

Summary

HL Statistical measures

Subject	Year	Start date	Duration
Mathematics: applications and interpretation	IB1	Week 2, October	4 weeks

Course Part

Description

In this unit you will learn how to manipulate and apply statistical measures to real-life situations.

Inquiry & Purpose

Inquiry / Higher Order Questions

Type	Inquiry Questions
Skills-based	Lies, lies and statistics is a commonly used phrase - why do you think this is the case?
Skills-based	What effects do outliers have on our different statistical measures?

Curriculum

Aims

Take action to apply and transfer skills to alternative situations, to other areas of knowledge and to future developments in their local and global communities

Objectives

Technology: Use technology accurately, appropriately and efficiently both to explore new ideas and to solve problems.

Syllabus Content

Topic 4: Statistics and probability

SL Content

SL 4.1

Concepts of population, sample, random sample, discrete and continuous data.

Reliability of data sources and bias in sampling.

Interpretation of outliers.

Sampling techniques and their effectiveness.

SL 4.2

Presentation of data (discrete and continuous): frequency distributions (tables).

Histograms.

Cumulative frequency; cumulative frequency graphs; use to find median, quartiles, percentiles, range and interquartile range (IQR).

Production and understanding of box and whisker diagrams.

SL 4.3

Measures of central tendency (mean, median and mode).

Estimation of mean from grouped data.

Modal class.

Measures of dispersion (interquartile range, standard deviation and variance).

Effect of constant changes on the original data.

Quartiles of discrete data.

AHL Content

AHL 4.12

Design of valid data collection methods, such as surveys and questionnaires.

Selecting relevant variables from many variables.

Choosing relevant and appropriate data to analyse.

ATL Skills

Approaches to Learning

Thinking

- In this unit, we will

set students a task which required higher-order thinking skills (such as analysis or evaluation)

build on a specific prior task



Developing IB Learners

☆ Learner Profile



Inquirers



Knowledgeable



Thinkers