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Description automatically generated**7th 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 7 Science [§112.27 Science, Grade 7, 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=27) | |
| 1st 6 Weeks: Introduction to Science/Safety – Interactive Science Notebooks  Matter and Solutions:  Elements and Compounds  Changes in Matter  Solutions  Force and Motion:  Speed & Velocity  Analyzing an Objects Motion  Newton’s First Law | 4th 6 Weeks: Plate Tectonics: Volcanoes  Water and Human Activity:  Surface Water  Groundwater  Importance of the Ocean  Body Systems: Organization, Communication and Movement  Organization in Plants and Animals  Nervous System  Endocrine & Reproductive Systems  Skeletal & Muscular Systems |
| 2nd 6 Weeks: Thermal Energy:  Temperature and Kinetic Energy  Thermal Energy Transfer  Thermal Energy and Equilibrium | 5th 6 Weeks: Body Systems: Energy and Defense  Circulatory and Respiratory Systems  Digestive and Urinary Systems  Immune and Integumentary Systems  Inheritance and Changes in Populations:  How Traits are Passed  How Populations Change  Classification: Taxonomy |
| 3rd 6 Weeks: The Solar System:  Objects in the Solar System  Gravity and Motion  Life and Earth  Plate Tectonics & Earth’s Surface  Earthquakes | 6th 6 Weeks: Classification: Taxonomy  Archaea, Bacteria, & Ecosystems  Eukarya and Ecosystems  Matter and Energy in Ecosystems:  Energy Flow in Ecosystems  Cycles of Matter |

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