**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%24ext.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 NotebooksMatter and Solutions: Elements and CompoundsChanges in MatterSolutionsForce and Motion:Speed & VelocityAnalyzing an Objects MotionNewton’s First Law | 4th 6 Weeks:Plate Tectonics: VolcanoesWater and Human Activity:Surface WaterGroundwaterImportance of the OceanBody Systems: Organization, Communication and MovementOrganization in Plants and AnimalsNervous SystemEndocrine & Reproductive SystemsSkeletal & Muscular Systems |
| 2nd 6 Weeks:Thermal Energy:Temperature and Kinetic EnergyThermal Energy Transfer Thermal Energy and Equilibrium | 5th 6 Weeks:Body Systems: Energy and DefenseCirculatory and Respiratory SystemsDigestive and Urinary SystemsImmune and Integumentary SystemsInheritance and Changes in Populations:How Traits are PassedHow Populations ChangeClassification: Taxonomy |
| 3rd 6 Weeks:The Solar System:Objects in the Solar SystemGravity and MotionLife and EarthPlate Tectonics & Earth’s SurfaceEarthquakes | 6th 6 Weeks:Classification: TaxonomyArchaea, Bacteria, & EcosystemsEukarya and EcosystemsMatter and Energy in Ecosystems:Energy Flow in EcosystemsCycles of Matter |

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