PENANG SANGAM HIGH SCHOOL

P.O.BOX 44, RAKIRAKI

WEEK 18 WORKSHEET

Subject: Technical Drawing **Year/Level:** 12

Strand	**TD 12.3 APPLIED DRAWING**
Sub Strand	**TD 12.3.3** PICTORIAL PROJECTION
Content Learning Outcome	**TD 12.3.3.1** Develop and demonstrate skills in the construction of perspective views, exploded views and assembled views of building and engineering components.

LESSON NOTES

PERSPECTIVE

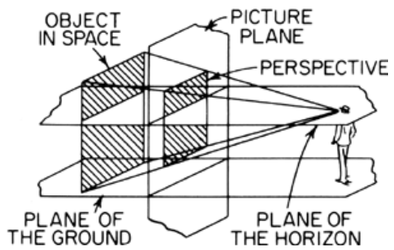
OUTCOME

By the end of this topic, students will:

a) Recall the concepts of perspective views and assembled views.
b) Construct perspective views and assembled views of building, engineering components and final solution in a design project.

INTRODUCTION

Perspective is a geometric method of representing on paper the way that objects appear in real life i.e. they get smaller and closer together the further away they are from the eye of an observer. It is the most realistic of all pictorial drawings. It is is the way real three-dimensional objects are pictured in a photograph that has a two-dimensional plane.



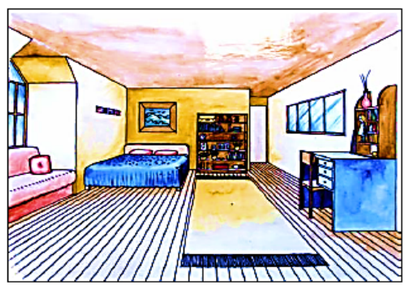
Perspective drawings are particularly useful to architects and designers because they can produce views of buildings that closely resemble photographs before anything has been built.

A Perspective projection uses a single plane of projection to produce a 3-Dimensional view of an object as shown below.
This means that the lines of sight (projectors) are not parallel, but converge. These converging lines give the photographic effect. The perspective view is drawn where the lines of sight meet the picture plane.

TERMS AND ABBREVIATIONS	
Picture Plane	A vertical transparent plane. The perspective view is drawn on this plane.
Ground Plane	The Plane on which the viewer stands. It is generally a horizontal surface.
Station Point (SP)	The position of the viewer's eye.
Horizon Line (HL)	The Line drawn on the picture plane to represent the horizon. It is the height of the viewer's eye above the ground plane.
Ground Line (GL)	The intersection between the picture plane and the ground plane.
Centre of Vision (CV)	A point on the horizon line directly in front of the viewer's eye. Lines at 90 degrees to the picture plane vanish at this point.
Vanishing Point (VP)	A point on the horizon line where receding parallel lines meet.
Vanishing Parallels	Lines drawn from the eye to locate the vanishing points. They are parallel to the lines being represented in perspective.
Visual Rays	The projection line or lines of sight drawn from the eye to the corners of the object.
Height Line (HtL)	A vertical measuring line drawn on the picture plane that is used to measure true heights of objects behind the picture plane.
Perspective Layout	A scale drawing showing the distance of the viewer from the picture plane and the height of the viewer's eye.
Plan Perspective	A perspective view is drawn by combining the plan layout with the elevation layout.

One Point Perspective

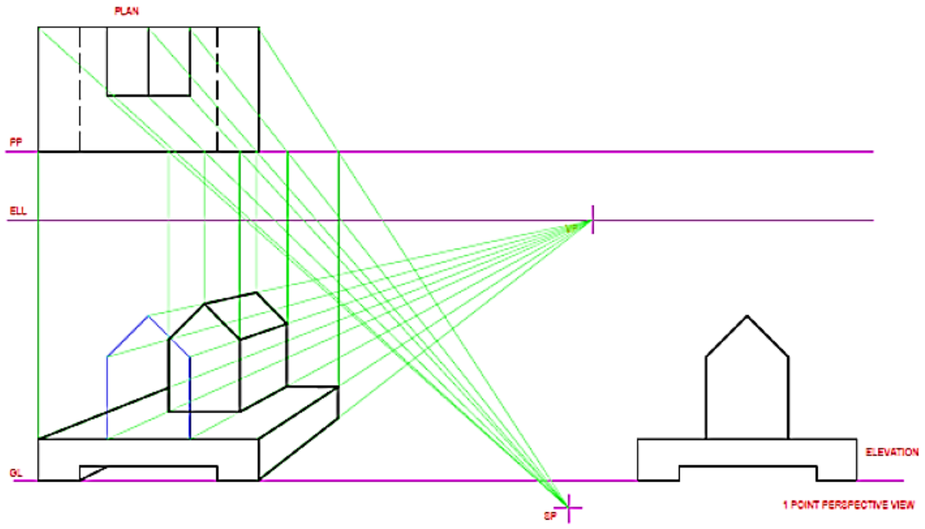
One point perspective is typically used for roads, railway tracks, hallways, or buildings viewed so that the front is directly facing the viewer. It works on the principle that all perspective lines (e.g. edges of the road or roof top) lead to one vanishing point.



Example

SHEET 2

Given below is a one point perspective drawing of a shaped block drawn using intruments.



STUDENT ACTIVITY

Given: The plan and elevation of a shaped block resting on the ground line and picture plane.

Required: Draw a one point perspective of the shaped block.

SA

THE END