



# 8th Grade Science Instructional Plan: Fall Semester

## Course Overview

Welcome to 8th grade Science.

## Contact Information

Teacher Name: Vancant

Email: @midlandisd.net

Phone: 432-240-4700

## Classroom Expectations

**Be Respectful** – Listen. Use kind words. Treat everyone and everything with care.

**Be Responsible** – Be on time. Bring what you need. Start bellwork immediately.

**Follow Directions** – Do what's asked the first time. Raise your hand to speak.

**Stay Focused** – Sit where you're supposed to. Keep your area tidy. Participate.

**Stay Positive** – Try your best. Learn from mistakes. Keep growing.

## Attendance Policy & Its Importance

### Attendance Is the First Step to Success

Coming to school every day ensures every student gets the instruction, connections, and support they need to learn, belong, and grow. Missing just a few days can create gaps in learning—but showing up builds confidence, community, and a path toward long-term achievement.

**Please notify the school if your child will be absent.** Frequent or extended absences may make it more difficult for your child to learn necessary foundational skills that ensure student success this year and in future school years.

## Learning Objectives

By the end of the first semester, students will be able to:

### TEKS

#### 8th Grade Science TEKS Overview

#### Scientific & Engineering Practices (≈40% of instruction)

Students are expected to:

- Ask questions, define problems, and plan/conduct investigations or design solutions using appropriate tools and models (e.g., thermometers, microscopes).
- Use safety equipment, collect quantitative and qualitative data, and organize findings through tables, graphs, and charts.



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- Develop and use models to explain phenomena; distinguish among hypotheses, theories, and laws.
  - Analyze and interpret data to identify patterns, draw evidence-based conclusions, and evaluate engineering designs.
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## Force, Motion & Energy

Students explore:

- How acceleration depends on net force and mass via Newton's Second Law.
  - Applications of Newton's three laws in systems like vehicle restraints, sports, tectonics, and rocket launches.
  - Wave energy transfer, including amplitude, frequency, wavelength of transverse waves and the electromagnetic spectrum.
  - Real-world uses of electromagnetic waves such as in radiation therapy, fiber optics, and astronomical observations.
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## Earth & Space Science

Key focus areas include:

- The life cycle of stars, classification via the Hertzsprung-Russell diagram, and categorizing galaxies (spiral, elliptical, irregular), including Earth's placement in the Milky Way.
  - The origin of the universe, evaluated using scientific data and theories.
  - Interactions among the Sun, hydrosphere, and atmosphere affecting weather and climate.
  - Global atmospheric movement patterns, their influence on local weather, and how ocean currents and air masses contribute to events like hurricanes.
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## Biology & Ecosystems

Students learn to:



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- Recognize various cell organelles and their functions (e.g., nucleus, mitochondria, chloroplasts).
- Use scientific evidence to explain how natural events (volcanic eruptions, ocean current changes, greenhouse gas fluctuations) influence climate

## Course Resources

- Experience Science Student Activity Companion, SAVVAS

## Grading Policy

*According to Midland ISD Grading Policy:*

[Student Handbook](#)

## School-wide System of Communication

Families can reach out by email, phone, or messages during school hours. We are to hear, to listen, to answer questions, and support you both.

Please feel free to reach out with any questions or concerns. We are excited to work together to make this a successful year of learning!

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### **Please fill out the portion below and return this portion to your teacher.**

We acknowledge that we have read and that we understand the expectations in [grade level or course]. We agree to contact the teacher should we have any questions or concerns regarding this instructional plan.

Parent Name: \_\_\_\_\_

Student Name: \_\_\_\_\_

Cell Phone Number: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Parent Signature : \_\_\_\_\_

Student Signature: \_\_\_\_\_

Date: \_\_\_\_\_