

Journey of the Loggerhead Curriculum Correlation Guidelines

Grade Level	Curriculum Correlation	Correlation Description
Middle Grades (5th - 8th grade)	CONTINUITY AND CHANGE	Describe how sea turtle fossils are used to trace their history; explain how scientists use these fossils to prove environmental changes occurred throughout history; provide examples of the concept of natural and artificial selection and how it has changed the species over time.
	SCIENTIFIC INQUIRY, TECHNOLOGY, and PROBLEM SOLVING: analysis, evaluation, and interpretation of information; processes and skills	Charts, GIS tracking, mapping; links to live satellite tracked sea turtle's; able to follow path, predict changes according to environmental conditions, chart average speed/distance/etc., and map turtle's migrations in the classroom. Use of modern technology: computers, satellite telemetry, website mapping, and more. Explain how personal bias can affect observations. Compare scientific inquiry and the technological methods and how they pertain to sea turtle research.
	SOCIAL STUDIES: analyzing information, facts, values, and opinions; maps and diagrams; drawing conclusions	GIS, migrations, nesting beach locations, oceans
	GENETICS: reproduction, egg production and formation	Nesting Patterns, Genetic families (haplotypes) of marine turtles (specifically loggerheads)
	LIFE SCIENCE and CLASSIFYING LIFE FORMS: life cycles and structures/functions of living things; adaptations and organism diversity; evolutionary history and fossils	Life cycles of marine turtles, egg to adult and nesting females. Basic anatomy and function of Loggerhead sea turtles. Adaptations through history - describe some structural and behavioral adaptations that allow turtles to survive in a changing environment. Ancient marine turtles (Archelon), fossil findings, and the history of their evolution.
	GEOGRAPHY: earth's features	oceans; beach ecology; currents
	ECOLOGY: populations; varying oceanic ecosystems; biotic resources.	Sea turtle ecology, the ecosystems they inhabit and why, sea turtle diet, symbiotic relationships, competition, predator/prey, parasitism, etc. The dangers of a polluted ecosystem, and more.
	IMPLICATIONS of SCIENCE and TECHNOLOGY: understanding historical, social, economic, environmental, and ethical implications.	Discuss ethical issues around the development and use of technology in sea turtle conservation and research. What are the societal impacts of new technologies on sea turtles. Describe an individual's impact (biologically) on the environment, ocean in specific. Explain connections b/w industry, natural resources, population, economic development, and the status of endangered species. Recognize contributions of various individuals (Ex: Archie Carr) towards the sea turtle conservation movement.
	LANGUAGE ARTS: capitalization of names, groups, places, titles; italicizing species	Proper names of sea turtle organizations, species names, researchers, professors, and doctors, as well as universities and equipment, procedures, acronyms.
	COMMUNICATION: Students will learn to communicate effectively in the application of science and technology.	Discuss scientific and technological ideas, such as current sea turtle research and the incorporation of technology into modern science (ex: satellite telemetry and PIT tagging). Access information at remote sites through the internet. Make and use maps, models, and scale drawings.
READING: reading comprehension; analysis and generalization of main ideas and determining literal meanings	Read the life history and scientific characteristics of the loggerhead. Also, learn about the historical beliefs associated with marine turtles: myths, legends, and folklore.	
VISUAL ARTS: Creativity and communication development through the use of visual images; promote cultural diversity.	Activities included that will enable students to visualize a loggerhead's nest, migration patterns and will demonstrate to them how hatchlings emerge from the nest.	

Grade Level	Curriculum Correlation	Correlation Description
Secondary: High School (9th - 12th grade)	CONTINUITY AND CHANGE	Describe how the loggerhead and all species of marine turtle have been affected by environmental pressures and how current and new environmental threats may lead to changes in the species over time.
	LIFE SCIENCE and CLASSIFYING LIFE FORMS: structures of living things	Life cycles of marine turtles, egg to adult and nesting females and all basic characteristics of a living thing. Basic to intermediate anatomy and function of Loggerhead sea turtles. Study adaptations through history. Ancient marine turtles (Archelon), fossil findings, and analyzing the history of their evolution. Describe similarities and differences among reptilians along the taxonomic system (Kingdom through species).
	SCIENTIFIC INQUIRY and PROBLEM SOLVING: processes and skills/analysis and interpretation	Charts, GIS tracking, mapping; links to live satellite tracked sea turtle's; able to follow path, predict changes according to environmental conditions, chart average speed/distance/etc., and map turtle's migrations in the classroom. Use of modern technology: computers, satellite telemetry, website mapping, and more.
	ECOLOGY: populations; varying oceanic ecosystems; biotic resources.	Sea turtle ecology, the ecosystems they inhabit and why, sea turtle diet, symbiotic relationships, dangers of a polluted ecosystem and the impact of human interactions/activities on the type and speed of change in a given ecosystem (ocean and beach, in this case), analyze factors that affect population size (reproduction, survival rates, outside threats), and more. Demonstrate knowledge of when to try different problem solving strategies.
	GEOGRAPHY: earth's features	More in-depth studies of the oceans, beach ecology, and the effects of different life forms on that geography.
	MATH: Math concepts and problem solving; making inferences/predictions; data interpretation	Making predictions in the turtle's migration patterns, make inferences about the turtle's behaviors based on satellite telemetry data or information.
	IMPLICATIONS of SCIENCE and TECHNOLOGY: understanding historical, social, economic, environmental, and ethical implications.	Examine the impact of current political decisions on sea turtle conservation, habitats, and conservation organizations. Demonstrate and discuss the importance of maintaining natural ecosystems, controlling environmental impacts on sea turtle habitats, and managing resources, especially how they pertain to endangered species survival plans. Analyze impacts, both ethical and scientific, of technological and scientific developments (Ex: modified fishing gear, PIT tagging, satellite telemetry, and other research equipment. Examine historical relationships between prevailing cultural beliefs and science breakthroughs (Ex: Cultures that harvest sea turtle eggs and meat and the ESA).
	LANGUAGE ARTS/READING: comprehension, draw conclusions, analysis, generalization and factual understanding	Determine main ideas in the literature segment of the DVD, analyze topics covered, discuss themes of the sea turtles' struggle to survive and the changes that the species has experienced through the centuries.
	COMMUNICATION: Students will learn to communicate effectively in the application of science and technology.	Analyze research on sea turtle biology and conservation methods for accuracy in design and findings. Make use of journals to record data, findings, and analyses. Make and use scales, diagrams, graphs, tables, etc. to apply and solve scientific problems. Use computers for data organization, research, problem solving, etc. Engage in debates on controversial issues in sea turtle research/conservation (Ex: fishing practices, TEDs, green vs. black sea turtle). Evaluate new media and critique current models, graphs, and data sets.