New Paltz Central School District
Science
Third Grade

TIME	CONTENT	SKILLS	ASSESSMENTS
September - December	**<u>Digestion and Nutrition</u>** • What is a system? • How are our body systems connected? • Where did lunch go? • Why should I care about what I eat? ---------- • Food supplies the energy and materials necessary for growth and repair. • All living things grow, take in nutrients, breathe, reproduce, and eliminate waste. • Humans need a variety of healthy foods, exercise, and rest in order to grow and maintain good health. • Good health habits include hand washing and personal cleanliness; avoiding harmful substances (including alcohol, tobacco, illicit drugs); eating a balanced diet; engaging in regular exercise.	• Safely and accurately use a timepiece (stopwatch). • Utilize senses optimally for making observations. • Observe, analyze, and report observations of objects and events. • Collect and organize data, choosing the appropriate representation: journal entries; graphic representations; drawings/pictorial representations. • Make predictions based on prior experiences and/or information. • Identify and control variables/factors.	• Unit assessment • Quizzes • Homework • Classwork • Observation of process skills
January - February	**<u>Astronomy and Light</u>** • Why can't we see the sun all the time? • Why does the moon look different over time? • Where does light come from? • What are the properties of light? ---------- • Natural cycles and patterns include: o Earth spinning around once every 24 hours (rotation), resulting in day and night. o Earth moving in a path around the Sun (revolution), resulting in one Earth year. o the length of daylight and darkness varying with the seasons. o the appearance of the Moon changing as it moves in a path around Earth to complete a single cycle.	• Utilize senses optimally for making observations. • Generate appropriate questions (teacher and student based) in response to observations, events, and other experiences. • Collect and organize data, choosing the appropriate representation: journal entries; graphic representations; drawings/pictorial representations. • Make predictions based on prior experiences and/or information.	• Unit assessment • Quizzes • Homework • Classwork Observation of process skills

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Science
Third Grade

TIME	CONTENT	SKILLS	ASSESSMENTS

	• Humans organize time into units based on natural motions of Earth:
	  ○ second, minute, hour.
	  ○ week, month.
	• The Sun and other stars appear to move in a recognizable pattern both daily and seasonally.
	• Objects have properties that can be observed, described, and/or measured: length, width, volume, size, shape, mass or weight, temperature, texture, flexibility, reflectiveness of light.
	• Energy and matter interact: water is evaporated by the Sun's heat; a bulb is lighted by means of electrical current; a musical instrument is played to produce sound; dark colors may absorb light, light colors may reflect light.
	• The force of gravity pulls objects toward the center of Earth.
	• The forces of gravity and magnetism can affect objects through gases, liquids, and solids.		

March - April	**<u>Changing States of Matter and Heat Energy</u>** • What are the states of matter? • How can we describe chemical and physical changes in states of matter? • How can we measure the properties of matter? ---------- • Objects have properties that can be observed, described, and/or measured: length, width, volume, size, shape, mass or weight, temperature, texture, flexibility, reflectiveness of light.	• Safely and accurately use a balance, thermometer, gram weights, dropper, measuring cups, and graduated cylinder. • Utilize senses optimally for making observations. • Observe, identify, and communicate cause-and-effect relationships.	• Unit assessment • Quizzes • Homework • Classwork • Observation of process skills • Written science explanations

New Paltz Central School District
Science
First Grade

TIME	CONTENT	SKILLS	ASSESSMENTS

	• The material(s) an object is made up of determine some specific properties of the object (sink/float, conductivity, magnetism). Properties can be observed or measured with tools such as hand lenses, metric rulers, thermometers, balances, magnets, circuit testers, and graduated cylinders.
	• Matter exists in three states: solid, liquid, gas:
	  ○ solids have a definite shape and volume.
	  ○ liquids do not have a definite shape but have a definite volume.
	  ○ gases do not hold their shape or volume.
	• Temperature can affect the state of matter of a substance.
	• Changes in the properties or materials of objects can be observed and described. (Focus on weight, function, appearance, texture, etc.)
	• Energy exists in various forms: heat, electric, sound, chemical, mechanical, light. *(Third grade focuses on chemical and light).*
	• Energy can be transferred from one place to another.
	• Some materials transfer energy better than others (heat and electricity).
	• Energy and matter interact: water is evaporated by the Sun's heat; a bulb is lighted by means of electrical current; a musical instrument is played to produce sound; dark colors may absorb light, light colors may reflect light.
	• Heat can be released in many ways, for example, by burning, rubbing (friction), or combining one substance with another.
	• Interactions with forms of energy can be either helpful or harmful.
	• Everyday events involve one form of energy being changed to another animals convert food to heat and motion.
		• Collect and organize data, choosing the appropriate representation: journal entries; graphic representations; drawings/pictorial representations.
		• Make predictions based on prior experiences and/or information.
		• Compare and contrast organisms/objects/events in the living and physical environments.
		• Plan, design, and implement a short-term and long-term investigation based on a student-or teacher-posed problem.
		• Communicate procedures and conclusions through oral and written presentations.	

New Paltz Central School District
Science
Third Grade

TIME	CONTENT	SKILLS	ASSESSMENTS
May - June	**<u>Ecosystems and Food Chains - Adaptations</u>** • What do all ecosystems have in common? • How do living things adapt to their environment? • How does a food chain function? • How does a change in population or environment affect the food chain/web? • What do animals need to survive? • What traits of animals are inherited? Which cannot be inherited? --- • Animals need air, water, and food in order to live and thrive. • Living things grow, take in nutrients, breath, reproduce, eliminate waste, and die. • Some traits of living things have been inherited (e.g., color of flowers and number of limbs of animals). • Some characteristics result from an individual's interactions with the environment and cannot be inherited by the next generation (e.g., having scars, riding a bicycle). • Plants and animals can transfer specific traits to their offspring when they reproduce. • Each animal has different structures that serve different functions in growth, survival, and reproduction: o The characteristics of some animals change as seasonal conditions change (e.g., fur grows and is shed to help regulate body heat; body fat is a form of stored energy and it changes as the seasons change). • In order to survive in their environment, plants and animals must be adapted to that environment:	• Safely and accurately use a hand lens and ruler. • Estimate, find, and communicate measurements, using standard and nonstandard units. • Classify objects according to an established scheme. • Generate a scheme for classification. • Utilize senses optimally for making observations. • Observe, analyze, and report observations of objects and events. • Observe, identify, and communicate patterns. • Observe, identify, and communicate cause-and-effect relationships. • Generate appropriate questions (teacher and student based) in response to observations, events, and other experiences. • Observe, collect, organize, and appropriately record data, then accurately interpret results.	• Unit assessment • Quizzes • Homework • Classwork • Observation of process skills

New Paltz Central School District
Science
Third Grade

TIME	CONTENT	SKILLS	ASSESSMENTS
	○ Animal adaptations include coloration for warning or attraction, camouflage, defense mechanisms, movement, hibernation, and migration. • Individuals within a species may compete with each other for food, mates, space, water, and shelter in their environment. • An organism's external physical features can enable it to carry out life functions in its particular environment. • Animals respond to change in their environment, (e.g., perspiration, heart rate, breathing rate, eye blinking, shivering, and salivating). • Senses can provide essential information (regarding danger, food, mates, etc.) to animals about their environment. • Some animals, including humans, move from place to place to meet their needs. • Particular animal characteristics are influenced by changing environmental conditions including: fat storage in winter, coat thickness in winter, camouflage, shedding of fur. • Some animal behaviors are influenced by environmental conditions. These behaviors may include: nest building, hibernating, hunting, migrating, and communicating. • 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. • Green plants are producers because they provide the basic food supply for themselves and animals. • All animals depend on plants. Some animals (predators) eat other animals (prey).	• Collect and organize data, choosing the appropriate representation: journal entries; graphic representations; drawings/pictorial representations. • Make predictions based on prior experiences and/or information. • Compare and contrast organisms/objects/events in the living and physical environments. • Plan, design, and implement a short-term and long-term investigation base on a student- or teacher-posed problem. • Communicate procedures and conclusions through oral and written presentations.	

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	• Animals that eat plants for food may in turn become food for other animals. This sequence is called the food chain. • Decomposers are living things that play a vital role in recycling nutrients. • An organism's pattern of behavior is related to the nature of the organism's environment, including the kinds and numbers of other organisms present, the availability of food and other resources, and the physical characteristics of the environment. • When the environment changes, some plants and animals survive and reproduce, and others die or move to new locations. • The Sun's energy is transferred on Earth from plants to animals through the food chain. • Humans, as individuals or communities, change environments in ways that can be either helpful or harmful for themselves and other organisms.		