

8th Grade Science Syllabus

McGraw Hill Physics: 2025–2026

Teacher: Mrs. Lange

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Course Description: This course is designed to deepen students' understanding of the natural world through inquiry-based instruction. Using the **McGraw Hill Texas Science Grade 8** curriculum and the **2025 Science TEKS**, students will engage in hands-on investigations, critical thinking, and the integration of science and engineering practices.

Materials

- Composition notebook
- Writing instruments
- Calculator
- Lab Materials

Goals: By the end of this year, you will be able to:

- Apply **scientific and engineering practices** to real-world problems.
- Master grade-level content as outlined in the **2025 TEKS**.
- Build skills in **critical thinking, data analysis, modeling, and communication**.
- Make cross-disciplinary connections to math, engineering, and environmental literacy.

Grading

- Daily Grades (Daily Work / Homework / Participation) – **60%**
- Exam Grades (Tests / Projects / Quizzes) – **40%**

Daily Structure

1. Bell Ringer
2. Reading Material/Assessments/Assignments
3. Exit Ticket

Policies

- **Late Work:** 10 points deducted each day. Not accepted after 4 days.
- **Make-Up Work:** The student is responsible for coming in during Pirate Period to receive any missed work/instruction.
- **Extra Help:** Tutoring available by appointment after school or any day during Pirate Period.

Note: This syllabus and pacing guide are intended as a general plan for the course. Adjustments may be made throughout the year to accommodate student needs, school events, or unforeseen circumstances. Any changes will be communicated in a timely and professional manner.

Pacing Guide

| Chapter & Topic | TEKS Covered | Days |
|--|--|------|
| Scientific and Engineering Practices | 8.1A–8.1H, 8.2A–8.2D, 8.3A–8.3C, 8.4A–8.4C, 8.5A–8.5G | 7 |
| Ch. 1: Properties and Conservation of Matter | 8.1A–8.1G, 8.2A–8.2D, 8.3A–8.3B, 8.4A, 8.4C, 8.5B–8.5C, 8.6A–8.6E | 20 |
| Ch. 2: Force and Motion Within Systems | 8.1B–8.1G, 8.2B–8.2D, 8.3A–8.3C, 8.4A–8.4C, 8.5A–8.5B, 8.5D, 8.5F–8.5G, 8.7A–8.7B | 13 |
| Ch. 3: Waves | 8.1A–8.1G, 8.2B–8.2D, 8.3A–8.3B, 8.4A, 8.5A–8.5B, 8.5E, 8.8A–8.8B | 11 |
| Ch. 4: Our Universe | 8.1A–8.1H, 8.2A–8.2D, 8.3A–8.3C, 8.4A–8.4C, 8.5A–8.5E, 8.5G, 8.9A–8.9C | 19 |
| Ch. 5: Weather and Climate | 8.1A–8.1G, 8.2A–8.2D, 8.3A–8.3C, 8.4A, 8.5A–8.5B, 8.5E, 8.5G, 8.10A–8.10C | 18 |
| Ch. 6: Impacts on Global Climate | 8.1A–8.1G, 8.2A–8.2D, 8.3A–8.3C, 8.4A–8.4B, 8.5A–8.5G, 8.11A–8.11B | 15 |
| Ch. 7: Stability and Change in Populations & Ecosystems | 8.1A–8.1G, 8.2B–8.2C, 8.3A–8.3C, 8.4A, 8.4C, 8.5A–8.5B, 8.5D–8.5E, 8.5G, 8.12A–8.12C | 17 |
| Ch. 8: Health and Survival of Organisms | 8.1A–8.1G, 8.2A–8.2D, 8.3A–8.3C, 8.4A, 8.5A, 8.5C–8.5D, 8.5F–8.5G, 8.13A–8.13C | 18 |

Total Days of Instruction: 138 (plus review, testing, and project time)

Instructional Approach

- **5E Model:** Engage, Explore, Explain, Elaborate, Evaluate
- **Hands-On Labs:** At least one per major concept
- **Cross-Curricular Links:** Math, engineering, environmental literacy
- **Differentiated Instruction:** Tiered assignments, choice boards, and technology integration

Year at a Glance

Fall Semester

- SEP (7 days)
- Ch. 1: Matter (20 days)
- Ch. 2: Force & Motion (13 days)
- Ch. 3: Waves (11 days)
- Ch. 4: Universe (Start before winter break)

Spring Semester

- Finish Ch. 4 (Universe)
- Ch. 5: Weather & Climate (18 days)
- Ch. 6: Global Climate Impact (15 days)
- Ch. 7: Ecosystems (17 days)
- Ch. 8: Health & Survival (18 days)
- STAAR Review & Final Projects