

CHECKLIST FOR FOURTH GRADE SCIENCE *CHECKS FOR UNDERSTANDING*

	DATE	CHECKS FOR UNDERSTANDING
Column1	Column2	Column3
✓		Embedded Inquiry
		0407.Inq.1 Identify specific investigations that could be used to answer a particular question and identify reasons for this choice.
		0407.Inq.2 Identify tools needed to investigate specific questions.
		0407.Inq.3 Maintain a science notebook that includes observations, data, diagrams, and explanations.
		0407.Inq.4 Analyze and communicate findings from multiple investigations of similar phenomena to reach a conclusion.
		Embedded Technology & Engineering
		0407.T/E.1 Explain how different inventions and technologies impact people and other living organisms.
		0407.T/E.2 Design a tool or a process that addresses an identified problem caused by human activity.
		0407.T/E.3 Determine criteria to evaluate the effectiveness of a solution to a specified problem.
		0407.T/E.4 Evaluate an invention that solves a problem and determine ways to improve the design.
		Standard 1 - Cells
		0407.1.1 Use illustrations or direct observations to compare and contrast the basic structures of plant and animal cells.
		0407.1.2 Create a basic model of the cell that illustrates different cell structures and describes their functions.
		Standard 2 - Interdependence
		0407.2.1 Analyze how an increase or decrease in competition or predation affects an ecosystem.
		0407.2.2 Design a simple experiment to illustrate the effects of competition, predation, and interdependency among living things.
		Standard 3 - Flow of Matter and Energy
		0407.3.1 Create a food web that illustrates the energy relationships between plants and animals and the key issues or assumptions found in the model.
		0407.3.2 Classify organisms as carnivores, herbivores, or omnivores.
		0407.3.3 Identify how a variety of organisms meet their energy needs.
		Standard 4 - Heredity
		407.4.1 Design a simple demonstration that illustrates the relationship between reproduction and survival of a species.
		0407.4.2 Study the life cycles of a variety of organisms and determine whether these processes illustrate complete or incomplete metamorphosis.
		Standard 5 - Biodiversity and Change
		0407.5.1 Classify animals according to their physical adaptations for obtaining food, oxygen, and surviving within a particular environment.
		0407.5.2 Describe how animal behaviors such as migration, defense, means of locomotion, and hibernation enable them to survive in an environment.
		0407.5.3 Investigate tropisms that plants exhibit in response to changes in their environment.
		0407.5.4 Gather fossil information to draw conclusions about organisms that exist today.
		0407.5.5 Analyze the common causes of extinction and explain how human actions sometimes result in the extinction of a species.

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	Standard 6 - The Universe
	0407.6.1 Chart the movements of the sun, moon, and earth to develop an explanation for the phases of the moon and solar and lunar eclipses.
	0407.6.2 Sequence the major phases of the moon during a lunar cycle.
	Standard 7 – The Earth
	0407.7.1 Prepare a demonstration to illustrate how wind and water affect the earth’s surface features.
	0407.7.2 Design an investigation to demonstrate how erosion and deposition change the earth’s surface.
	0407.7.3 List factors that determine the appropriate use of an earth material.
	0407.7.4 Use data from a variety of informational texts to analyze and evaluate man’s impact on non-renewable resources.
	Standard 8 - The Atmosphere
	0407.8.1 Prepare a model that illustrates the basic features of the water cycle.
	0407.8.2 Use long term weather data to distinguish between weather and climate.
	0407.8.3 Use an illustration to predict and draw conclusions about how weather and climate affect the water cycle.
	Standard 9 – Matter
	0407.9.1 Use appropriate tools to measure and compare the physical properties of various solids and liquids.
	0407.9.2 Compare the causes and effects of various physical changes in matter.
	Standard 10 – Energy
	0407.10.1 Design an investigation to demonstrate how different forms of energy release heat or light.
	0407.10.2 Design an experiment to investigate how different surfaces determine if light is reflected, refracted, or absorbed
	0407.10.3 Gather and organize information about a variety of materials to categorize them as translucent, transparent, or opaque.
	Standard 11 – Motion
	0407.11.1 Identify the position of objects relative to fixed reference points.
	0407.11.2 Design an investigation to identify factors that affect the speed and distance traveled by an object in motion.
	0407.11.3 Complete a coordinate graph to describe the relative positions of objects.
	0407.11.4 Plan and execute an investigation that demonstrates how friction affects the movement of an object.
	0407.11.5 Design and implement an investigation to determine that the speed of an object is equal to the distance traveled over time.
	Standard 12 - Forces in Nature
	0407.12.1 Explore the interactions between an electrically charged object and other materials.
	0407.12.2 Design an experiment to investigate how a simple electromagnet affects common objects.
	0407.12.3 Describe how electricity passes through a simple circuit that includes a battery, wire, switch, and bulb.