

Summary

SL - Coordinate geometry, lines, Voronoi diagrams Draft

Subject	Year	Start date	Duration
Mathematics: applications and interpretation	IB2	Week 3, October	4 weeks

Course Part

Inquiry & Purpose

? Inquiry / Higher Order Questions

Type	Inquiry Questions
Concept-based	What does a perpendicular line represent on a voronoi diagram?
Concept-based	What does a region on a voronoi diagram represent?

Curriculum

🎯 Aims

Develop a curiosity and enjoyment of mathematics, and appreciate its elegance and power

◇ Objectives

Knowledge and understanding: Recall, select and use their knowledge of mathematical facts, concepts and techniques in a variety of familiar and unfamiliar contexts.

📖 Syllabus Content

Topic 2: Functions

SL Content

SL 2.1

Different forms of the equation of a straight line. Gradient; intercepts.

Lines with gradients m_1 and m_2

Parallel lines $m_1 = m_2$. Perpendicular lines $m_1 \times m_2 = -1$

Topic 3: Geometry and trigonometry

SL Content

SL 3.5

Equations of perpendicular bisectors.

SL 3.6

Voronoi diagrams: sites, vertices, edges, cells.

Addition of a site to an existing Voronoi diagram.

Nearest neighbour interpolation.

Applications of the “toxic waste dump” problem.

 **ATL Skills**

 **Approaches to Learning**


 **Thinking**

- In this unit, we will


give students time to think through their answers before asking them for a response

 **Developing IB Learners**

 **Learner Profile**

 Inquirers

 Knowledgeable

 Thinkers