IB Biology Command Terms

These command terms indicate the depth of treatment required for a given assessment statement. These command terms will be used in examination questions, so it is important that you are familiar with the following definitions.

Objective 1

Define	Give the precise meaning of the word, phrase or physical quality.
Draw	Represent by means of **pencil** lines (always label unless told not to do so).
Label	Add labels to a diagram.
List	Give sequence of names or other brief answers with **no** explanation.
Measure	Find a value for a quantity.
State	Give a specific name, value or other brief answer without explanation or calculation.

Objective 2

Annotate	Add brief notes to the diagram or graph.
Apply	Use an idea, equation, principle, theory or law in a new situation.
Calculate	Find a numerical answer showing the relevant stages in the working (unless instructed not to do so).
Describe	Give a detailed account.
Distinguish	Give the differences between two or more different terms.
Estimate	Find an approximate value for an unknown quantity.
Identify	Find an answer from a given number of possibilities.
Outline	Give a brief account or summary.

Objective 3

Analyse	Interpret data to reach conclusions.
Comment	Give a judgement based on a given statement or result of a calculation.
Compare	Give an account of **similarities and differences** between two (or more) items, referring to both (all) of them throughout.
Construct	Represent or develop in graphical form.
Deduce	Reach a conclusion from the information given.
Derive	Manipulate a mathematical relationship(s) to give a new equation or relationship.
Design	Produce a plan, simulation or model.
Determine	Find the only possible answer.
Discuss	Give an account including, where possible, a range of arguments for and against the relative importance of various factors or comparisons of alternative hypotheses.
Evaluate	Assess the implication and limitations.
Explain	Give a detailed account of causes, reasons or mechanisms.
Predict	Give an expected result.
Show	Give the steps in a calculation or derivation.

Sketch	Represent by means of a graph showing a line and labelled but unscaled axes, but with important features (for example, intercept) clearly indicated.
Solve	Obtain an answer using algebraic and/or numerical methods.
Suggest	Propose a hypothesis or other possible answer.

It is the intention of all Diploma Programme experimental science courses that students achieve the following objectives.

Objective 1

Demonstrate an understanding of:

a) scientific facts and concepts
b) scientific methods and techniques
c) scientific terminology
d) methods of presenting scientific information.

Objective 2

Apply and use:

a) scientific facts and concepts
b) scientific methods and techniques
c) scientific terminology to communicate effectively
d) appropriate methods to present scientific information.

Objective 3

Construct, analyse and evaluate:

a) hypotheses, research questions and predictions
b) scientific methods and techniques
c) scientific explanations.

Objective 4

Demonstrate the personal skills of cooperation, perseverance and responsibility appropriate for effective scientific investigation and problem solving.

Objective 5

Demonstrate the manipulative skills necessary to carry out scientific investigations with precision and safety.