

Northland Preparatory Academy
6th Grade Science Syllabus
Mrs. Heins
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Course Description:

The sixth grade science class is designed to challenge the students and help them learn more about the world around us. We have a lot of engaging and exciting projects planned for this year! You will need to work on some of these projects outside of class and 100% effort will be expected of you each day. Come prepared to explore our atmosphere, oceans, energy, life, the scientific method, and so much more!

Course Timeline:

1st Quarter

- Experimental Design (Scientific Method)
 1. Lab Safety
 2. Observations, Questions, Hypotheses
 3. Hands-on Labs and Investigations
- Measurement (Metric)
 1. Nature of Scientific Knowledge
 2. Measurement Labs
- Physical Science
 1. Transfer of Energy
 2. Wind Power, Solar Power
 3. Renewable vs. Nonrenewable

2nd Quarter

- Environmental Science
 1. Changes in Environments
 2. Disasters and Solutions
 3. Science and Technology (Satellites)
- Computer Science
 1. Programming
 2. Lego Robotics
 3. Sphero Robotics

General Rules:

1. Be on time
2. Be respectful to others and yourself
3. Be prepared
4. Raise your hand to speak
5. The teacher has the right to teach and the students have the right to learn

3rd Quarter

- Earth Science (Structure of the Earth)
 1. Water Cycle
 2. Atmosphere, Lithosphere, Hydrosphere
 3. Ocean Zones and Layers
 4. Layers of the Atmosphere
 5. High Altitude Balloon Project
- Earth Processes and Systems
 1. Climate vs. Weather
 2. Climate Investigations
 3. Water Based Investigations

4th Quarter

- Cells
 1. Structure and Function in Living Systems
 2. Cell Models
 3. Microscopy
- Human Body
 1. Human body (Circulatory system, Endocrine system, digestion, Respiratory system, skeletal system)
 2. Dissection (heart and kidney)
 3. Plants
 4. Root and vascular systems

Expectations for Class:

Come to class every day prepared to give 100%. We have very high expectations so it will be your responsibility to be on time, homework completed, and ready to participate during class time.

Homework: Assigned homework will be posted on my website, which can be accessed on the NPA website. Homework is usually posted over the weekend before the week starts. Homework is assigned a couple of times a week depending on the content being covered. There will also be a couple large projects each quarter for students to demonstrate research and presentation skills. Students will have a short quiz each week so Mrs. Heins can monitor their understanding of science topics. These quizzes will be open note so that they become familiar with using their science notebooks and work on good note-taking skills. Students will also have what is called the "Article of the Week", which is a science article related to the content we are covering at the time.

Absences and Late Work: If a student is absent during the week, it is expected that they will make up any assignments in a time frame equal to the number of days missed. Failure to complete the assignment in the number of days missed will result in a zero for the assignment. Please be sure to check the class website if your child is absent so they know what work they will need to make up.

Extra Help/Make-up Work

If you are having difficulty with anything in this course, please see me as soon as you feel that you have a problem. We can schedule a time that is convenient for both of us. You will receive one day to make up assignments for each day of school that is missed.

Science Notebooks:

Each student will be required to keep a science notebook in Mrs. Heins classroom. These notebooks will help students keep records, notes, and labs just like real scientists. Occasionally, students will be able to go back and use their notebooks for quizzes and labs. The science notebooks will need to be kept neat and organized because they will be graded each quarter as well.

Tests & Quizzes:

Throughout a unit, quizzes will be given weekly to check for student understanding of the material. In addition to that, there will be a unit test at the end of each unit. These tests include multiple choice as well as short answer questions in most cases. These are designed to test both your conceptual understanding of the class material, as well as your problem solving abilities. As an NPA student, you are expected to possess a high level of integrity and ethics and as such, any cheating will not be tolerated.

Grading: The letter grade earned in this class is based on the school wide scale identified in the Student Handbook.

- A - 90% - 100%
- B - 80% - 89%
- C - 70% - 79%
- D - 60% - 69%
- F - Below 60%

Participation:

As a regular part of this class we will be discussing various concepts, results, or homework. During these discussions it is expected that each student is ready to participate (this includes listening attentively to classmates or adding to the discussion yourself). These discussions will be a way for me to check your understanding and assess how well you are learning the material. **There is a high correlation between students that participate in discussions and students that get good grades. Likewise, there is a high correlation between students who perform poorly in class and students that do not participate in discussions.** It is to your advantage to raise any questions or comments when discussion is going on.

Electronics/Cell Phone Policy:

Electronics are welcomed in my class when the need arises. However, on days we are not using devices they will be put in the Electronics Bin next to the teacher's desk **at the beginning of class** (they may be picked up after class is over).

Bathroom Policy:

As noted earlier, laboratories and classroom experiences are a huge part of learning the content in this class. As such, if any time is missed in class, you will likely miss important details from class. To go to the restroom you will sign out on the clipboard by the door, and take the bathroom pass with you. If your name is on the clipboard frequently to go to the restroom we will need to have a conference to try and understand why you are missing so much of our class time.

Please have the following section initialed, signed, and returned to class by _____.

____ (Student Initials) I understand the above concepts and requirements.

____ (Student Initials) I have reviewed the syllabus, requirements, and policies of the course (including the homework policy), and agree to abide by them.

Student Name _____ Student Signature _____ Date _____

Parent Name _____ Parent Signature _____ Date _____