

Alignment with Wisconsin'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

Fourth Grade

Science, Standard A: Science Connections

A.4.1 When conducting science investigations, ask and answer questions that will help decide the general areas of science being addressed

A.4.2 When faced with a science-related problem, decide what evidence, models, or explanations previously studied can be used to better understand what is happening now

Science, Standard B: Nature of Science

B.4.1 Use encyclopedias, source books, texts, computers, teachers, parents, other adults, journals, popular press, and various other sources, to help answer science-related questions and plan investigations

B.4.2 Acquire information about people who have contributed to the development of major ideas in the sciences and learn about the cultures in which these people lived and worked

B.4.3 Show* how the major developments of scientific knowledge in the earth and space, life and environmental, and physical sciences have changed over time

Science, Standard C: Science Inquiry

C.4.1 Use the vocabulary of the unifying themes to ask questions about objects, organisms, and events being studied

C.4.2 Use the science content being learned to ask questions, plan investigations, make observations, make predictions, and offer explanations

C.4.7 Support their conclusions with logical arguments

C.4.8 Ask additional questions that might help focus or further an investigation

Science, Standard D: Physical Science

PROPERTIES OF EARTH MATERIALS

D.4.3. Understand that substances can exist in different states-solid, liquid, gas

POSITION AND MOTION OF OBJECTS

D.4.6 Observe and describe physical events in objects at rest or in motion

D.4.7 Observe and describe physical events involving objects and develop record-keeping systems to follow these events by measuring and describing changes in their properties, including:

* position relative to another object

- * motion over time
- * and position due to forces

LIGHT, HEAT, ELECTRICITY, AND MAGNETISM

D.4.8 Ask questions and make observations to discover the differences between substances that can be touched (matter) and substances that cannot be touched (forms of energy, light, heat, electricity, sound, and magnetism)

Science, Standard E: Earth and Space Science OBJECTS IN THE SKY

E.4.4 Identify celestial objects (stars, sun, moon, planets) in the sky, noting changes in patterns of those objects over time

Science Standard F: Life and Environmental THE CHARACTERISTICS OF ORGANISMS

F.4.1 Discover* how each organism meets its basic needs for water, nutrients, protection, and energy* in order to survive

Science, Standard H: Science in Personal and Social Perspectives

H.4.4 Develop* a list of issues that citizens must make decisions about and describe* a strategy for becoming informed about the science behind these issues

Eighth Grade

Science, Standard A: Science Connections

A.8.1 Develop their understanding of the science themes by using the themes to frame questions about science-related issues and problems

A.8.5 Show how models and explanations, based on systems, were changed as new evidence accumulated (the effects of constancy, evolution, change, and measurement should all be part of these explanations)

A.8.6 Use models and explanations to predict actions and events in the natural world

A.8.7 Design real or thought investigations to test the usefulness and limitations of a model

Science, Standard B: Nature of Science

B.8.1 Describe how scientific knowledge and concepts have changed over time in the earth and space, life and environmental, and physical sciences

B.8.5 Explain ways in which science knowledge is shared, checked, and extended, and show how these processes change over time

Science, Standard C: Science Inquiry

C.8.6 State what they have learned from investigations*, relating their inferences* to scientific knowledge and to data they have collected

C.8.9 Evaluate*, explain*, and defend the validity of questions, hypotheses, and conclusions to their investigations*

C.8.10 Discuss the importance of their results and implications of their work with peers, teachers, and other adults

C.8.11 Raise further questions which still need to be answered

Science, Standard D: Physical Science MOTIONS AND FORCES

D.8.5 While conducting investigations, explain the motion of objects by describing the forces acting on them

D.8.6 While conducting investigations, explain the motion of objects using concepts of speed, velocity, acceleration, friction, momentum, and changes over time, among others, and apply these concepts and explanations to real-life situations outside the classroom

D.8.7 While conducting investigations of common physical and chemical interactions occurring in the laboratory and the outside world, use commonly accepted definitions of energy and the idea of energy conservation

TRANSFER OF ENERGY

D.8.8 Describe and investigate the properties of light, heat, gravity, radio waves, magnetic fields, electrical fields, and sound waves as they interact with material objects in common situations

D.8.9 Explain the behaviors of various forms of energy by using the models of energy transmission, both in the laboratory and in real-life situations in the outside world

Science, Standard E: Earth and Space Science

EARTH IN THE SOLAR SYSTEM

E.8.7 Describe the general structure of the solar system, galaxies, and the universe, explaining the nature of the evidence used to develop current models of the universe

Science, Standard F: Life and Environmental Science

STRUCTURE AND FUNCTION IN LIVING THINGS

F.8.2 Show how organisms have adapted structures to match their functions, providing means of encouraging individual and group survival within specific environments

Science Applications, Performance Standards G Grade 8

G.8.2 Explain* how current scientific and technological discoveries have an influence on the work people do and how some of these discoveries also lead to new careers

G.8.6 Use current texts, encyclopedias, source books, computers, experts, the popular press, or other relevant sources to identify* examples of how scientific discoveries have resulted in new technology

Science, Standard H: Science in Personal and Social Perspectives

H.8.2 Present a scientific solution to a problem involving the earth and space, life and environmental, or physical sciences and participate in a consensus-building discussion to arrive at a group decision

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