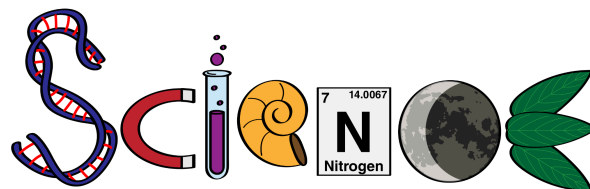


# Integrated Science 1 & 2

## Syllabus



**Instructor:** Madi Wells

**Office:** Rm 1314 (check here first) & Science Office

**Contact Info:** mjwells@lps.k12.co.us

**Off Hours:** Per. 1 & 4 (and 2nd first semester only)

### Course Overview:

Welcome to IS 1-2! I am so excited to have you in class. We will be covering a variety of science topics throughout the school year. Refer to the table below for more details. In this class, we will take on the role of scientists and act, think, and engage as scientists would. We will develop skills that not only prepare you for the next science course you will take in high school but also prepare you to be a more informed member of society and your community in relation to a variety of scientific topics.

1st Semester: Earth Science	2nd Semester: Biology
<b><u>Unit 1: Types of Energy and Conversion Factors</u></b> <ul style="list-style-type: none"> <li>- Forms of energy and Law of Conservation of Energy</li> <li>- Factor Labeling and Unit Conversions</li> </ul>	<b><u>Unit 5: Energy Transfer and Conversions Between Biotic and Abiotic Components on Earth</u></b> <ul style="list-style-type: none"> <li>- Energy flow (photosynthesis, food chains/ webs/ trophic levels/ energy pyramids) and nutrient cycling in ecosystems (nitrogen cycle and carbon cycle in food chains/ webs)</li> <li>- Population dynamics, limiting factors, and carrying capacity</li> <li>- Symbiosis and keystone species</li> </ul>
<b><u>Unit 2: History of the Earth/ Geologic Time</u></b> <ul style="list-style-type: none"> <li>- Types of rocks/ rock cycle</li> <li>- Rock layers/ fossils/ geologic time and radiometric dating</li> <li>- Plate tectonics</li> </ul>	
<b><u>Unit 3: Energy Resources on Earth</u></b> <ul style="list-style-type: none"> <li>- The atmosphere, water cycle/ carbon cycle, greenhouse effect, climate change</li> <li>- Renewable and non-renewable energy sources on Earth</li> <li>- Wind turbine lab (work/ power)</li> </ul>	<b><u>Unit 6: Energy and Matter Transformations on Earth (<i>Evolution and Natural Selection</i>)</u></b> <ul style="list-style-type: none"> <li>- Variation and biodiversity</li> <li>- Natural selection, speciation, and cladistics</li> <li>- Evidence for evolution</li> </ul>
<b><u>Unit 4: Energy in Living Systems</u></b> <ul style="list-style-type: none"> <li>- Biotic/ abiotic components of ecosystems and characteristics of life</li> <li>- Kingdoms of life and types of organisms</li> <li>- Microscopes/ biological drawings/ measurements and conversions</li> </ul>	<b><u>Unit 7: Energy and Matter Transformations in Living Systems (<i>Genetics and Cell Reproduction</i>)</u></b> <ul style="list-style-type: none"> <li>- DNA (structure/ function)</li> <li>- Cell cycle and mitosis (and DNA replication)</li> <li>- Protein synthesis (transcription and translation and mutations)</li> <li>- Meiosis (compare to mitosis too)</li> <li>- Variation, alleles, phenotypes and genotypes, blood types, and punnett squares</li> </ul>

### MATERIALS:

Please bring these materials to class everyday and anything else that you may need to be successful.

- Computer or Tablet
- 3 ring binder with at 8 divider tabs (please let me know if you are struggling to get this, I have extras)
  - Labeled as follows: Warm- up/ BOP, Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6, Unit 7
- Loose-leaf paper

- Pencils/ pens/ highlighters/ other writing utensils
- Planner (paper or digital)
- Calculator

**TEXTBOOK:** (Online) McGraw Hill Integrated Science

<b>GRADES</b>	
Are based on total number of points accumulated for the semester and will be determined based on the following percentages:	
<b>Breakdown:</b> Assessments: 40% Labs and Write- Ups: 35% Classwork and Homework: 25%	<b>Letter grades will be assigned as follows:</b> A 90-100 B 80-89 C 70-79 D 60-69 F 50 and below

#### **ASSESSMENTS:**

There will be quizzes/exams (assessments) to assess your learning. All assessments **MUST** be taken during the scheduled time on the assessment day. Missing the class the day before an assessment does **NOT** excuse you from taking the assessment on the assessment day. If an assessment is missed, you must take the **MAKE-UP ASSESSMENT** to receive credit for the missed assessment. *If you do not take the MAKE-UP ASSESSMENT, you will receive a 0 for the assessment you missed.*

#### **LABS:**

Lab grades will be based on written assignments, conduct/participation, post-lab clean up, lab safety practices, and attendance. Written assignments will be due **ON THE DUE DATE**. If you experience any problems with assignments, you must talk to me **before** they are due. We will use the experimental design rubric (EDR) as a guide which you should continuously refer back to. I expect that each of you will follow the safety rules at **ALL** times in lab.

#### **CLASSWORK and HOMEWORK:**

Classwork and homework will be *assigned* and discussed, but not all work will be *collected and graded*. **HOWEVER**, some will be collected randomly (the dates will be unknown to you) for a grade. That means.....do **ALL** of your work!!

#### **EXTRA HELP:**

If you are struggling in any way, come and see me. I am always here to help you and want to see you succeed. However, it is your responsibility to communicate with me and make the effort to come in for help. Please come into my classroom for help during my off-hours or directly before or after school. Let me know in advance if you will be coming in for extra help so you do not have to try and find me around the building.

#### **HONORS CREDIT/ IS 3-4 EXEMPTION**

1. Honors Credit: Any student in IS 1-2 who completes all honors assignments and a 70% class grade or better will receive honors credit for IS 1 and IS 2 on their transcript. Honors credit is completed separately for each semester, and allows a student to earn grade points one grade higher than what was received on their transcript.
2. IS 3-4 Exemption: Any student in IS 1-2 who completes all honors assignments for **BOTH** semesters **AND** receives a grade of 90% or better in the class may choose to exempt IS 3-4 and take a higher level science elective the following year.

## **PARTICIPATION/CONDUCT:**

I expect you to be ON TIME, to be in class every day, to maintain a respectful and positive attitude, to ask questions, to participate in class, and to always do your best. Bring your class materials EVERY DAY, so that you are prepared to learn.

- **Attendance/Tardies:** I expect you to be in class and on time every time we meet. Do your best to let me know in advance if you will be missing a class. If you miss class, it is YOUR RESPONSIBILITY to get information & assignments, etc. from that day from Google Classroom, me, or fellow students.
- **Cheating/Plagiarism:** Cheating and plagiarism will not be tolerated. Any work that is not your own is considered cheating. If cheating/ plagiarism is suspected, you will receive a zero or reduced grade in the grade book. Refer to the LHS Academic Integrity Policy- it is your responsibility to know what is and is not violating this policy.
- **Electronic Devices:** Electronics (including phones, AirPods, headphones, tablets, etc.) need to be put away (in your backpack) at all times. **Any electronic device being used inappropriately or without my approval will be collected.**
- **Late work:** I will accept late work up until the day of the unit assessment/ exam. Any late work will receive a 10% deduction in the gradebook. After you have taken the unit assessment, late work will no longer be accepted for that unit and will go into the gradebook as a zero. I reserve the right to refuse your late work (resulting in a zero in the gradebook) if I believe you are not using class time effectively.

## **CLASS EXPECTATION**

As a class, we will establish class expectations that best meet the needs of our individual class. I will ask you to work collaboratively with your peers and myself to help establish these expectations.