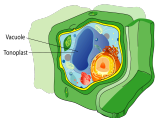
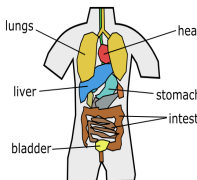
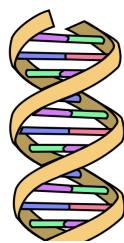
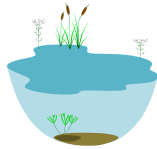


Investigations in Life Science - 7

Students in the Investigations in Life Science course will develop understanding of biology concepts related to the following topic areas: Cellular Structure and Processes, Matter and Energy Flow in Organism, Inheritance and Variation of Traits, Evolution, and Ecosystems Interactions, Energy, and Dynamics. While each of these concepts will be taught in isolated units, Investigations in Life Science will also revisit related concepts throughout the school year to show the interconnected nature of biological sciences.

	Content Focus
	<u>Cellular Structure and Processes</u> - Students will examine the characteristics of living things including the structure of cells and the processes they carry out. Students will also learn what materials are required by living things, how the materials are delivered, and how these materials sustain life.
	<u>Matter and Energy Flow in Organisms</u> - Students will study the body systems of organisms and explore how the interactions of those systems affect overall functions. Students will learn about the levels of organization within an organism and the contribution cells provide a system as the basic building blocks of life. Students will explore how matter and energy are processed by organisms to build, maintain, and repair themselves.
	<u>Inheritance and Variation of Traits</u> - Students will study the principles of heredity and genetics and how organisms reproduce and transfer their genetic information to their offspring. Students will use biotechnical processes to explore the genetic characteristics of organisms. Students will conduct a DNA extraction and a microarray will be performed as a way of checking the genotypes of the offspring.
	<u>Evolutionary Biology</u> - Students will explore the concepts of natural selection and adaptation and will learn that traits of an organism can change as a result of environmental conditions or a need for survival. Students will explore the similarities between organisms and use biotechnical processes, such as DNA fingerprinting, as means of identification.
	<u>Ecosystem Interactions, Energy, and Dynamics</u> - Students will explore the biodiversity and essential factors of different ecosystems and learn that a population consists of all species that occur together at a given place and time. Students will investigate populations within food webs and categorize those populations as producers, consumers, and decomposers. Students will learn that organisms compete for limited resources and that the number of organisms an ecosystem can support depends on the resources available.

Safety in Science Class

A Safety Contract signed by guardian and student must be returned prior to student participation in lab activities. All science students will be required to follow safety procedures as designated by the MCPS safety contract. Failure to follow the safety guidelines will result in dismissal from the science laboratory for the remainder of that class period (minimum) or student / parent / administrator conference prior to readmission to lab setting.

Grading & Reporting

Students' academic grades are based on individual academic achievement. Quarterly grades will be assessed in two categories (Formative and Practice / Prep). Both individual assignments and final grades will be determined using a scale of:

A: 89.5% - 100%, B: 79.5% - 89.4%, C: 69.5% - 79.4%, D: 59.5% - 69.4%, E: 59.4% and below.

We will use a variety of assessment types to determine student mastery.

Category	Weight	Examples
Formative Assessments (FA)	90%	Unit Projects, Common Tasks, labs, quizzes, writing assignments, journal entries, activators, exit tickets
Collaboration / Practice/ Prep/ (PA)	10%	Any work assigned for practice, done as a class (ex. NearPod), or completed through collaboration with classmates

Learning Skills Grades:

In addition to the academic grade, students will receive *Learning Skills Grades* each quarter. Learning skills grades will assess students' Participation and Assignment Completion throughout the course. Students may earn the following grades for each of the aforementioned categories:

C: Consistently

O: Often

S: Sometimes

R: Rarely

NI: Not Enough Information

Reassessment of Formative Work

- Weekly assessed tasks may be retaken by students to demonstrate a greater level of understanding. Reassessments will be determined based on teacher discretion.
- Re-teaching and reassessment opportunities usually take place the following Wednesday.
- Reassessments are available to all students - no matter what grade was earned.
- If a student does not elect to reassess a task on the identified date, that opportunity has passed for the marking period.
- Assessments may be reassessed partially, entirely, or in a different format.

Late Assignments and / or Missing Work

- A **due date** is the date students are expected to submit an assignment. Assignments turned in after the due date will be penalized one letter grade or 10%.
- A **deadline** is the last date the teacher will accept an assignment. (Interim dates are typical deadlines for Formative Tasks assigned during the first half of the marking period.)
- Any **Formative Assessment** not attempted or turned in will earn a **grade of zero.** (not 50%)
- Late / incomplete practice assignments will receive a grade of 50%, and if not submitted will receive a **grade of zero.**
- **Absent from class** - Students have the responsibility to make up missed assignments. All assignments will be posted in MyMCPS Canvas. Review the day's assignments and complete the work using the posted resources. See the teacher for help as needed.
- There is no extra credit per MCPS Policy.

Student and Parent Portal (CANVAS)

- This year's learning platform, CANVAS, has been set up and may be accessed from any computer / mobile device to find daily lessons, resources, and assignments.
- **ALL LESSONS AND ASSESSMENTS ARE POSTED HERE**
- Parents will also receive access to the Parent Portal for grade updates. Students are expected to know their grades, and what, if any, work is missing at all times. Other forms of communication include interims, report cards, and scheduled conferences. There should be no surprises about grades to students or parents.

REQUIRED Student Organizational Tools and Supplies

Fully Charged Chromebook	Pens / Pencils	Binder / Folder for papers
--------------------------	----------------	----------------------------