

BIOLOGY

COURSE DESCRIPTION

Biology Course and Curriculum

What: This course will provide students with an introduction to biological concepts and themes. Its goal is provide a framework or foundation of biological principles and practices and for some prepare them for success in AP biology.

Why: Provides students with perhaps the first and only exposure to fundamental biological concepts. For students continuing their education in the life sciences it will provide a foundation for more advanced biology courses. Otherwise we hope that students learn enough biology that they may feel better prepared as citizens to understand and make decisions about complex issues that they will certainly face.

How: As teachers we will try reach students through different modalities such as lectures, group work, formal labs, group activities and videos. The students will asked to demonstrate their understanding in both declarative knowledge and procedural knowledge. Declarative knowledge addresses what the students “know” and procedural knowledge will address what students can “do’. We will measure student understanding through both formative and summative assessments, however their grade in the class will be primarily reflected on their performance on summative assessments.

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Information Sheet

Instructors: Mr. Morone Email – pmorone@pcschools.us
Mr. Mullick Email – emullick@pcschools.us

Textbook: Class Set

Companion Site: TBA

Materials: Each student is required to bring a notebook and a writing utensil to class each day.

Class Rules:

1. Do nothing that gets in the way of your learning and the learning of others.
2. Show respect and common courtesy towards everyone in the class

Expectations:

1. You are expected to keep up with the class assignments and activities.
2. You are expected to give an honest effort towards completing all assignments.
3. Once you return from an absence, **IT IS YOUR RESPONSIBILITY TO INQUIRE ABOUT THE WORK MISSED, COMPLETE THE WORK AND TO TURN IN YOUR WORK.**
4. If you are absent the day of a test you will be expected to take the test **the day you return.**
5. **YOU ARE RESPONSIBLE** for ALL MAKE UP WORK INCLUDING TESTS. If you fail to make up work in the appropriate amount of time, the grade becomes a zero. It is **not the teacher's responsibility** to remind you of work which is not completed. **YOU HAVE POWERSCHOOL...USE IT.**
7. Tests will be made up during class unless other arrangements are made; the student is then responsible for making up the work missed during their testing.
8. It is expected that each student completes ALL of his/ her work. Nothing should be copied from another student except class notes or lab data. Working together is only permitted when specifically permitted by the teacher.

Grading Scheme: Quizzes ~ 10% TBA
Labs and activities ~ 50% TBA
Tests ~ 40% TBA

Grading Scale:

100 - 90	A
89 - 80	B
79 - 70	C
69 - 60	D
59 - 0	F

Topics: Basic Life Functions, Scientific Methods and Practices, Ecology, Cells, Metabolism, Cell Reproduction, Genetics, Biotechnology, Evolution

FIRST DAY BIOLOGY POINTS TO MAKE

- I. **You must keep up:** each section builds on preceding sections. Excessive tardies and absences will make it difficult for you to keep pace with the class. Falling behind is the biggest reason students have difficulty. If you do poorly on a test, you must still learn the material! It is likely to be part of the next two or three tests as well.
- II. You must **work** to **understand** the concepts and apply them. You will be asked to explain the concepts.
- III. **Ask questions** if you have them. Waiting can be detrimental to understanding the current and successive concepts. The class may move quickly for some and a small misunderstanding can become a major problem. Ask the teacher so he/she will know there is additional explaining needed. If you ask another student both will miss the material.
- IV. **Focus during the class** and follow the lesson closely. If you do this well you will little need for homework. Make sure you understand what you are writing down. I have 30 years of experience helping students understand these ideas and concepts so work to understand each lesson in class with my help. Trying to learn the material all by yourself at home is far more challenging.
- V. **Think!** You will have to combine ideas and concepts for some problems; this shows a full understanding (not just memorization). Rather than creating shortcuts, do you best to actually learn the material. Actually learning the material will lead to a positive “snowball effect” as class proceeds throughout the year.

- VI. Create **study guides** from your notes. These could be in the form of organizational charts, flash cards, rewritten notes, or lists of concepts. Everyone learns differently but research supports the idea of writing to retain information.
- VII. **Form a small study group.** I am advocate of small group learning, learning comes much easier in small study groups with your peers or with me after school. You can learn from those in the group, and you will understand the material better by explaining the material to them. Also these are the people that will help you when you are absent. They can get you the notes, tell you what we did, and pick up assignments for you.

KEY ACTION WORDS

On a test or other assessment, you may be asked to carry out one or more of the following actions. The following chart is a definition of each of these. Pay particular attention to the definition for these actions. For example, if a test question says “LIST”, then you would simply provide a list of relevant information. No other information is required to successfully answer the question. *Providing other info result in a lower score.*

Level 1	Definition	Level 2	Definition	Level 3	Definition
Define	Give the precise, concise meaning of a word	Outline	Give a brief account or summary	Suggest	Propose a hypothesis or other possible answer.
State	Give a specific name or other brief answer	Describe	Give a detailed account including all relevant info	Discuss	Give an account including a range of arguments, assessments of the relative importance of various factors or comparison of alternative hypo's
List	Give a sequence of names or brief answers.	Calculate	Find an answer using math. Show your work.	Explain	Give a clear account including causes, reasons or mechanisms.
Measure	Find a quantity and state it using a number and SI unit.	Identify	Find an answer from a number of possibilities.	Deduce	Reach a conclusion from information given.
Draw	Represent by means of a pencil line. Add labels .	Apply	Use an idea, equation, principle, theory or law in a new situation.	Predict	Given an expected result.
		Compare	Give an account of similarities/differences b/w 2 or more items referring to both throughout. Can use a table.	Evaluate	Assess the implications and limitations.
		Annotate	Add brief notes to a diagram, drawing, graph.	Design	Produce a plan, object, simulation or model.
				Determine	Find the only possible answer.
				Analyze	Interpret data to reach a conclusion.

These key action words are used directly with exam expectations. Exam expectations are short prompts each of which will begin with one of the the words above. These prompts are written by the teacher and align with assessment items. They are intended to direct a student's preparation for upcoming summative assessments. To avoid any misunderstanding this table allows students to see exactly what our expectations are for each part or question on the exam. The levels are also useful in that students get a better idea of the depth of understanding that is required for each assessment item.

