

Alignment with Nevada's Science Standards

This document evaluates the state's Education Standards for Science to determine alignment with content found in Cogno board games. Grades 3-8 were analyzed.



Highlighting Key

Indicates a significant amount of material addresses the standard

Indicates a moderate amount of material is present to develop student understanding of the standard

Grades 3 - 5	
N.5.A	Students understand that science involves asking and answering questions and comparing the answers to what scientists know about the world.
N.5.A.1	Students know scientific progress is made by conducting careful investigations , recording data, and communicating the results in an accurate method. E/S
N.5.A.2	Students know how to compare the results of their experiments to what scientists already know about the world. I/L
N.8.A.3	Students know how to draw conclusions from scientific evidence . E/S
N.5.A.6	Students know models are tools for learning about the things they are meant to resemble. I/S
N.5.A.7	Students know observable patterns can be used to organize items and ideas. E/S
Grades 6 - 8	
N.8.A	Students understand that scientific knowledge requires critical consideration of verifiable evidence obtained from inquiry and appropriate investigations.

N.8.A.1	Students know how to identify and critically evaluate information in data, tables, and graphs. E/S
N.8.A.2	Students know how to critically evaluate information to distinguish between fact and opinion. E/S
N.8.A.6	Students know scientific inquiry includes evaluating results of scientific investigations, experiments, observations, theoretical and mathematical models, and explanations proposed by other scientists. E/S

**Science, Technology, and Society
(Nature of Science Unifying Concept B)**

Grades 3 – 5	
N.5.B	Students understand that many people, from all cultures and levels of ability, contribute to the fields of science and technology.
N.5.B.1	Students know that, throughout history, people of diverse cultures have provided scientific knowledge and technologies. E/S
N.5.B.2	Students know technologies impact society, both positively and negatively. E/S
N.5.B.3	Students know the benefits of working with a team and sharing findings. E/L

Grades 6 – 8	
N.8.B	Students understand the interactions of science and society in an ever-changing world.
N.8.B.2	Students know scientific knowledge is revised through a process of incorporating new evidence gained through on-going investigation and collaborative discussion. E/S

**Atmospheric Processes and the Water Cycle
(Earth and Space Science Unifying Concept A)**

Grades 3 - 5

E.5.A

Students understand the water cycle's relationship to weather.

E.5.A.1

Students know the Sun is the main source of energy for planet Earth. E/S

E.5.A.3

Students know most of Earth's surface is covered with **fresh** or salt water. W/L

E.5.A.5

Students know air is a substance that surrounds us, takes up space, and moves around us as wind. I/S

Grades 6 - 8

E.8.A

Students understand the relationship between the Earth's atmosphere, topography, weather and climate.

E.8.A.3

Students know the properties that make water an essential component of the earth system. E/S

E.8.A.4

Students understand the composition of Earth's atmosphere, emphasizing the role of the atmosphere in Earth's weather and climate. I/S

**Solar System and Universe
(Earth and Space Science Unifying Concept B)**

Grades 3 - 5

E.5.B

Students understand that there are many components in the solar system including Earth.

E.5.B.1

Students know there are more stars than anyone can easily count, but they are not scattered evenly, and they are not all the same in brightness or color. W/L

E.5.B.2	Students know the solar system includes the Sun, planets, and moons. E/S
E.5.B.3	Students know stars are like the Sun, but they are so far away that they look like points of light. W/L
E.5.B.4	Students know there are cyclical patterns of observable objects in the solar system. I/S
E.5.B.5	Students know the patterns of stars in the sky stay the same (e.g., the constellations), although they appear to move across the sky nightly, and different stars can be seen in different seasons. (14.5.2) W/S

Grades 6 - 8

E.8.B	Students understand characteristics of our solar system that is part of the Milky Way galaxy.
E.8.B.1	Students know the universe contains many billions of galaxies, and each galaxy contains many billions of stars. W/L
E.8.B.2	Students know the solar system includes a great variety of planetary moons, asteroids, and comets. I/S
E.8.B.4	Students know Earth is part of a solar system located within the Milky Way Galaxy. E/S
E.8.B.5	Students know the Sun is many thousands of times closer to Earth than any other star, and billions of times closer than the far end of the Milky Way Galaxy. W/L
E.8.B.6	Students know the Sun is a medium-sized star located in the Milky Way Galaxy, part of which can be seen as a glowing band of light spanning the clear night sky. W/L

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Matter
(Physical Science Unifying Concept A)

Grades 3 - 5	
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P.5.A	Students understand properties of objects and materials.
P.5.A.1	Students know matter exists in different states (i.e., solid, liquid, gas) which have distinct physical properties. E/S
P.5.A.2	Students know heating or cooling can change some common materials, such as water, from one state to another. E/S
P.5.A.5	Students know the mass of a material remains constant whether it is together, in parts, or in a different state. E/S
P.5.A.6	Students know materials are composed of parts that are too small to be seen without magnification. E/S

Grades 6 - 8	
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P.8.A	Students understand the properties and changes of properties in matter.
P.8.A.5	Students know mass is conserved in physical and chemical changes. E/S
P.8.A.6	Students know matter is made up of tiny particles called atoms. E/S

Forces and Motion
(Physical Science Unifying Concept B)

Grades 3 - 5	
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P.5.B	Students understand that forces can change the position and motion of an object.
P.5.B.1	Students know that, when an unbalanced force is applied to an object, the object either speeds up, slows down, or goes in a different direction. E/S
P.5.B.2	Students know how the strength of a force and mass of an object influence the amount of change in an object's motion. E/S
P.5.B.3	Students know a magnetic force causes certain kinds of objects to attract and repel each other. E/S
P.5.B.5	Students know Earth's gravity pulls any object toward it without touching it. E/S

Grades 6 - 8

P.8.B	Students understand that position and motion of an object result from the net effect of the different forces acting on it.
P.8.B.1	Students know the effects of balanced and unbalanced forces on an object's motion. E/S
P.8.B.3	Students know every object exerts gravitational force on every other object, and the magnitude of this force depends on the mass of the objects and their distance from one another. I/S

Energy (Physical Science Unifying Concept C)

Grades 3 - 5

P.5.C	Students understand that energy exists in different forms.
P.5.C.1	Students know light can be described in terms of simple properties (e.g., color, brightness, reflection). I/S

P.5.C.2	Students know the wave characteristics of sound. E/S
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Grades 6 – 8	
P.8.C	Students understand transfer of energy.
P.8.C.1	Students know visible light is a narrow band within the electromagnetic spectrum. I/S
P.8.C.2	Students know vibrations (e.g., sounds, earthquakes) move at different speeds in different materials, have different wavelengths, and set up wave-like disturbances that spread away from the source uniformly. E/S
P.8.C.4	Students know energy cannot be created or destroyed, in a chemical or physical reaction, but only changed from one form to another. E/S

Organisms and Their Environment (Life Science Unifying Concept C)

Grades 3 – 5	
L.5.C	Students understand that there is a variety of ecosystems on Earth and organisms interact within their ecosystems.
L.5.C.3	Students know changes to an environment can be beneficial or detrimental to different organisms. E/S
L.5.C.5	Students know plants and animals have adaptations allowing them to survive in specific ecosystems. E/S

Grades 6 – 8	
L.8.C	Students understand how living and non-living components of ecosystems interact.
L.8.C.3	Students will evaluate how changes in environments can be beneficial or harmful. E/S

Diversity of Life
(Life Science Unifying Concept D)

Grades 3 - 5	
L.5.D	Students understand that living things can be classified according to physical characteristics, behaviors, and habitats.
L.5.D.1	Students know animals and plants can be classified according to their observable characteristics. E/S

Grades 6 – 8	
L.8.D	Students understand that life forms change over time, contributing to the variety of organisms found on the Earth.
L.8.D.1	Students know species can be identified and classified based upon their characteristics. (8.8.6) E/S

Please note that use of these standards does not imply this state's endorsement of Cogno.