Week 6-10</b>  10 Sessions	<b>b) Construction Process:</b> Layout Cutting Drilling Joining finishing	Construct given article	Construction of selected article.	Grading of article
<b>Week 11</b>	<b>Revision</b>			
<b>Weeks 12-13</b>				<b>End of YEAR Exam</b>