

Manitoba Curriculum Framework of Outcomes



Grades K-3

Reference	Specific Learning Outcomes	Wetlands	Rainforest
	It is expected that students will:		
100-4	observe and identify similarities and differences in the needs of living things	Organisms, Migration, Animal Adaptations, Food Chains, Web Game	Organism Screens, Dependency Web Game
100-5	describe different ways that plants and animals meet their needs	Organisms, Migration, Animal Adaptations, Food Chains, Web Game	Organism Screens, Dependency Web Game
100-7	describe the different ways that humans and other living things move to meet their needs	Organisms, Migration: examples of other living things	Organisms: examples of other living things
100-8	identify and describe common characteristics of humans and other animals, and identify variations that make each person and animal unique	Organisms, Migration: use as examples of other animals	Organisms: use as examples of other living things
100-15	compare life cycles of familiar animals and classify them according to the similarities and differences of their life cycles	Organisms, Migration: life cycle	Organisms: life cycle
100-16	describe the changes in humans as they grow, and contrast human growth to that of other organisms	Organisms, Migration, Animal Adaptations: use for contrasting organisms	Organisms: use for contrasting organisms
100-30	observe and describe changes that occur through the life cycle of a flowering plant	Cranberry, Labrador Tea, Leatherleaf: life cycle	Bromeliad, Cecropia, Heliconia, Mahogany, Mistletoe, Piper, Strangler Fig, Water Vine: life cycle
101-7	observe and describe changes in the appearance and activity of an organism as it goes through its life cycle	Green Frog: life cycle movie, Organism screens (life cycle) describe changes	Beetle movie shows larval and adult stages, Organism screens (life cycle) describes changes

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Reference	Specific Learning Outcomes	Wetlands	Rainforest
102-4	investigate and describe changes that occur on a daily basis in the characteristics, behaviours, and location of living things	Organisms, Migration: behavior	Organisms: behavior
102-5	investigate and describe changes that occur in seasonal cycles in the characteristics, behaviours, and location of living things	Animal Adaptations, Habitat	Howler Monkey: food source, Humming bird & Red-eyed Tree Frog: life cycle
102-6	identify constant and changing traits in organisms as they grow and develop	Organisms, Migration: life cycle	Organisms: life cycle
102-7	describe features of natural and human-made environments that support the health and growth of some familiar animals	Migration: life cycle	Habitat, Niches
102-12	describe ways in which plants are important to living things and the environment	Organisms (plants) Producers, Food Chains, Food Web Game, Conservation	Organisms (plants), Dependency Web Game

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Grades 4-6

Reference	Specific Learning Outcomes	Wetlands	Rainforest	Digital Frog 2
	It is expected that students will:			
300-1	compare the external features and behavioural patterns of animals that help them thrive in different kinds of places	Animal Adaptations, Organisms & Migration: behaviour	Organisms: behaviour	
300-2	compare the structural features of plants that enable them to thrive in different kinds of places	Use plant Organism screens as examples	Use plant Organism screens as examples, Botany (with teacher support)	
300-15	describe the role of a common classification system for living things	Producers, Consumers, Decomposers, Food Chains, Organisms, Migration	Organisms	
300-16	distinguish between vertebrates and invertebrates	Organism screens featuring animals and insects	Organism screens featuring animals and insects	
300-17	compare the characteristics of mammals, birds, reptiles, amphibians and fishes	Use Organisms & Migration for examples	Use Organisms for examples	
300-18	compare characteristics of common arthropods	Caddisfly, Damselfly, Daphnia, Dragonfly, Giant Water Beetle, Mosquito, Waterboatman	Ant, Beetle, Butterfly, Moth, Scorpion, Spider, Termites	
300-21	identify characteristics and adaptations that enable birds and insects to fly	Use bird & insect Organism screens, and Migration for examples	Use bird & insect Organism screens for examples	
301-1	predict how the removal of a plant or animal population affects the rest of the community		Tree Fall Gaps, Succession, Climate	
301-2	relate habitat loss to the endangerment or extinction of plants and animals	Conservation, Endangered Wetlands	Tree Fall Gaps, Succession	

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Grades 4-6

Reference	Specific Learning Outcomes	Wetlands	Rainforest	Digital Frog 2 (to be used as a comparison)
	It is expected that students will:			
302-2	describe how a variety of animals are able to meet their basic needs in their habitat	Animal Adaptations, Organisms, Migration	Organisms, Niches, Biodiversity	
302-3	classify organisms according to their role in a food chain	Producers, Consumers, Decomposers, Food Chains, Web Energy, Organisms, Migrations, Food Web Game	Organisms, Dependency Types, Food, Habitat, Seed Dispersal, Pollination, Dependency Web Game	
302-5	describe the structure and function of the major organs of the digestive, excretory, respiratory, circulatory and nervous systems			Respiratory, Circulatory, Digestive, Excretory, and Nervous systems are found in the Anatomy section
302-6	demonstrate how the skeletal, muscular and nervous systems work together to produce movement			Anatomy section: Musculoskeletal and Nervous systems
302-7	describe the role of the skin			Anatomy section: The Skin
302-8	describe the body's defences, such as tears, saliva, skin, certain blood cells, and stomach secretions, against infections			Anatomy section: Circulatory system, Blood

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Grades 7-9

Reference	Specific Learning Outcomes	Wetlands	Rainforest	Digital Frog 2 (to be used as a comparison)
	It is expected students will:			
304-2	identify the roles of producers, consumers and decomposers in a local ecosystem, and describe both their diversity and their interactions	Producers, Consumers, Decomposers, Food Chains, Web Energy, Food Web Game, Photosynthesis, Organisms, Migration	Organisms, Botany: Fungi	
304-6	explain that growth and reproduction depend on cell division			Cellular Division
304-7	explain structural and functional relationships between and among cells, tissues, organs and systems in the human body			Anatomy section
304-8	relate the needs and functions of various cells and organs to the needs and functions of the human organism as a whole			Anatomy section
304-9	describe the basic factors that affect the functions and efficiency of the human respiratory, circulatory, digestive, excretory, and nervous systems			Anatomy section: respiratory, circulatory, digestive, excretory, and nervous systems
304-10	describe examples of the interdependence of various systems of the human body			Anatomy section has links between systems to show how they are interdependent
304-11	illustrate and describe the basic process of cell division, including what happens to the cell membrane and the contents of the nucleus			Cellular division: mitosis, meiosis

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Grades 7-9

Reference	Specific Learning Outcomes	Wetlands	Rainforest	Digital Frog 2 (to be used as a comparison)
	It is expected students will:			
306-1	describe how energy is supplied to, and how it flows through, a food web	Food Chain, Web Energy, Producers, Consumers, Decomposers, Food Web Game, Organisms, Migration		
306-2	describe how matter is recycled in an ecosystem through interactions among plants, animals, fungi and microorganisms	Food Chain, Web Energy, Producers, Consumers, Decomposers, Food Web Game, Organisms, Migration, Nutrient Cycles, Photosynthesis	Productivity, Soils & Decomposition, Organisms	
306-3	describe interactions between biotic and abiotic factors in an ecosystem	Nutrient Cycles, Photosynthesis, Web Energy, Food Chains		
306-4	identify signs of ecological succession in a local ecosystem		Succession	

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Grades 10-12

Reference	Specific Learning Outcomes	Wetlands	Rainforest	Digital Frog 2
	It is expected students will:			
313-1	analyse and explain the life cycle of a representative organism from each kingdom, including a representative virus	Organisms & Migration: life cycle	Organisms: life cycle	
313-2	describe in detail mitosis and meiosis			Cellular Division: mitosis & meiosis
314-1	identify chemical elements and compounds that are commonly found in living systems	Nutrient cycles, Photosynthesis		
314-2	identify the role of some compounds, such as water, glucose, and ATP, commonly found in living systems	Photosynthesis		
316-5	use organisms found in a local or regional ecosystem to demonstrate an understanding of fundamental principles of taxonomy	Organisms & Migration: taxonomy		
318-1	illustrate the cycling of matter through biotic and abiotic components of an ecosystem by tracking carbon, nitrogen and oxygen	Nutrient cycles, Photosynthesis	Water Cycle, Soils & Decomposition, Productivity	