COORDINATE GEOMETRY

INTRODUCTION

One of the most important property of any point, line, or object is its position in space relative to other points or objects. Coordinate geometry is a field where we use graphs and figures to find measurements and other useful information about objects. It is crucial to many fields, ranging from programming graphics to creating maps, reading radar signals and mapping stars!

Learners begin by understanding the Cartesian coordinate system, learning to graph quadratic equations, and know how linear and quadratic equations are represented in a graphical manner. They build their own game using an Android application demonstrating what they have learnt.

Learners exit this module with an understanding of the Cartesian coordinate system and its significance and applications in real life.

This module is a part of the "UNDERSTAND - THE SCIENCE THAT RUNS THE WORLD" series.

MODULE DETAILS

- **Series 1: Understand - The Science That Runs The World**
- **Module 1: Coordinate Geometry**
- **Student Accomplishment Level: 4**

Grade Group : >8 Number of Sessions: 8 Session Duration: 60 min

SESSION EXPERIENCE

1. **Tuning in:** Understand the module structure and goals. Learn the tool used in the module.
2. **Understanding the X and Y axes:** Use a tablet application to understand the X and Y axes in the Cartesian coordinate system.
3. **Points and Lines on the X and Y axes:** Understand how points and lines parallel to the X and Y axes are represented.
4. **Equations of a line:** Understand the properties of a line.
5. **Parabolas and Hyperbolas:** Graph quadratic equations.
6. **Design your own game/project:** Design own game/learning activity.
7. **Build your Own Game/Project:** Create game/ learning activity based on designs from the previous project.
8. **How did I do?** Reflect on the learnings from the module: Applying principles of geometry, understand the Cartesian coordinate system, properties of lines, equations of and points on a line. Present work done to peers.

Learning Objectives:

Learners will:

1. Apply principles of geometry.
2. Understand the Cartesian coordinate system, properties of lines, equations of lines, points on a line.
3. Follow instructions, conduct research, solve problems and create tangible artifacts.
4. Engage in active collaboration, communication and design thinking.

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