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Description automatically generated**8th Grade Advanced Science Parent Guide**

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| 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](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=19&pt=2&ch=112&rl=28) | |
| 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  Enrichment/Extension |

**Questions?** Please contact your course science teacher.