

Metropolitan Business Academy

Biology Course Syllabus

Teacher Contact Info:

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Hours by Appointment: During Lunch, Before & After School

Class Expectations:

Be respectful of yourself, of others of the teacher and the space - Be on time - No offensive language - Keep electronics away - No eating or drinking in class - Be prepared - Be safe

Class Objective:

To empower students to think critically and solve problems scientifically - To support students in the pursuit of higher education by developing science thinking skills, encouraging revision of ideas and providing various ways to learn

Course Overview:

Biology is a required course. Next Generation Science Standards (NGSS) have been adopted by the state of Connecticut and the District of New Haven. Three dimensional learning includes science and engineering practices, disciplinary core ideas and the crosscutting concepts. The major topics include biochemistry and cells, genetics and evolution, populations and ecology.

Biology Standards:

1. **50% - Science and Engineering Practices (SEP):** Students can apply the practices of questioning, investigation, modeling, analysis, explanation and argumentation through the performance expectations.
2. **30% - Disciplinary Core Ideas (DCI):** Students can demonstrate their understanding of the content through the performance expectations.
3. **20% - Crosscutting Concepts (CCC):** Students can apply the concepts of causality, systems, and patterns to demonstrate their understanding through the performance expectations.

Each of the six units, the students will be provided with a standards sheet. The document will explain the expectations of the unit, what SEP's (50% of grade), DCI's (30% of grade) and CCC's (20% of grade) will be emphasized. The standards sheet will contain rubrics for the students, peers and teacher to use to evaluate their progress towards competency in the standard. The student will be required to complete **AT LEAST** three major tasks during the unit prior to the **FINAL UNIT assessment**. After the UNIT assessment, the students will reflect on their competency of the standards and decide what areas to improve upon. A personal learning plan will be formed and completed prior to reassessment.

UNIT 5 - EVOLUTION STANDARDS SHEET		
SEP SEP's (Practices) CONSTRUCTING EXPLANATIONS ENGAGING IN ARGUMENT FROM EVIDENCE COMMUNICATING INFORMATION	SEP DCI's (Content) EVOLUTION ADAPTATION NATURAL SELECTION	SEP CCC's (Concepts) STABILITY & CHANGE CAUSE & EFFECT PATTERNS
REQUIRED ACTIVITIES (3 out of 4 to do (REAL ASSESSMENT)) <input type="checkbox"/> Nova Evolution Lab (Online with Questions) <input type="checkbox"/> Homed Fossil Lab <input type="checkbox"/> Comparative Connections Lab <input type="checkbox"/> Penned Acc Evolution Lab		ASSESSMENT RECAP VIDEO
PRACTICES (SEP) RUBRICS		
1 - Constructing Explanations - SEP		
1A. I can clearly make a claim to explain a phenomenon. 1B. I can base my claim on scientific evidence. 1C. I can use valid evidence from various reliable sources to support my claim. 1D. I can develop relationships among my claim to evidence. 1E. I can evaluate, revise and justify explanations.	1E - ALL 5 1D - AT LEAST 4 1C - AT LEAST 3 1B - AT LEAST 2 1A - AT LEAST 1	
2 - Argument from Evidence - SEP		
2A. I can compare and evaluate competing arguments. 2B. I can determine the merits of competing arguments. 2C. I can respectfully provide or receive critiques. 2D. I can construct an argument based on evidence. 2E. I can evaluate competing solutions to real-world problems.	2E - ALL 5 2D - AT LEAST 4 2C - AT LEAST 3 2B - AT LEAST 2 2A - AT LEAST 1	

What will grades look like in Powerschool?

	SEP - Model 1.1 Photosynthesis Lab	DCI - Photosynthesis 1.1 Photosynthesis Lab	CCC - Energy & Matter 1.1 Photosynthesis Lab	1.2 Photosynthesis Homework	SEP - Model Final Assessment	DCI - Photosynthesis Final Assessment	CCC - Energy & Matter Final Assessment
Your NAME	EM	NY	CO	✓	CO	CO	COXE

FINAL GRADE WILL INCLUDE ONLY PROGRESS IN THE STANDARDS

SEP MODEL	CO	85%
DCI PHOTOSYNTHESIS	CO	85%
CCC ENERGY & MATTER	COXE	93%
FINAL GRADE		86.6%

- Mistakes are expected and are celebrated as learning opportunities.
- Homework is a practice for a standard and will be recorded in Powerschool but not part of the overall grade.
- "On Pace" dates will help the student with time management.
- Students are responsible for communicating with the teacher about challenges and opportunities for revisions or reassessment.
- Reassessment IS NOT A DO OVER, this is an authentic learning process based on continued practice and feedback.
- Student reflection is essential to understand best practices and shortfalls.
- TIMELINESS MATTERS since learning is most successful when fresh.

Major Tasks:

Unit 1 - NGSS Assessment

Unit 2 - Model Presentation

Unit 3 - Cancer Cure Project

Unit 4 - NGSS Assessment

Unit 5 - Video Explanation

Unit 6 - Eco-Fair

Mastery Language Abbreviations	Mastery Language	Progression to Meeting Standard	What does my grade mean?	Standard Grading Equivalent
XE	Exemplary	Exceeds Standard with Distinction	You did an amazing job and your peers could use your work as an example.	100
CO/XE	Competent/ Exemplary	Exceeds Standard (revise for exemplary)	You did a great job. There are a few things you could do to make it even better.	93
CO	Competent	Meets Standard (revise for exemplary)	You know what you are doing. You have done solid work.	85
EM	Emerging	Approaches Standard (needs revision)	You are getting it. You still need some improvement.	70
NY	Novice	Not Yet (needs revision)	Keep practicing and learning. Your work is 'not yet' (NY) there.	60
NE	No Evidence	No Evidence of Work Yet	Your work is missing or there isn't enough for valuable feedback.	50