Science Core Curriculum
Kindergarten – Quarter 4

NYS Standard	Key Ideas & Performance Indicators	Resources Chapters, Web Links, Leveled Books, Technology Tools, Nonfiction/Technical Writing	Assessments
LIFE SCIENCE			
	Performance Indicator 4.1 Describe the major stages in the life cycles of selected plants and animals.	http://www.bbc.co.uk/schools/ks2bitesize/science/living_things/help_plants_grow/play.shtml	Sequence the Life Cycle of a Plant/Animal Teacher Guide Pg EMxiii
	Major Understandings:		
4.1a	Plants and animals have life cycles. These may include beginning of life, development into an adult, reproduction as an adult, and eventually death.	Pgs. 34-35, 42-45 http://www.brainpopjr.com/science/animals/frogs/ http://www.brainpopjr.com/science/animals/butterflies/ http://www.ngfl-cymru.org.uk/vtc/2008-09/cynnal/discovery/eng/life_cycle_2.html	Performance Assessment Picture Cards Teacher Guide Pg 71a
4.1b	Each kind of plant goes through its own stages of growth and development that may include seed, young plant, and mature plant.	Chapter 2 Pgs. 27a-29, 42-43 http://www.brainpopjr.com/science/plants/plantlifecycle/	Lab – Experiment: do seeds need water? Pgs. 72-73
4.1c	The length of time from beginning of development to death of the plant is called its life span.	Pgs. 42-43 www.discoveryeducation.com How Plants Grow	Performance Assessment How Plants Grow Teachers Guide Pgs 65d

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4.1d	Life cycles of some plants include changes from seed to mature plant.	Pgs. 24-25, 42-43 www.pearsonsuccessnet.net Take it to the Net: Life Science Plants Change and Grow	Performance Assessment How Plants Grow Teachers Guide Pg 65d
4.1e	Each generation of animals goes through changes in form from young to adult. This completed sequence of changes in form is called a life cycle. Some insects change from egg to larva to pupa to adult.	Pgs. 34-35, 38-39, 33-45 www.discoveryeducation.com Insect Life Cycle	Lab-Investigate how animals grow and change? Pgs 44-45
4.1f	Each kind of animal goes though its own stages of growth and development during its life span.	Pgs. 26-29, 34-35, 38-39, 44-45, 74-75	Lab-Investigate how animals grow and change? Pgs 44-45
4.1g	The length of time from an animal's birth to its death is called its life span. Life spans of different animals vary.	Pgs. 44-45 www.pearsonsuccessnet.net Take it to the Net: Life Science Life Cycle of a frog	Lab – how do animals grow and change?
	Performance Indicator 4.2 Describe evidence of growth, repair, and maintenance, such as nails, hair, and bone, and the healing of cuts and bruises.	www.discoveryeducation.com Tooth Wisdom Primary Health and Safety www.brainpopjr.com health	KWL Chart Teachers Guide Pg EMi

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	Major Understandings:		
4.2a	Growth is the process by which plants and animals increase in size.	Chapter 2 Pgs. 4-5, 26-31, 34-35, 38-39, 42-43, 74-75	www.pearsonsuccessnet.net Take it to the Net: Life Science Growing and Changing
4.2b	Food supplies the energy and materials necessary for growth and repair.	Pgs. 44-45	Performance Assessment Plant Care Teacher Guide Pg 65c
	Key Idea 5: Organisms maintain a dynamic equilibrium that sustains life.		
	Performance Indicator 5.1 Describe basic life functions of common living specimens (e.g., guppies, mealworms, gerbils).	http://www.abpischools.org.uk/page/modules/humansandanimals/activity.cfm?coSiteNavigation_allTopic=1	Chart Observations of an Earthworm/or other animal
	Major Understandings:		
5.1a	All living things grow, take in nutrients, breathe, reproduce, and eliminate waste.	Chapter 2 Pgs. 5b, 4-5, 14-17, 22-31, 34-35, 38-39, 42-45, 70-75, 94-95	Lab-How do animals grow and change? Pgs 44-45
5.1b	An organism's external physical features can enable it to carry out life functions in its particular environment.	Chapter 3 Pgs. 36-37, 44-47, 56-63	Performance Assessment Animal Poster Teacher Guide Pg 45d
	Performance Indicator 5.2 Describe some survival behaviors of common living specimens.	Pgs. 14-15 www.discoveryeducation.com Animal Faces, Animal Places	Sort Animals by survival characteristics

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5.2a	Plants respond to changes in their environment. For example, the leaves of some green plants change position as the direction of light changes; the parts of some plants undergo seasonal changes that enable the plant to grow; seeds germinate, and leaves form and grow.	Pgs. 14-15 www.discoveryeducation.com Habitats	Lab –Investigate: how can you show different habitats? Pgs 64-65
5.2b	Animals respond to change in their environment (e.g., perspiration, heart rate, breathing rate, eye blinking, shivering, and salivating).	Chapter 3 Pgs. 44-45	Lab – Explore how can you show where animals live? Pgs 50-51
5.2c	Senses can provide essential information (regarding danger, food, mates, etc.) to animals about their environment.	Pgs. 54-63 http://www.brainpopjr.com/science/animals/camouflage http://faculty.washington.edu/chudler/amaze.html	Make a chart of the 5 senses and how they are used to help animals.
5.2d	Some animals, including humans, move from place to place to meet their needs.	Pgs. 61, 114-115	Activity Flip Chart: What habitat can you make? Teacher Guide Pg 46E

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NYS Standard	Key Ideas & Performance Indicators	Resources Chapters, Web Links, Leveled Books, Technology Tools, Nonfiction/Technical Writing	Assessments
5.2e	Particular animal characteristics are influenced by changing environmental conditions including: fat storage in winter, coat thickness in winter, camouflage, shedding of fur.	Pg. 61 http://www.brainpopjr.com/science/animals/camouflage	Activity Flip Chart: What habitat can you make? Teacher Guide Pg 46E
5.2f	Some animal behaviors are influenced by environmental conditions. These behaviors may include: nest building, hibernating, hunting, migrating, and communicating.	Pgs. 58-63, 114-117 http://www.brainpopjr.com/science/animals/hibernation/ http://www.brainpopjr.com/science/animals/migration/	Classify animals by their behaviors, ie hibernating, hunting, etc.
5.2g	The health, growth, and development of organisms are affected by environmental conditions such as the availability of food, air, water, space, shelter, heat, and sunlight.	Pgs. 22-23, 58-63	Lab-Explore how can you show where animals live? Pgs 50-51
	Performance Indicator 5.3 Describe the factors that help promote good health and growth in humans.	http://www.bbc.co.uk/schools/ks2bitesize/science/living_things/health_growth/play.shtml	Sort good and bad healthy habits

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	Major Understandings:		
5.3a	Humans need a variety of healthy foods, exercise, and rest in order to grow and maintain good health.	Pgs. 20-21 www.brainpop.com/health http://www.bbc.co.uk/schools/ks2bitesize/science/living_things/keeping_healthy/play.shtml	Make a chart of healthy habits
	Key Idea 6: Plants and animals depend on each other and their physical environment.	www.discoveryeducation.com Animals around Us	Lab – Explore how can you show where animals live? Pgs 50-51
	Performance Indicator 6.1 Describe how plants and animals, including humans, depend upon each other and the nonliving environment.	www.discoveryeducation.com Our Natural World	Lab – Explore how can you show where animals live? Pgs 50-51
	Major Understandings:		
6.1a	Green plants are producers because they provide the basic food supply for themselves and animals.	Pgs. 21, 70-71 www.discoveryeducation.com The Importance of Plants	Make a chart of producers and consumers that you have observed during a nature walk
6.1b	All animals depend on plants. Some animals (predators) eat other animals (prey).	Pg. 21 www.discoveryeducation.com You in the Food Web	Sequence Food Web Teachers Guide Pg EMviii

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6.1c	Animals that eat plants for food may in turn become food for other animals. This sequence is called a food chain.	Pgs. 20-21, 62-65 http://www.brainpopjr.com/science/animals/foodchain/	Sequence and label food chain Teachers Guide Pg EMviii
6.1d	Decomposers are living things that play a vital role in recycling nutrients.	www.discoveryeducation.com The Food Chain Mystery http://astroventure.arc.nasa.gov/teachers/pdf/AV-Biolesson-5.pdf http://www.sheppardsoftware.com/content/animals/kidscorner/games/foodchaingame.htm	Sequence Food Chain Teachers Guide Pg EMviii

PreK – 5 Science Rubric

	1	2	3	4
Inquiry	Only asks questions about an observation when prompted by the teacher.	Needs occasional prompting to ask questions about observations and investigations.	Independently asks questions about observations and investigations.	Questioning is spontaneous, consistent, and driven by curiosity. Independently asks "what if" questions.
Analysis	Only demonstrates a limited ability to explain natural phenomena.	Occasionally demonstrates an ability to explain natural phenomena.	Independently develops an explanation of natural phenomena in a continuing creative process.	Consistently asks "why" questions to develop an explanation of natural phenomena in a continuing creative process.
Problem Solving	Applies components of the scientific method/process skills when prompted by the teacher.	Occasionally applies limited components of the scientific method/process skills when designing solutions to problems.	Independently applies scientific method/process skills when designing solutions to problems.	Consistently applies scientific method/process skills when designing creative solutions to problems.
Collaboration	Works towards group goals and contributes information only when prompted.	Works towards group goals and contributes information with occasional prompting.	Works toward group goals. Accepts individual role and contributes knowledge, opinion, and skills.	Consistently works toward group goals. Actively contributes knowledge, opinions, and skills.
Content Knowledge	Demonstrates limited content knowledge.	Occasionally demonstrates content knowledge.	Independently demonstrates content knowledge.	Consistently demonstrates mastery of content knowledge.