

| Grade 6 EARTH SCIENCE Unit | Anchor Phenomenon, Engineering Design Project/Inquiry Project | Performance Expectations covered (PEs) | # Lessons | # Days |
|-------------------------------------|---|---|--------------|-----------|
| 1. Intro to Grade 6 Science | Anchor: What is dry ice? IP: Ice and dry ice investigations | (setting norms, practicing teamwork and SEPs) | 15 | 18 |
| 2. Weather | Anchor: What causes different kinds of weather? EDP: Design or improve a weather instrument IP: What causes extreme weather phenomena? | MS-ESS2-4, MS-ESS2-5, MS-ETS1-1 | 18 | 23 |
| 3. Climate | Anchor: Why do places have such different climates? EDP: Design an ecotourism resort | MS-ESS2-6 | 12 | 19 |
| 4. Climate Change | Anchor: Can we do anything about climate change? EDP: Design a program as a class to lower carbon footprint, gather data to measure its effectiveness | MS-ESS3-3, MS-ESS3-5, MS-ETS1-1, 1-2, 1-3, 1-4 | 13 | 24 |
| 5. Earth Systems | Anchor: How did the Grand Canyon form? EDP: Design a building for earthquakes | MS-ESS2-1, 2-2, 2-3, 3-2, MS-ETS1-1, 1-2, 1-3, 1-4 | 18 | 30 |
| 6. Natural Resources | Anchor: How do we stop plastics pollution? IP: How do we solve the plastics pollution problem? | MS-ESS3-1 | 10 | 16 |
| 7. Earth's Place in the Universe | Anchor: Where are we in space? How do we know? EDP: Design an interactive model | MS-ESS1-1, 1-2, 1-3 | 12 | 16 |
| 8. Geologic Time Scale | Anchor: Why did the dinosaurs go extinct? IP: Design a presentation on Earth's timeline, cite evidence | MS-ESS1-4 | 13 | 20 |
| 9. Human Impact | Anchor: How do our choices affect our planet? EDP: Design a solution and present it to decision makers | MS-ESS3-4 | 10 | 14 |

Total: 180 days

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| Grade 7 LIFE SCIENCE Unit | Anchor Phenomenon, Engineering Design Project/Inquiry Project | Performance Expectations covered (PEs) | # Lessons | # Days |
|--------------------------------------|---|---|--------------|-----------|
| 1. Intro to Gr 7 Science | Anchor: Who can be a scientist or engineer? EDP: Paper tower challenge | MS-ETS1-1, 1-2 | 11 | 15 |
| 2. Cells | Anchor: What makes us sick? EDP: Design a magnifying device; Make a microbe-based food (optional) IP: Cancer | MS-ETS1-1, MS-LS1-1, MS-LS1-2 | 25 | 38 |
| 3. Body Systems | Anchor: How does your body work? EDP: Design an organ donation and delivery system | MS-LS1-3, MS-LS1-8 MS-ETS1-1 | 18 | 30 |
| 4. Traits and Survival | Anchor: Why are some species endangered? IP: Endangered species research project | MS-LS1-4, MS-LS1-5, MS-LS3-2 | 13 | 23 |
| 5. Respiration and Photosynthesis | Anchor: What do you need for a Mars mission? IP: Design an experiment to measure rate of photosynthesis or respiration. EDP: Design a sustainable Mars colony | MS-LS1-6, MS-LS1-7 MS-ETS1-1 | 14 | 20 |
| 6. Ecology | Anchor: How can we protect/restore ecosystems? IP: Ecosystem study, ecosystem restoration solutions. | MS-LS2-1, 2-2, 2-3, 2-4, 2-5, | 20 | 28 |
| 7. Evolution | Anchor: What causes these unusual traits? IP: Should genetic engineering be allowed? | MS-LS3-1, 4-1, 4-2, 4-3, 4-4, 4-5, 4-6 | 17 | 26 |

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| Grade 8 PHYSICAL SCI. Unit | Anchor Phenomenon, Engineering Design Project/Inquiry Project | Performance Expectations (PEs) | # Lessons | # Days |
|-------------------------------------|---|---|--------------|-----------|
| 1. Intro to Gr 8 Science | Anchor: How can we observe phenomena that happen too slowly/quickly? EDP: Make a slow-motion or time lapse video | MS-ETS1-1 | 10 | 10 |
| 2. Thermal Energy | Anchor: Can you really use energy from the Sun to cook food? EDP: Design a better solar cooker | MS-PS3-3, 3-4, 3-5 (start), MS-ETS1-1, 1-2, 1-3, 1-4 | 14 | 22 |
| 3. Properties of Matter | Anchor: What killed Blinky the fish? EDP: Design a foil boat | MS-PS1-4, 1-2 (started) MS-ETS1-1 | 17 | 15 |
| 4. Elements and Compounds | Anchor: What is it made of? EDP: Design a crystal growing kit with package & instructions | MS-PS1-1, 1-3, MS-ETS1-1, 1-2 | 14 | 22 |
| 5. Physical and Chemical Changes | Anchor: How do hot/cold packs work? EDP: Design a hot or cold pack accessory | MS-PS1-2(cont.) 1-5, 1-6, MS-ETS1-1, 1-2, 1-3, 1-4 | 16 | 17 |
| 6. Motion and Forces | Anchor: How do we get astronauts safely to the ISS & back? EDP: Design a capsule for safe landing | MS-PS2-1(start), 2-2, 2-4 MS-ETS1-1, 1-2, 1-3, 1-4 | 29 | 32 |
| 7. Kinetic and Potential Energy | Anchor: How do we prevent concussions? EDP: Design and analyze safety equipment | MS-PS2-1(cont.), 3-1, 3-2, 3-5 (cont.) MS-ETS1-1, 1-2, 1-3, 1-4 | 13 | 19 |
| 8. Electricity and Magnetism | Anchor: What is causing the Earth's magnetic field? EDP: Design an electrical system for a toy house | MS-PS2-3, 2-5, 3-2 MS-ETS1-1 | 17 | 20 |
| 9. Waves | Anchor: What are sound and light? What are they used for? IP: What makes a better cup phone? EDP: Design an art installation involving sound and light | MS-PS4-1, 4-2, 4-3 | 15 | 23 |

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