Nevada Grade 4 Science

1	Physical Sciences: Forces and Motion	1	**Investigate and describe balance points of different objects.** *Interprets text and diagrams to identify if forces are balanced or unbalanced.*
		2	**Investigate and describe how objects can sink or float in water.** *Describes how density of an object can effect if it floats or sinks in water.*
2	Physical Sciences: Structure and Properties of Matter	1	**Investigate and describe properties of materials when they are combined (mixtures).** *Observes the effect of adding an insoluble material to a liquid.* *Tests if materials are soluble or insoluble.* *Separates mixtures using a sieve.* *Separates solids and liquids using filter paper.*
		2	**Observe and describe that different objects and materials may be composed of parts that are too small to be seen without magnification.** *Uses a microscope to view the cells of plants.* *Identifies the parts and controls of a microscope.* *Observes flower pollen magnified by a microscope.*
3	Physical Sciences: Energy and Matter; Interaction and Forms	1	**Investigate and describe how circuits can produce light, heat, sound, and magnetic effects.** *Uses a bar magnet and an electromagnet to find the differences and similarities between them.* *Discovers where kinetic, potential, chemical, light, heat and sound energy can occur.* *Increases the strength of an electromagnet.*
4	Life Sciences: Structure and Function	1	**Investigate, compare, and contrast identifiable structures of plants and animals.** *Uses software to find what parts of the human body give each of the five senses.* *Identifies the parts of plants that help them to make their own food.*
5	Life Sciences: Internal and External Influences on Organisms	1	**Investigate and describe the behavior of individual organisms when influenced by internal cues (e.g. hunger) and by external cues (e.g. environment).** *Uses software to find what parts of the human body give each of the five senses.* *Identifies the parts of plants that help them to make their own food.* *Students identify how living organisms have adapted to become suited to the environment in which they grow.* *Students identify how populations can be affected by changes in a food chain.*
6	Life Sciences: Heredity and Diversity	1	**Observe and describe variations among individuals within the human population.** *Students identify the differences between learnt and inherited traits.* *Students identify that heredity traits are those that are passed between parent and offspring.*

7	Earth and Space Sciences: Earth Structure and Composition	1	**Investigate, compare, and contrast the properties of rocks and minerals.** *Describes the different conditions for the formation of various rocks.* *Sorts rocks into sedimentary, metamorphic and igneous rock types.*
		2	**Compare and contrast the location of landforms.** *N/A*
		3	**Investigate and describe the composition of different soils.** *Interprets text and diagrams to plan a fair experiment that tests how different soil types can effect the growth of a plant.*
9	Earth and Space Sciences: Cycles of Matter and Energy	1	**Identify and describe various meteorological phenomena (e.g. floods, drought)** *N/A*
		2	**Investigate and describe the forms and uses of water.** *Replicates and observes the stages of the water cycle.* *States the different forms of water in the water cycle.* *Interprets text and diagrams to identify natural sources of water, such as rivers, lakes and oceans.*
		3	**Identify the components of our solar system (i.e. planets, moon, asteroids, comets, sun)** *Uses software to discover facts about the Moon and its relation to the Earth.* *Recognises planets in the solar system.* *States the effects that the Sun has on the light levels on the planets of the solar system.* *Uses software to discover the different phases of the Moon.* *States the position of the planets in the solar system.*
10	Earth and Space Sciences: The Solar System and the Universe	1	**Observe and describe properties, locations, and movements of the sun, moon, stars, clouds, birds, and planes.** *Uses software to discover the different phases of the Moon.* *Identifies characteristics of the Moon and its phases.* *Uses a software simulation to find out how seasons are linked to the position of the Earth in relation to the Sun.* *Uses software to discover facts about the Moon and its relation to the Earth.*
		2	**Observe and describe the changes of the moon's appearance over time.** *Uses software to discover facts about the Moon and its relation to the Earth.* *Uses software to discover the different phases of the Moon.*
		3	**Investigate and describe how distance affects the brightness of any light source.** *Observes the effect that distance has on light levels.* *States the effects that the Sun has on the light levels on the planets of the solar system.* *Uses a digital light meter to measure light levels in a room.* *Uses a model of the Earth to identify how the position of the Earth during different seasons effects the hours of daylight.* *Uses an analogue light meter to measure light levels in a room.*

11	Environmental Sciences: Ecosystems	1	**Investigate and describe the variables that affect the survival of organisms within an ecosystem.** *Discovers the habitats of different animals.* *Discovers the characteristics of animals that allow them to survive in their natural habitats.*
12	Environmental Sciences: Natural Resources	1	**Identify the natural resources of Nevada.** *N/A*
		2	**Investigate and describe resources which can be used and reused or renewed.** *Identifies what natural materials have been used to make a series of sample objects.* *Identifies where different natural materials come from.* *Identifies how different materials can be recycled.*
13	Environmental Sciences: Conservation	1	**Observe, investigate, and describe how some environmental changes occur quickly and some occur slowly.** *Identifies what effect pollution can have on rivers and ponds.* *Interprets text and diagrams to identify physical, chemical and biological forms of weathering.*
14	The Nature and History of Science: Scientific, Historical and Technological Perspectives	1	**Identify the components of scientific investigation (e.g. observing, collecting data, classifying)** *Students identify the typical stages in a scientific experiment.*
		2	**Exchange scientific observations and ideas.** *Makes a presentation on science.* *Debates issues that relate to science.* *Creates a science poster.* *Writes a report on science.* *Critiques written and oral explanations of science.*
		3	**Explain that measuring instruments can be used to gather information for making scientific comparisons of objects and events for designing and constructing things that will work properly.** *Identifies units of measurement that would be most suitable for measuring a series of different items.* *Students identify tools that could be used in measurement of physical phenomena.* *Uses non-standard measurements, such as paper clips and hands, to measure different objects.* *Measures pulling forces using a newton meter.* *Uses a ruler and a motion sensor to measure height.* *Uses a motion sensor to measure distances.*
16	Scientific Enquiry: Processes and Skills; Scientific Values and Attitudes	1	**Conduct fair tests to make observations.** *Interprets text and diagrams to plan a fair experiment that tests how different soil types can effect the growth of a plant.*