To educate students to be self-directed learners, collaborative workers, complex thinkers, quality producers, and community contributors.

**Philosophy**

Learning is not a spectator sport. Fundamentally, the responsibility to learn is yours and yours alone. For learning to happen in any course, you must take an active role in the process. For our class, you are expected to come to class prepared and ready to learn, which requires you to read and to study the assigned reading before you come to class. Being prepared for class enables you to construct a knowledge base on which subsequent learning rests. During our class, the learning and discussion is often student driven, which means your teacher talks less to get you to talk about what you are learning. Your grade is a reflection of your mastery of the course standards and not solely on completion.

**Course Description**

This course is a study of fundamental biological concepts based on the Next Generation Science Standards. Students will evaluate evidence from experiments and technology used by scientists to understand the nature of biology. Concepts and skills are reinforced by a strong emphasis on hands-on laboratory experiences and the integration of other branches of science. Constructivist methods of teaching are employed to ensure the best possible comprehension and retention of science concepts. Prerequisite is successful completion of Honors Chemistry or Chemistry.

**Course Topics**

**Semester 1:**
- Unit 1: Biochemistry and Characteristics of Life
- Unit 2: Cellular Metabolism
- Unit 3: Cell Cycle, DNA and Mitosis
- Unit 4: Protein Synthesis

**Semester 2:**
- Unit 5: Meiosis and Genetics
- Unit 6: Biotechnology
- Unit 7: Evolution
- Unit 8: Ecology

**Common Unit Assessment**

**Semester 1:**
- Unit 1: Characteristics of Life
- Unit 2: Cells and Cell Transport
- Unit 2: Energy
- Unit 3: DNA and Cell Cycle
- Unit 4: Protein Synthesis

**Semester 2:**
- Unit 5a: Meiosis
- Unit 5b: Genetics
- Unit 6: Biotechnology
- Unit 7: Evidence of Evolution
- Unit 7: Mechanisms of Evolution
- Unit 8: Ecology

Revised May 2020
Grading Calculation
At Naperville North we define formative and summative work as follows:

- Formative work is used to monitor student’s learning to provide ongoing feedback that can be used by students to improve their learning. Examples may include: practice activities, lab work, homework, quizzes, etc.
- Summative work is used to evaluate student learning at the end of an instructional unit or segment of learning by comparing it against a standard or benchmark.

Grades communicate each student’s progress toward mastery of goals/standards for the course. Grades should not be reduced or inflated due to student behaviors outside of the standards.

- No extra credit will be issued.
- Formative assignments will be accepted up to the end of each unit (the end of each unit is the day of the summative assessment).
- A zero on a summative assessment will only indicate that no attempt was made by the student
  - Violations of the academic integrity policy will be consequenced by administration in collaboration with the IC/teacher.
- Formative work submitted after the due date cannot be penalized more than a total of 10%.
- Summative work submitted after the due date cannot be penalized more than a total of 10% and must be submitted prior to the end of the next unit.
- Any percentage lower than 50% will be put into the grade book as a 50%, the lowest possible grade on completed work (incomplete or work not turned in will receive a grade of 0 in the grade book).

Your course grade will reflect what you have learned, not what you have completed.

### Exam

<table>
<thead>
<tr>
<th>Formative</th>
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<tbody>
<tr>
<td>10%: Daily work (homework, group projects, whiteboard presentations, quizzes, lab completion checks, lab notebooks)</td>
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<table>
<thead>
<tr>
<th>Summative</th>
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<tbody>
<tr>
<td>90%: Unit summative tests and summative lab work</td>
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A : 90-100 %  
B : 80-89 %  
C : 70-79 %  
D : 60-69 %  
F : below 60%

Reassessment Policy
Students will be provided multiple and varied opportunities to demonstrate mastery of learning standards.

- The purpose of reassessment is to allow students to demonstrate mastery of course standards in which they remain deficient.
- Students will be required to engage in further learning and reassessment when students do not demonstrate sufficient learning of the course essential standards.
- Students who have demonstrated sufficient learning of the essential standards (but scored below a weighted 80%), will be allowed reassessment opportunities on the unit summative assessments if they so choose. To be eligible for reassessment, students must
  - Demonstrate readiness for the summative assessment through the completion of all formative work.
  - Demonstrate readiness for the summative assessment by completing all remediation assignments assigned based on formative performance.
  - Complete the designated learning experiences as assigned by the teacher in the form of required reassessment assignments and attend peer tutoring prior to the reassessment to prepare.

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Reassessments MUST be completed during the next unit of study on a day and time determined by the teacher. No reassessments will be given on unit exams after the last day of the next unit.

Project-based assessments that include multiple opportunities for feedback and improvement in the assessment process will represent multiple attempts and be considered a reassessment.

Reassessments will be provided for unit exams only. Reassessments will not be provided for summative lab work.

Reassessments will be a new form of the assessment that addresses all of the same standards that were on the original assessment.

Higher reassessment grades will replace the original assessment score (but will not exceed a weighted 80%).

Academic Integrity: Students will be expected to submit only original work and follow the academic integrity policy described in the NNHS student handbook.

- Level 1 infraction will follow our reassessment policy, students will earn no more than – 80%;
- Level 2 infraction – 50%;
- Level 3 infraction – 0%

Communication

- As a high school student, it is strongly encouraged that you communicate directly with your teacher regarding questions. Meet with your teacher after class and arrange an appointment to meet or send an email to set an appointment.
- Teachers make every effort to respond to emails and phone calls within 24 hours during the work week.
- The best way to communicate with teachers is through email; however, if you haven’t received a response within 48 hours, please resend the email or call their voicemail. Your email may have been filtered.

- Make an appointment with your teacher.
- After School Tutoring will be available for students M, W, Th after school in the Learning Commons.
- Peer tutors available before school and during lunch periods in the Lit Center.
- Utilize the Mastering Biology website for enrichment opportunities (practice quizzes, video tutorials, flashcards, enrichment assignments, etc.)

— we need your help please!

Naperville North believes in a collective partnership with parents/guardians which provides students the best opportunities for academic success.

Some ways parents/guardians can support their student’s learning are:

- Actively check Infinite Campus for their student’s grade.
- Infinite Campus is a tool to monitor progress of student work until final course grade is posted. Grades in infinite campus are not final and can change at any time due to absences, missing work, etc.
- Monthly progress grades are posted and represent the current grade of a student in the course at that moment in time.
- Discuss missing assignments, reiterate due dates, help organize folders, materials, assignment notebooks and review upcoming projects and assessments.

Planet Earth, Gattaca, Lorenzo’s Oil, Wonder, The Lorax, Extraordinary Measures, The Croods, Life, Walking with Monsters, Your Inner Fish, Ted Talks and other documentaries

Science Department Contact Information

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