# Port Moresby International School

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Unit & Assessment Outline for Students & Parents Grades 7 – 10.

| Year | **2026** | Grade | 10 | Semester | 2 |
|---|---|---|---|---|---|
| Course Title | DESIGN and TECHNOLOGY | | | | |
| Curriculum Taught | IGCSE Design Technology/PNG Technology& Industrial Arts Junior 9&10 | | | | |
| Topics | Structures: Building construction/ Revision past papers | | | | |

Assessment

| Week | Topic(s) | Type of Task | Weighting |
|---|---|---|---|
| 1 | Building Regulation/Planning | Building Assignment | 20% |
| 5 | Plans/ wall frames/roof types | 2025 PNG TIA Exam | 40% |
| 6 | Door types and windows | Final CDT Test | 40% |

Learning outcomes against which the students will be reported

1. Knowledge and understanding
   - Demonstrate the ability to apply relevant knowledge to designing and making
2. Problem solving
   - Investigate, research, collect and record relevant data and information.
3. Communication
   - Propose and communicate ideas graphically using a range of media
4. Realisation
   - Select from a range, the appropriate resources for the realisation of the product.

Course Aims/Goals

To enable students to:

- develop creative thinking in areas relevant to design and technology
- apply problem solving skills to practical and technological problems
- develop the communication skills central to design and making and evaluation
- apply knowledge and understanding to the design and making of products, taking into consideration sustainability and the wider impact on society.
- encourage candidates to apply learning to areas of personal interest.
- develop a range of transferable skills and the attributes of the Cambridge learner
- develop the ability to make aesthetic, economic, moral and technical value judgements

Content Outline

| Weeks | Content Outline | Curriculum Links |
|---|---|---|
| 1-2 | Introduction to building construction structures<br>Factors to consider before building.<br>Building codes and regulation requirements<br>Revision 2014 Practical Skills paper | IGCSE Syllabus<br>PNG Tech & Industrial Arts<br>Junior 9-10 |
| 3-4 | Building methods and construction terminology<br>Purpose and types of building-accommodation<br>Building elements and components<br>Final CDT Test-Revision 2025 | IGCSE Syllabus<br>PNG Tech & Industrial Arts<br>Junior 9-10 |
| 5-6 | The foundation- site/ methods to set up the profile<br>• Footings, Floor, Wall and Roof components<br>Revision 2020 & 2022 Practical Skills Paper/IGCSE Revision | IGCSE Syllabus<br>PNG Tech & Industrial Arts<br>Junior 9-10 |
| 7-8 | • Demonstrate a range of skills and technique's used in construction<br>• Evaluate the appropriateness of the finished practical project.<br>Revision 2019 & 2021 Practical Skills Paper | IGCSE Syllabus<br>PNG Tech & Industrial Arts<br>Junior 9-10 |
| 9-10 | Types of doors and stairs<br>Types of windows-louvres, fixed light, swing etc.<br>Revision 2013 & 2014 (2023 & 2024) Practical Skills Paper/ IGCSE Papers | IGCSE Syllabus<br>PNG Tech & Industrial Arts<br>Junior 9-10 |
| 11-12 | Revision Past Exam Paper<br>2016 Practical Skills Paper/IGCSE Revision Papers<br>External Examinations commence. IGCSE<br>2021 Practical Skills Exam | IGCSE Syllabus<br>PNG Tech & Industrial Arts<br>Junior 9-10 |
| 13-14 | Introduction to Welding- Safety First<br>Personal Protective Equipment's.<br>What is welding?<br>What isn't welding? | IGCSE Syllabus<br>PNG Tech & Industrial Arts<br>Junior 9-10 |
| 15-16 | Metal Fabrication- Welding stool project<br>Types of welders.<br>Arc welding equipment.<br>Metal stool project. | IGCSE Syllabus<br>PNG Tech & Industrial Arts<br>Junior 9-10 |
| 17-18 | Metal Fabrication-Welding stool project<br>Steel- metal properties<br>Mild steel properties-strength, conductivity, expansion etc.<br>Metal Stool project | IGCSE Syllabus<br>PNG Tech & Industrial Arts<br>Junior 9-10 |
| 19-20 | Metal Fabrication- Complete Welding stool project.<br>Finish Application. Surface preparation, metal primer and Final finish application. | IGCSE Syllabus<br>PNG Tech & Industrial Arts<br>Junior 9-10 |