

## Summary

### SL - Trigonometric Functions Draft

Subject	Year	Start date	Duration
Mathematics: applications and interpretation	IB2	Week 4, September	2 weeks

Course Part

## Inquiry & Purpose

### ? Inquiry / Higher Order Questions

Type	Inquiry Questions
Concept-based	What real life situations could be modelled by a sinusoidal function?
Skills-based	What do the values of a,b,c and d represent graphically in the model $a\sin(bx+c)+d$

## Curriculum

### ⊕ Aims

Develop an understanding of the concepts, principles and nature of mathematics

### ◇ Objectives

**Communication and interpretation: Transform common realistic contexts into mathematics; comment on the context; sketch or draw mathematical diagrams, graphs or constructions both on paper and using technology; record methods, solutions and conclusions using standardized notation; use appropriate notation and terminology.**

### 📖 Syllabus Content

#### Topic 2: Functions

SL Content

SL 2.5

Sinusoidal models:  $f(x) = a \sin(bx) + d$ ,  $f(x) = a \cos(bx) + d$

SL 2.6

Modelling skills:

Use the modelling process described in the “mathematical modelling” section to create, fit and use the theoretical models in section SL2.5 and their graphs.

Develop and fit the model:

Given a context recognize and choose an appropriate model and possible parameters.

Determine a reasonable domain for a model.

Find the parameters of a model.

Test and reflect upon the model:

Comment on the appropriateness and reasonableness of a model.

Justify the choice of a particular model, based on the shape of the data, properties of the curve and/or on the context of the situation.

Use the model:

Reading, interpreting and making predictions based on the model.

## 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)



## Developing IB Learners

### Learner Profile



Inquirers



Knowledgeable



Thinkers