**Subsidiary Course Agreement and Syllabus**

**Course: Science 6** **Course** **Number: 6006**

**Subject Teacher: Linda Patterson**  **Email: lpatterson@sandi.net**

**Description of Semester Course**

Three-dimensional learning in the Amplify Science Middle School 6th Grade Course The Amplify Science Grade 6 Integrated Course includes nine units that support students in meeting the NGSS. The following unit summaries demonstrate how students engage in three-dimensional learning to solve real world questions and problems. Microbiome: Students investigate the human microbiome at multiple scales—from molecules to bacteria to the human body. They construct scientific arguments about how a surprising treatment— fecal transplants—can cause a patient infected with harmful bacteria to recover. Metabolism: Students diagnose a patient by figuring out how body systems work together to provide molecules to the body’s cells. They obtain information from articles, system models, videos, and hands-on investigations about macroscale and microscale body processes. Metabolism Engineering Internship: Students analyze data from tests to design a nutrition bar that meets the metabolic needs of rescue workers and patients in disaster areas. They consider how molecules in ingredients affect people at cellular and whole-body scales. Traits and Reproduction: Students write arguments about why the silk of closely related spiders can vary. From models and articles, they gather evidence about traits, the structure and function of protein molecules, gene combinations, and inheritance. Thermal Energy: Students use mathematical thinking and evidence from articles, experiments, and models to decide which of two heating systems will best heat a fictional school. They construct explanations for what causes stability or change in thermal energy and temperature. Ocean, Atmosphere, and Climate: Students construct explanations about why regional climates change during El Niño years. They gather evidence from experiments, articles, maps, and more to explain causes and effects between the atmosphere, ocean, and regional climates. Weather Patterns: Students create visual models showing why a fictional town has experienced an increase in extreme rainstorms. They conduct a variety of investigations about how the energy in air changes and becomes stable, and how this affects weather patterns. Earth’s Changing Climate: Students ask questions about climate change and figure out how human activities add greenhouse gases to the atmosphere, altering the energy flow into and out of Earth’s systems. They explain how specific solutions could reduce climate change.

**Objectives and Methods of Study**

Each month, students in this course must complete the following work:

1. Read and work through each lesson in chapters assigned.

 2. At end of each chapter, complete end of chapter test

3. Turn in all student work each month.

**Resources**

* Weekly Study Groups: See the schedule posted by the school.
* Materials will be posted on Google Classroom and some handed out in study group each week.
* Amplify website: [my.amplify.com](http://www.phschool.com/atschool/california/science_explorer/)
* Linda Patterson website: <https://lindapatterson.weebly.com/6th-grade-science.html>

This website includes Ms. Patterson’s policies and includes a page with information particular to your course.

**Monthly Topics, Chapter Content and Technology Focus**

|  |  |  |
| --- | --- | --- |
| **Month /**Text Chapters  | **Critical Concept** | **Performance Expectations**CA NGSS Standards |
| **Month 1**Ch. 1 and 2 | Microbiome | MS-LS1-1; MS-LS1-2; MS-LS1-3; MS-LS2-2; MS-LS2-2 |
| **Month 2** | Metabolism  | MS-LS1-1; MS-LS1-2; MS-LS1-3; MS-LS1-7; MS-LS1-8 |
| **Month 3** | Traits and Reproduction | MS-LS1-2; MS-LS1-3; MSLS1-4; MS-LS1-5; MS-LS3-1; MS-LS3-2; MS-LS4-5 |
| **Month 4** | Thermal Energy | WHST.6-8-8 |
| **Month 5** | Thermal Energy | WHST.6-8.9, MS-ESS2-5 |
| **Month 6** | Ocean Atmosphere and Climate Weather | MS-ESS2-3; MS-ESS2-5; MS-ESS2-6; MS-ESS3-2; MS-PS1-4; MS-PS3-3 |
| **Month 7** | Weather Patterns | MS-ESS2-3; MS-ESS2-5; MS-ESS2-6; MS-ESS3-2; MS-PS1-4; MS-PS3-3MS-ESS2-5, MS-ESS2-6 |
| **Month 8**  | Earth’s Changing Climate  | MS-ESS2-5, MSESS2-6  |
| **Month 9** | Earth’s Changing Climate  | MS-ESS2-6, MS-ESS3-5 |
| **Month 10** | Earths Changing Climate | MS-ESS2-6, MS-ESS3-5 |

**Evaluation Criteria and Methods**

1. Attendance credit for each month and all assignments will be based on submission of monthly work by due dates listed on assignment agreement.
2. Work submitted after the due date cannot earn full credit.
3. Academic grades will be based on the skills assessed each month along with quality and quantity of work submitted on time according to directions and expectations above.
4. In keeping with SDUSD procedure #5121 the following grades will be used:

**"A”** = Superior achievement.

**"B"** = Above average achievement.

**"C"** = Satisfactory achievement.

**"D"** = Below average achievement.

**“F”** = Failure (credit not granted).

**"I"** = Incomplete.

**"IP"** = In Progress.

**“NC”** = No Credit

**Schoolwide Learner Outcomes**

* Communicate effectively through reading, writing, listening and speaking.
* Think and solve problems independently and critically.
* Demonstrate the confidence, resilience, and self-esteem to succeed in life.
* Use resources, including technology, to locate needed information.
* Demonstrate good citizenship and personal integrity.