EAGLE MOUNTAIN SAGINAW ISD
Curriculum and Instruction

8th Grade Advanced Science Parent Guide

This course is designed to provide students with the skills necessary to apply science concepts to their everyday life. Students will ask questions, plan and conduct investigations, and explain phenomena using appropriate tools and models. Students will identify problems and design solutions using engineering design practices. Recurring themes and concepts will be explored to make connections between overarching concepts. This course is built on the following strands: scientific and engineering practices; matter and energy; force, motion, and energy; earth and space; and organisms and environment. In advanced science, students will engage in inquiry-based science including designing and conducting their own investigations and learning to use and develop critical thinking skills. Texas Essential Knowledge and Skills for Grade 8 Science §112.28 Science, Grade 8, Adopted 2021

1st 6 Weeks: Introduction to Science/Safety – Interactive Science Notebooks Matter and Chemical Reactions: Classification of Matter Properties of Water Acids and Bases Chemical Reactions & Conservation of Mass Force, Motion, and Acceleration: Acceleration Newton's Law of Motion	**4th 6 Weeks:** Weather and Climate: Local Weather Tropical Cyclones, Typhoons, and Hurricanes Impacts on Global Climate: Natural Events that Influence Climate Human Events that Influence Climate Cell Structures, Inheritance, & Survival: Functions of Cell Structures Variations, Adaptions, and Survival
2nd 6 Weeks: Force, Motion, and Acceleration: Newton's Law of Motion Waves and the Electromagnetic Spectrum: Characteristics of Waves Electromagnetic Waves, Application of Electromagnetic Waves The Universe: Stars	**5th 6 Weeks:** Ecosystems and Population Change: Ecosystem Disruptions and Food Webs Ecological Succession Biodiversity STAAR Review
3rd 6 Weeks: The Universe: Stars Galaxies Origins of the Universe Weather and Climate: Energy in Earth's Atmosphere and Hydrosphere Global Patterns of Atmospheric Movement	**6th 6 Weeks:** 8th Grade Science STAAR Review 8th Grade Science STAAR Exam Matter and Energy Electromagnetic Waves Origin of Universe Earth and Space – Natural Events, Human Activities, Carbon Cycle Environment – natural disasters – human intervention and energy

Questions? Please contact your course science teacher. Rev. 10-2-25