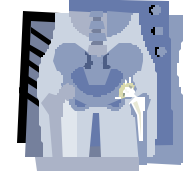




**Science Third Grade- Curriculum Guide
By Strand
Irving Independent School District**



Essential Questions:

- What properties and patterns are in my environment?
- How are models similar to or different from the natural world?
- What would happen if parts of a system were added or removed?
- What could make the changes to occur faster or slower?

- * How are properties and patterns used in constructing models?
- * How are the parts of a system connected?
- * What causes changes?
- * What causes scientific explanations to change?

TEKS Knowledge & Skills		Student Expectation	TAKS Objective	1	2	3	4	5	Observable Behavior	Resources
Life Science	3.5 The student knows that systems exist in the world.	a. Observe and identify simple systems such as a sprouted seed and a wooden toy car		✓	✓	✓	✓	✓ T	<ul style="list-style-type: none"> describe the cycle, structures, and processes that occur in a human body system (ie; skeletal system) categorize the functions of joints and bones within the human body describe the air cycle of photosynthesis 	<ul style="list-style-type: none"> Human Body Science Kit McGraw Hill textbook, Unit 2,3, 5, 6 'Observe a Leaf' , 'Seedsort', 'Seeds Travel', 'Food Chain Facts'; AIMS
	Focus Question: How does the human body function as a system?	b. observe a simple system and describe the role of various parts such as a yo-yo and string		✓	✓	✓	✓	✓ T	<ul style="list-style-type: none"> describe the system of the human body and how it functions like a simple system label parts of flower 	<ul style="list-style-type: none"> Human Body Science Kit McGraw Hill textbook, Unit 2,3, 5, 6 'Observe a Leaf' , 'Seedsort', 'Seeds Travel', 'Food Chain Facts'; AIMS Heart course in PE
	3.8 The student knows that living organisms need food, water, light, air, a way to dispose of waste, and an environment in which to live	a. observe and describe the habitats of organisms within an ecosystem	2	✓		✓ T		✓	<ul style="list-style-type: none"> describe and compare the life cycle of the plants and animals within an ecosystem 	<ul style="list-style-type: none"> Textteam Vista, Constancy and Change, http://www.tenet.edu/teks/science/stacks/instruct/vistas/grade_3_c&c.pdf

3.10 The student knows that many likenesses between offspring and parents are inherited from the parents	a. identify some inherited traits of plants	2			✓	✓	✓	T	<ul style="list-style-type: none"> identify likenesses an organism has with its parent collect information about three generations of a plant, organize a data chart to include information 	<ul style="list-style-type: none"> Snapshot 3.9B Snapshot 3.10A
Focus Question: What is an inherited trait and how does it affect the offspring?	b. identify some inherited traits of animals	2			✓	✓	✓	T	<ul style="list-style-type: none"> identify likenesses an organism has with its parent collect information about three generations of an animal/self and family organize a data chart to include information. 	<ul style="list-style-type: none"> Snapshot 3.10B
3.5 The student knows that systems exist in the world.	a. Observe and identify simple systems such as a sprouted seed and a wooden toy car	3	✓	✓	✓	✓	✓	T	<ul style="list-style-type: none"> explore with simple systems describe how a simple system works easier or harder 	<ul style="list-style-type: none"> Lifting Heavy Things Science Kit Science Snapshot, Forces, http://www.tenet.edu/teks/science/stacks/instruct/vistas/3rd_gradetext.pdf Science leveled readers: <u>Machines that Build</u>
Focus Question: What judgment can you make about a simple system?	b. observe a simple system and describe the role of various parts such as a yo-yo and string	3	✓	✓	✓	✓	✓	T	<ul style="list-style-type: none"> describe various parts of simple systems explain the role of each part of a simple machine construct a diagram with labeled parts 	<ul style="list-style-type: none"> Lifting Heavy Things Science Kit Science Snapshot 3.5B , http://www.tenet.edu/teks/science/stacks/instruct/vistas/3rd_gradetext.pdf
3.6 The student knows that forces cause change	a. measure and record changes in the position and direction of the motion of an object to which a force such as a push or pull has been applied	4				✓	✓	T	<ul style="list-style-type: none"> collect and organize data from an experiment analyze data collected 	<ul style="list-style-type: none"> Lifting Heavy Things Science Kit Science Snapshot3.6A, http://www.tenet.edu/teks/science/stacks/instruct/vistas/3rd_gradetext.pdf

Focus Question: What conclusions can you draw about how forces work?								Analyze specific tools for specific ideas Brainstorm and record kinds of tools needed to build log cabin, pyramid, today's home, etc	<ul style="list-style-type: none"> Internet resources 	
3.7 The student knows that matter has physical properties	a. gather information including temperature, magnetism, hardness, and mass using appropriate tools to identify physical properties of matter	3	✓	✓	✓	✓	✓	T	<ul style="list-style-type: none"> identify the physical properties of matter name different substances that are in each state of matter 	<ul style="list-style-type: none"> Textteams Vista, Properties, Patterns, and Models, http://www.tenet.edu/teks/science/stacks/instruct/vistas/ppm3.pdf
Focus Question: What are the three types of matter and their properties?	b. identify matter as liquids, solids, and gases	3			✓	✓	✓	T	<ul style="list-style-type: none"> investigate the physical properties of various types of matter classify liquids, solids, and gases 	<ul style="list-style-type: none"> Snapshot 3.7 B
3.5 The student knows that systems exist in the world.	a. Observe and identify simple systems such as a sprouted seed and a wooden toy car	4	✓	✓	✓	✓	✓	T	<ul style="list-style-type: none"> describe the water cycle 	<ul style="list-style-type: none"> Water Science kit Textteams Vista, Systems; http://www.tenet.edu/teks/science/stacks/instruct/vistas/3systems.pdf
Focus Question: What are the stages of the water cycle>	b. observe a simple system and describe the role of various parts such as a yo-yo and string	4	✓	✓	✓	✓	✓	T	<ul style="list-style-type: none"> explain the stages of the water cycle and how they relate to each other 	<ul style="list-style-type: none"> Water Science Kit Textteams Vista, Systems, http://www.tenet.edu/teks/science/stacks/instruct/vistas/3systems.pdf
3.6 The student knows that forces cause change	a. measure and record changes in the position and direction of the motion of an object to which a force such as a push or pull has been applied	4				✓	✓	T	<ul style="list-style-type: none"> list examples of forces that cause change 	<ul style="list-style-type: none"> Snapshot 3.6A

Earth Science

Focus Question: What kinds of forces change the surface of the Earth?	b. identify that the surface of the Earth can be changed by forces such as earthquakes and glaciers	4				✓	✓	T	<ul style="list-style-type: none"> design an example of a force changing the surface of the Earth label parts and show sequence 	<ul style="list-style-type: none"> Science leveled readers: <u>The Hurricane Hens</u>; <u>Stormy Weather</u>; <u>Supersonic Shake</u>
3.11 The student knows that the natural world includes earth materials and objects in the sky	a. identify and describe the importance of earth materials including rocks, soil, water, and gases of the atmosphere in the local area and classify them as renewable, nonrenewable, or inexhaustible resources	4			✓	✓	✓	T	<ul style="list-style-type: none"> give examples of earth materials and explain the important role they play analyze what would be needed to sustain life on another planet 	<ul style="list-style-type: none"> Snapshot 3.11 A
Focus Question: What natural resources are found in the Earth and sky?	b. identify and record properties of soils such as color and texture, capacity to retain water, and ability to support the growth of plants	4		✓	✓	✓	✓		<ul style="list-style-type: none"> investigate the relationship of soil and water and how they affects each other 	<ul style="list-style-type: none"> Textteams Vista, Systems, http://www.tenet.edu/teks/science/stacks/instruct/vistas/3sytems.pdf Textteams Vista, Properties, Patterns, and Models, http://www.tenet.edu/teks/science/stacks/instruct/vistas/ppm3.pdf Snapshot 3.11B
	c. identify the planets in our solar system and their position in relation to the Sun	4	✓	✓	✓	✓	✓	T	<ul style="list-style-type: none"> create a model of the solar system 	<ul style="list-style-type: none"> Science leveled readers: <u>Mars Discovery</u> Snapshot 3.11C
	d. describe the characteristics of the Sun	4			✓	✓	✓	T	<ul style="list-style-type: none"> list of characteristics of the sun 	<ul style="list-style-type: none"> Snapshot 3.11D
										•
3.1 The student conducts field and laboratory investigations following home and school safety procedures and environmentally	a. demonstrate safe practices during field and laboratory investigations	1	✓	✓	✓	✓	✓	T	<ul style="list-style-type: none"> identify safe and appropriate practices to be used when conducting field and laboratory investigations in an environmentally 	<ul style="list-style-type: none"> All Science Kits Textteams Vistas Science Snapshots McGraw Hill Textbook

Nature of Science

appropriate and ethical practices								friendly and ethical manner.	
Focus Question: What is a laboratory investigation? Why safety?	b. make wise choices in the use and conservation of resources and the disposal or recycling of materials	1	✓	✓	✓	✓	✓	• evaluate the importance of conservation and how it affects our environment and justify your answers •	<ul style="list-style-type: none"> All Science Kits Textteams Vistas Science Snapshots McGraw Hill Textbook Science leveled readers; <u>Save Our Park Trees</u>
3.2 The Student uses scientific inquiry methods during field and laboratory investigations.	a. plan and implement descriptive investigations including asking well-defined questions, formulation testable hypotheses, and selecting and using equipment and technology	1	✓	✓	✓	✓	✓	• distinguish between a testable question and non-testable question • select and use appropriate equipment for an investigation • use technology equipment to test hypotheses	<ul style="list-style-type: none"> All Science Kits Textteams Vistas Science Snapshots McGraw Hill Textbook
Focus Question: What does it mean to use the scientific method?	b. collect information by observing and measuring	1	✓	✓	✓	✓	✓	• use available manipulative to collect information and draw conclusions.	<ul style="list-style-type: none"> All Science Kits Textteams Vistas Science Snapshots McGraw Hill Textbook
	c. analyze and interpret information to construct reasonable explanations from direct and indirect evidence	1	✓	✓	✓	✓	✓	• draw conclusions from collected data • evaluate for reasonableness • organize data in a useful way	<ul style="list-style-type: none"> All Science Kits Textteams Vistas Science Snapshots McGraw Hill Textbook
	b. communicate valid conclusions	1	✓	✓	✓	✓	✓	• explain verbally and in writing the understanding of the conclusion	<ul style="list-style-type: none"> All Science Kits Textteams Vistas Science Snapshots McGraw Hill Textbook
	d. construct simple graphs, tables, maps, and charts using tools, including computers to organize, examine and evaluate information	1	✓	✓	✓	✓	✓	• plan and implement methods of communication for information	<ul style="list-style-type: none"> All Science Kits Textteams Vistas Science Snapshots McGraw Hill Textbook
3.3 The Student knows that critical thinking and scientific problem solving are used in making decisions	a. analyze, review, scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information	1	✓	✓	✓	✓	✓	• compare and contrast scientific explanation to construct a reasonable solution •	<ul style="list-style-type: none"> All Science Kits Textteams Vistas Science Snapshots McGraw Hill Textbook

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Focus Question: How can you explain your plan for solving a problem?	b. draw inferences based on information for products and services	1	✓	✓	✓	✓	✓	T	<ul style="list-style-type: none"> identify information that is needed to solve a problem 	<ul style="list-style-type: none"> All Science Kits Textteams Vistas Science Snapshots McGraw Hill Textbook
	c. represent the natural world using models and identify their limitations	1	✓	✓	✓	✓	✓	T	<ul style="list-style-type: none"> construct models and identify the limitations construct and explain the purpose of models in science 	<ul style="list-style-type: none"> All Science Kits Textteams Vistas Science Snapshots McGraw Hill Textbook
	d. evaluate the impact of research on scientific thought, society, and the environment								<ul style="list-style-type: none"> relay in writing view points concerning scientific research and its impact 	<ul style="list-style-type: none"> All Science Kits Textteams Vistas Science Snapshots McGraw Hill Textbook
	e. connect Grade 3 science concepts with the history of science and contributions of scientists								<ul style="list-style-type: none"> communicate a timeline representing scientists and their contributions 	<ul style="list-style-type: none"> All Science Kits Textteams Vistas Science Snapshots McGraw Hill Textbook Science leveled readers: <u>Ben Franklin</u>; <u>Edward Jenner and the Smallpox Vaccine</u>
3.4 The Student knows how to use a variety of tools and methods to conduct science inquiry	a. collect and analyze information using tools including calculators, microscopes, cameras, safety goggles, sound recorders, clocks, computers, thermometers, hand lenses, meter sticks, rulers, balances, magnets, and compasses	1	✓	✓	✓	✓	✓	T	<ul style="list-style-type: none"> use appropriate tools and manipulative to solve questions 	<ul style="list-style-type: none"> All Science Kits Textteams Vistas Science Snapshots McGraw Hill Textbook
Focus Question: What tools and methods are necessary to conduct an appropriate scientific investigation?	b. demonstrate that repeated investigation may increase the reliability of results								<ul style="list-style-type: none"> construct a graph that shows consistency in results 10/24/2002 	<ul style="list-style-type: none"> All Science Kits Textteams Vistas Science Snapshots McGraw Hill Textbook

4.10 The student knows that certain past events affect present and future events.	a. identify and observe effects of events that require time for changes to be noticeable including growth, erosion, dissolving, weathering, and flow								<ul style="list-style-type: none"> Observe the changes made to foods during testing Develop a timeline of inventions 	<ul style="list-style-type: none"> Food Chemistry Kit Heart Course in PE
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5. 5 The student knows that systems exist in the world.	a describe some cycles, structures, and processes that are found in a simple system			<ul style="list-style-type: none"> Investigating the relationship of nutrients to human health 	<ul style="list-style-type: none"> Food Chemistry Kit
	b. describe some interatctions that occur in a simple system			<ul style="list-style-type: none"> Investigating the relationship of nutrients to human health 	<ul style="list-style-type: none"> Food Chemistry Kit