

**City School District of Albany
Science Curriculum Pacing Map
Grade 5**

Text: Harcourt Science

MONTH	CONTENT/TOPIC(S)	NYS STANDARD/KEY IDEA/PERFORMANCE INDICATOR	VOCABULARY	SKILLS	ASSESSMENTS
September – Mid November	<p style="text-align: center;">UNIT A</p> <p>Chapter 1 – From single cells to body systems Lesson 1 – What are cells and what do they do? Lesson 2 – How do body systems transport materials? Lesson 3 – How Do Bones, Muscles and Nerves Work Together?</p> <p>Chapter 2-Classifying Living Things Lesson 1 – How do scientists classify living things? Lesson 2 – How are animals classified? Lesson 3 – How Are Plants Classified?</p> <p>Chapter 3 – Animal Growth and Hereditary Lesson 1 – How do animals grow and reproduce?</p>	<p>Standard 4 1.1a – g 1.2 a – h 1.2 a – I</p> <p>5.1 a – g</p> <p>4.1 a - d</p>	<p>Cell Cell membrane Nucleus Cytoplasm Diffusion Osmosis Tissue Organ System Capillaries Alveoli Villi Nephrons Bone marrow Joints Tendons Ligaments Neuron Receptors</p> <p>Classification Kingdom Moneran Protist Fungi Genus Species Vertebrae Mammal Reptile Amphibian Fish Birds Invertebrate Vascular plant Nonvascular plant</p> <p>Chromosome Mitosis Asexual reproduction Sexual reproduction meiosis</p>	<p>Observe Compare Classify/order Gather, record, display or interpret data Use numbers Communicate Plan and conduct simple investigations Measure Predict Infer</p>	<p>Teacher portfolio Evaluation Checklist Assessment Performance Task Workbook</p>

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September - Mid November	<p>Lesson 2 – What is a Life Cycle? Lesson 3 – Why are offspring like their parents?</p> <p>Chapter 4 – Plants and Their Adaptations Lesson 1 – What are the functions of roots, stems and leaves? Lesson 2 – How do plants reproduce? Lesson 3 – How do people use plants?</p>	<p>4.3a-f</p> <p>2.1a-e 2.2a-c</p> <p>1.1f</p>	<p>Life cycle Direct development Metamorphosis</p> <p>Inherited trait Dominant trait Recessive trait Gene</p> <p>Xylem Phloem Photosynthesis Chlorophyll</p> <p>Spore Gymnosperm Pollen Angiosperm Germinate</p> <p>Grain fiber</p>	<p>Observe Compare Classify/order Gather, record, display or interpret data Use numbers Communicate Plan and conduct simple investigations Measure Predict Infer</p>	<p>Teacher portfolio Evaluation Checklist Assessment Performance Task Workbook</p>

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Mid November - January	<p>Chapter 1 – Cycles in Nature (2 weeks) Lesson 1 – How does Nature reuse materials? Lesson 2 – Why is the water cycle important?</p> <p>Chapter 2- Living Things Interact (3 weeks) Lesson 1 – What are ecosystems? Lesson 2 – How does energy flow through an ecosystem? Lesson 3 – How do organisms compete and survive in an ecosystem? Lesson 4 – What is extinction and what are causes?</p>	<p>LE 5.1 a – g 2.2 – o 3.2 a 2.1 j</p> <p>7.1 a-c 7.2a-b</p> <p>7.2 c 3.2a-b</p>	<p>Nitrogen cycle Carbon oxygen cycle Respiration Water cycle Evaporation Condensation Precipitation Transpiration</p> <p>Individual Population Community Ecosystem Habitat Niche Producer Consumer Food chain Decomposer Food web Energy pyramid</p> <p>Competition Symbiosis Instinct Learned behavior</p>	<p>Observe Compare Classify Order Gather, record, display or interpret data Communicate Use numbers Plan and conduct simple investigations Measures Predict Infer Draw conclusions Use time/space Relationships Formulate or use models Hypothesize Identify and control variables</p>	<p>Teacher portfolio Evaluation Checklist Assessment End of chapter tests Performance task Workbook</p>

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MONTH	CONTENT/TOPIC(S) UNIT B CONT.	NYS STANDARD/KEY IDEA/PERFORMANCE INDICATOR	VOCABULARY	SKILLS	ASSESSMENTS
Mid November - January	Chapter 3 – Biomes <u>(2 weeks)</u> Lesson 1 – What are land biomes? Lesson 2 – What are water ecosystems? Chapter 4 – Protecting and Preserving Ecosystems Lesson 1 – How do ecosystems change naturally? Lesson 2 – How do people change ecosystems? Lesson 3 – How can people treat ecosystems? Lesson 4 – How can people help restore damaged ecosystems?	7.1a 7.1b 7.2a 7.1 c 7.2a, c, d	Biome Climate zone Inter-tidal zone rear-shore zone open-ocean zone estuary Succession Pioneer plants Climax community Pollution Acid rain Conserving Reduce Reuse Recycle Reclamation Wetlands		

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MONTH	CONTENT/TOPIC(S) UNIT C	NYS STANDARD/KEY IDEA/PERFORMANCE INDICATOR	VOCABULARY	SKILLS	ASSESSMENTS
February – March	<p>Chapter 1 – Changes to Earth’s Surface Lesson 1 – What processes change landforms? Lesson 2 – What causes mountains, volcanoes, earthquakes? Lesson 3 – How has earth’s surface changed?</p> <p>Chapter 2 – Rocks and Minerals Lesson 1 – What are minerals Lesson 2 – What are Rocks? Lesson 3 – What is the rock cycle?</p> <p>Chapter 3 – Weather and Climate Lesson 1- How can we observe and measure weather conditions? Lesson 2: What causes weather? Lesson 3 – what is climate and how does it change?</p>	<p>Standard 4 PS 2.2 2.2a – h</p> <p>PS 2.1e-j</p> <p>PS 2.2i – p</p>	<p>Land forms Weathering Erosion Deposition Mass movement Crust Mantle Core Plate Magma Volcano Earthquake Fault Continental drift Pangea fossil</p> <p>mineral streak luster hardness Rock Igneous rock Sedimentary rock Metamorphic rock Rock Cycle Atmosphere Air pressure Humidity Precipitation Evaporation Local winds Prevailing winds Air mass Front Climate Microclimate El nino Greenhouse effect Global warming</p>	<p>Observe Compare Classify/order Gather, record, display or interpret data Use numbers Communicate Plan and conduct simple investigations Experiments Measure Predict Infer Draw conclusions Use time/space relationships</p>	<p>Teacher Portfolio Checklist Workbook Performance Tasks Chapter Assessment</p>

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February - March	Chapter 4 – Exploring the Ocean Lesson 1 – What are the Oceans Like? Lesson 2 – How ocean waters move. Lesson 3 – How do oceans interact with land? Lesson 4 – How do people explore the oceans and use ocean resources?	PS 2.1a – d	Salinity Water pressure Wave Current Tide Shore Headland Tide pool Jetty Scuba Submersible Sonar Desalination	Observe Compare Classify/order Gather, record, display or interpret data Use numbers Communicate Plan and conduct simple investigations Experiments Measure Predict Infer Draw conclusions Use time/space relationships	Teacher Portfolio Checklist Workbook Performance Tasks Chapter Assessment

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MONTH	CONTENT/TOPIC(S) UNIT D	NYS STANDARD/KEY IDEA/PERFORMANCE INDICATOR	VOCABULARY	SKILLS	ASSESSMENTS
April – Early May	<p>The Solar System and Beyond Chapter 1- Earth, Moon, and Beyond Lesson 1 – How do the earth and moon compare? Lesson 2 – What else is in the Solar System? Lesson 3- How Have people explored the solar system</p> <p>Chapter 2- The Sun & Other Stars Lesson 1-What are the Features of the sun? Lesson 2- How are stars classified? Lesson 3- What are Galaxies?</p>	<p>PS 1.1a-j</p>	<p>Revolve, orbit Rotate, axis, eclipse Solstice, equinox, planets, asteroids Comets, telescope Satellite, space probe</p> <p>Photosphere, corona Sunspot, solar flare Solar wind Magnitude Main sequence Universe, galaxy Light-year</p>	<p>Observe Compare Classify, order, gather, record, display or interpret data Use numbers Communicate Plan and conduct simple investigations Measure Predict</p>	<p>Teacher/portfolio Checklist Workbook Performance tasks Chapter assessment</p>

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MONTH	CONTENT/TOPIC(S) UNIT E	NYS STANDARD/KEY IDEA/PERFORMANCE INDICATOR	VOCABULARY	SKILLS	ASSESSMENTS
Early May – Early June	Chapter 1 – Matter and Its Properties Lesson 1 – How can physical properties be used to identify matter? Lesson 2 – How does matter change from one state to another? Lesson 3 – how does matter react chemically? Chapter 2 – Atoms and Elements Lesson 1 – What are atoms and elements? Lesson 2 – what are compounds?	3.1a-h 3.2a-d 3.1 a-f 3.2 a – e 3.3 a – e 3.3 f - g	Matter Physical properties Mass Weight Volume Density Solubility Solid Liquid Gas Evaporation Condensation Reactivity Combustibility Nucleus Proton Neutron Electron Element Atom Molecule Periodic table Compound	Observe Compare Gather, ,record, display or intepert data Communicate Plan and conduct simple investigations Measure Predict Infer Draw conclusion Experiment	Teacher portfolio Evaluation Checklist Chapter assessments Workbook Performance task

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MONTH	CONTENT/TOPIC(S) UNIT F CON'T	NYS STANDARD/KEY IDEA/PERFORMANCE INDICATOR	VOCABULARY	SKILLS	ASSESSMENTS
June	<p>Lesson 3 – What are light and sound energy? Lesson 4 – What are thermal And chemical energy?</p> <p>Chapter 4 – How People Use Energy Lesson 1- How do people use fossil fuels? Lesson 2 – How can moving water generate electricity? Lesson 3 – What other sources of energy do people us?</p>	<p>4.4 b –c 4.2 a – b 4.2 e</p> <p>4.5 a- b 4.1 a – e</p>	<p>Reflection Refraction Lens Pitch Volume Temperature Heat Conduction Convection Radiation</p> <p>Chemical bonds</p> <p>Hydroelectric energy Tidal energy</p> <p>Biomass Nuclear energy Geothermal energy Solar energy Fusion energy</p>		

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