**8th Grade Science Syllabus**

**Course Description:**

This eighth science course focuses on thermal energy, human population and its impact on the environment, weather and climate systems, energy in waves, forces and motions, unity of life, and diversity of life throughout the school year. Students will explore the real-world applications of science all year long through virtual labs, performance tasks, and group collaboration on Microsoft Teams.

**Course Content:**

|  |  |  |
| --- | --- | --- |
| **Content Topic** | **Connected NGSS**  **Performance Expectations** | **Approximate Schedule** |
|  |  |  |
| **1. Thermal Energy** | [MS-PS3-3](https://www.nextgenscience.org/pe/ms-ps3-3-energy), [MS-ETS1-4](https://www.nextgenscience.org/pe/ms-ets1-4-engineering-design), [MS-ETS1-3](https://www.nextgenscience.org/pe/ms-ets1-3-engineering-design) | 5 Weeks |
| **2. Human Population and Its’ Impact on the Environment** | [MS-ESS3-4](https://www.nextgenscience.org/pe/ms-ess3-4-earth-and-human-activity), [MS-PS1-3](https://www.nextgenscience.org/pe/ms-ps1-3-matter-and-its-interactions), [MS-ESS3-3](https://www.nextgenscience.org/pe/ms-ess3-3-earth-and-human-activity) | 6 Weeks |
| **3. Weather and Climate Systems** | [MS-ESS3-5](https://www.nextgenscience.org/pe/ms-ess3-5-earth-and-human-activity), [MS-ESS2-6](https://www.nextgenscience.org/pe/ms-ess2-6-earths-systems), [MS-ESS2-4](https://www.nextgenscience.org/pe/ms-ess2-4-earths-systems), [MS-ESS2-5](https://www.nextgenscience.org/pe/ms-ess2-5-earths-systems) | 7 Weeks |
| **End of Semester 1 (January)** | | |
| **4. Energy in Waves** | [MS-PS4-1](https://www.nextgenscience.org/pe/ms-ps4-1-waves-and-their-applications-technologies-information-transfer), [MS-PS4-2](https://www.nextgenscience.org/pe/ms-ps4-2-waves-and-their-applications-technologies-information-transfer), [MS-PS4-3](https://www.nextgenscience.org/pe/ms-ps4-3-waves-and-their-applications-technologies-information-transfer) | 5 Weeks |
| **5. Forces, Motion, and Energy** | [MS-PS2-1](https://www.nextgenscience.org/pe/ms-ps2-1-motion-and-stability-forces-and-interactions), [MS-PS2-2](https://www.nextgenscience.org/pe/ms-ps2-2-motion-and-stability-forces-and-interactions), [MS-PS3-1](https://www.nextgenscience.org/pe/ms-ps3-1-energy), [MS-ETS1-2](https://www.nextgenscience.org/pe/ms-ets1-2-engineering-design) | 5 Weeks |
| **6. Unity of Life** | [MS-LS4-1](https://www.nextgenscience.org/pe/ms-ls4-1-biological-evolution-unity-and-diversity), [MS-LS4-2](https://www.nextgenscience.org/pe/ms-ls4-2-biological-evolution-unity-and-diversity), [MS-LS4-3](https://www.nextgenscience.org/pe/ms-ls4-3-biological-evolution-unity-and-diversity), | 4 Weeks |
| **7. Diversity of Life** | [MS-LS4-4](https://www.nextgenscience.org/sites/default/files/evidence_statement/black_white/MS-LS4-4%20Evidence%20Statements%20June%202015%20asterisks.pdf), [MS-LS4-5](https://www.nextgenscience.org/sites/default/files/evidence_statement/black_white/MS-LS4-5%20Evidence%20Statements%20June%202015%20asterisks.pdf), [MS-LS4-6](https://www.nextgenscience.org/sites/default/files/evidence_statement/black_white/MS-LS4-6%20Evidence%20Statements%20June%202015%20asterisks.pdf) | 4 Weeks |
| **End of Semester 2 (May)** | | |

**Class Materials/Textbooks:**

All students will need the following every class period:

Computer

Internet Access

Ability to log onto:

* Canvas
* Microsoft Teams
* Student E-Mail
* Infinite Campus

Access to OneNote as a Science Notebook

**Course Policies:**

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**Class Activities:** Students will be required to participate in variety of class activities. Some of these will be assessed for basic student understanding in order to direct instruction and will not have a direct impact on report card grades. Other activities will be used as an artifact in a body of evidence to determine student proficiency on a specific learning goal.

**Assessments**: Student performance will be assessed formatively throughout the year in various ways including quizzes and exit passes and other tasks. Students will also have at least three assessments and/or assignments for every topic taught this year. These will be the main pieces of evidence used to determine if students have mastered topics. Assessments will be graded using SRG and IB criteria.

**Absences/Tardies:** Students are expected to participate through: entry and exit passes, participating with the microphone, chat, and having the camera on as much as possible. Simply showing with the camera off and microphone disengaged does **NOT** qualify for attendance.

**Class Rules:**

* “**Be Respectful**.” The student is always expected to treat the teacher and other students with respect.   Offensive language and hatefulness are not acceptable in this class.  Basically, treat others how we would like to be treated.
* “**Be Responsible**.” Students are expected to be online and prepared for class at the start of class.
* “**Be Ready**.” Being prepared for class means having all materials, books, pencils, etc. out and ready.

**Grading Plan:**

1. Grades are based on a consistent four-point system.

|  |  |
| --- | --- |
| **Scale Score** | **Academic Descriptor** |
| 4 | Exceeding |
| 3 | Proficient |
| 2 | Developing |
| 1 | Beginning |
| 0 | No evidence of student understanding in submitted work. |
| M | Missing- Student has not submitted evidence. |

1. Letter grades, derived from the 4-point scale, will be based solely on achievement of 8th grade science standards. Student participation, work completion, and ability to work with others will be reported separately using the ‘DMPS Citizenship and Employability Skills Rubric.’
2. Scores will be based on a body of evidence.
3. Achievement will be organized by standard/learning topic and reported as a scale score. Cross topic scale scores will be converted to a letter grade for the course.
4. Students will have multiple opportunities to demonstrate proficiency.
5. Incomplete or late work will remain a zero in the grade book until it is completed
6. Accommodations and modifications will be provided to students with special needs.
7. **Grading Scale**:

|  |  |
| --- | --- |
| A | 3.00-4.00 |
| B | 2.50-2.99 |
| C | 2.00-2.49 |
| D | 1.50-1.99 |
| F | Below 1.49 |

**IB Grading**

MYP assigns four (4) criteria to each subject. Each teacher must assess each criterion two times per semester. Criteria based assessments are assessed using an MYP 8-point rubric. When more than one criterion is assessed in a task, there will be multiple grades. For example if an essay is assessed using Criteria A: Analyzing, B: Organizing C: Producing Text, and D: Using Language, then the teacher will input a separate score for each criterion, thus there will be four (4) grades for the essay.

The Assessment Criteria for all eight subject areas are listed below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Subject Area** | **A** | **B** | **C** | **D** |
| Language and Literature (formerly known as English Language Arts) | Analyzing | Organizing | Producing Text | Using Language |
| Language Acquisition (formerly known as World Language) | Comprehending Spoken and Visual Text | Comprehending Written and Visual Text | Communicating | Using Language |
| Individuals and Societies (formerly known as history and/or social science) | Knowing and Understanding | Investigating | Communicating | Thinking Critically |
| Sciences | Knowing and Understanding | Inquiring and Designing | Processing and Evaluating | Reflecting on the Impacts of Science |
| Mathematics | Knowing and Understanding | Investigating Patterns | Communicating | Applying Mathematics in Real-World Contexts |
| Arts (visual and performing) | Knowing and Understanding | Developing Skills | Thinking Creatively | Responding |
| Physical and Health Education | Knowing and Understanding | Planning for Performance | Applying and Performing | Reflecting and Improving Performance |
| Design (technology & culinary courses) | Inquiring and Analyzing | Developing Ideas | Creating the Solution | Evaluating |

**Extra Help:**

I will be available via Microsoft Teams for students who need extra help. Please use the chat or e-mail to set up an appointment.,

**Consequences:**

Students who are unable to follow class rules may have one or more of the following consequences.

* **Warning**: Everyone needs to be reminded of expectations. I will always give students 1-2 warnings and redirections before I use another consequence.
* **Parent Contact**: I will contact home as I feel necessary.

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