

# IB Biology

Welcome to the course!



# Training experience

- ◆ Mr Kenneth Horrocks. Mr Kenny, Mr Horrocks, Mr H.
- ◆ BSc Environmental Sciences major in Ecology (East Anglia) hons from Louisiana State University
- ◆ PGCSE Biology in education (Manchester)
- ◆ Masters Leadership in Education (Framingham)
- ◆ US Government scientist: Clean water act team
- ◆ Mountain Leadership Summer ML, Rock Climbing instructor. Experiential learning specialist. 86 School trips led.
- ◆ Schools: Malawi, England, Portugal, El Salvador, EARJ

# Who are we?



UBUNTU

# The course structure

- ◆ The standard level course has 6 core components:
- ◆ 1 cell biology
- ◆ 2 molecular biology
- ◆ 3 genetics
- ◆ 4 ecology
- ◆ 5 evolution and biodiversity
- ◆ 6 human physiology

# HL

- ◆ The higher level course has 4 additional components:
- ◆ 7 Nucleic acids
- ◆ 8 molecular biology
- ◆ 9 Plant Biology
- ◆ 10 Genetics and Evolution
- ◆ 11 Animal physiology

# Then we have the options

- ◆ We need to choose one out of four options (SI/HL):
- ◆ Option A: Neurobiology and behaviour
- ◆ Option B: Biotechnology and bioinformatics
- ◆ Options C: Ecology and conservation
- ◆ Option D: Human physiology

# The lab skills

- ◆ The emphasis is on independence, creativity, and mastery of skills
- ◆ Labs focus on Personal Engagement, Exploration, Analysis, and Evaluation
- ◆ You will carry out at least 40 hours of labs of increasing complexity (there are required testable lab skills)
- ◆ We will learn components of the skills separately, first data analysis, then conclusion/evaluation, then design.

# Nature of Science

- ◆ Sometime we will discuss the way that scientific knowledge is acquired in the context of society.
- ◆ This relates to TOK

?



# External Assessment

- ◆ Internal assessment 20%
- ◆ Paper 1 multiple choice: 20%
- ◆ Paper 2 data based questions, factual recall and essay question: 40%
- ◆ Paper 3 the options paper : 20%
- ◆ Group 4 project. No external grade but mandatory.

# The internal assessments

- ◆ Three kinds of assessments: Projects, Written assessments, Labs.
- ◆ Only one lab will count for the IB
- ◆ That is the Individual Investigation (II), which is an extended lab lasting 2-3 weeks **YOU HAVE CONTROL**
- ◆ Your other labs will help you master the skills needed for a successful Individual investigation

# The criteria

- ◆ Personal engagement
- ◆ Exploration
- ◆ Analysis
- ◆ Evaluation
- ◆ Communication

# Class assessments Quarter

- ◆ 3 Summative (100% weighting) and Formative (0%)
- ◆ At least 3 of each in each quarter
- ◆ Formative examples: practice tests, demonstration labs, practice labs, practice questions, check-ins.
- ◆ Summative examples: Tests, lab reports, Special projects (group and individual grades)

# Remember

**“Intellectual courage”**

**The willingness to apply oneself to a Situation outside the mental comfort Zone...**