



Standard #: SC.912.N.3.1

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Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.

General Information

Subject Area: Science

Grade: 912

Body of Knowledge: Nature of Science

Idea: Level 3: Strategic Thinking & Complex Reasoning

Standard: [The Role of Theories, Laws, Hypotheses, and Models](#) - The terms that describe examples of scientific knowledge, for example: "theory," "law," "hypothesis" and "model" have very specific meanings and functions within science.

Date Adopted or Revised: 02/08

Content Complexity Rating: [Level 3: Strategic Thinking & Complex Reasoning](#) - [More Information](#)

Date of Last Rating: 05/08

Status: State Board Approved

Related Courses

Course Number	Course Title
2001350:	Astronomy Solar/Galactic (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2020910:	Astronomy Solar/Galactic Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2000310:	Biology 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2000320:	Biology 1 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2000330:	Biology 2 Honors (Specifically in versions: 2014 - 2015, 2015 - 2018, 2018 - 2022 (current), 2022 and beyond)
2000430:	Biology Technology (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
3027010:	Biotechnology 1 (Specifically in versions: 2015 and beyond (current))
2003350:	Chemistry 1 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2003360:	Chemistry 2 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2001310:	Earth/Space Science (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2001320:	Earth/Space Science Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2000380:	Ecology (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2001340:	Environmental Science (Specifically in versions: 2015 - 2022 (current), 2022 and beyond)
2002480:	Forensic Science 1 (Specifically in versions: 2014 - 2015, 2015 - 2017, 2017 - 2022 (current), 2022 and beyond)
2002400:	Integrated Science 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2002420:	Integrated Science 2 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2002430:	Integrated Science 2 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2002440:	Integrated Science 3 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2002450:	Integrated Science 3 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2000390:	Limnology (Specifically in versions: 2014 - 2015, 2015 - 2018 (course terminated))
2002500:	Marine Science 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2002510:	Marine Science 1 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2002520:	Marine Science 2 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2002530:	Marine Science 2 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2003400:	Nuclear Radiation (Specifically in versions: 2014 - 2015, 2015 - 2018 (course terminated))
2020710:	Nuclear Radiation Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2003310:	Physical Science (Specifically in versions: 2015 - 2022 (current), 2022 and beyond)
2003320:	Physical Science Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2003390:	Physics 1 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2003410:	Physics 2 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2003600:	Principles of Technology 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2003610:	Principles of Technology 2 (Specifically in versions: 2014 - 2015, 2015 - 2018 (course terminated))
2002540:	Solar Energy Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2002550:	Solar Energy 2 Honors (Specifically in versions: 2014 - 2015, 2015 - 2018 (course terminated))
2002330:	Space Technology and Engineering (Specifically in versions: 2014 - 2015, 2015 - 2018 (course terminated))

2000800:	Florida's Preinternational Baccalaureate Biology 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2002340:	Experimental Science 1 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2002350:	Experimental Science 2 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2002360:	Experimental Science 3 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2002370:	Experimental Science 4 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
7920015:	Access Biology 1 (Specifically in versions: 2014 - 2015, 2015 - 2018, 2018 and beyond (current))
7920020:	Access Earth/Space Science (Specifically in versions: 2014 - 2015, 2015 - 2018, 2018 and beyond (current))
7920025:	Access Integrated Science 1 (Specifically in versions: 2014 - 2015, 2015 - 2018, 2018 and beyond (current))
2000315:	Biology 1 for Credit Recovery (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2000500:	Bioscience 1 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2000510:	Bioscience 2 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2000520:	Bioscience 3 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
2002405:	Integrated Science 1 for Credit Recovery (Specifically in versions: 2014 - 2015, 2015 - 2020 (course terminated))
2002425:	Integrated Science 2 for Credit Recovery (Specifically in versions: 2014 - 2015, 2015 - 2020 (course terminated))
2002445:	Integrated Science 3 for Credit Recovery (Specifically in versions: 2014 - 2015, 2015 - 2020 (course terminated))
2003500:	Renewable Energy 1 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
7920030:	Fundamental Integrated Science 1 (Specifically in versions: 2013 - 2015, 2015 - 2017 (course terminated))
7920035:	Fundamental Integrated Science 2 (Specifically in versions: 2013 - 2015, 2015 - 2017 (course terminated))
7920040:	Fundamental Integrated Science 3 (Specifically in versions: 2013 - 2015, 2015 - 2017 (course terminated))
2003836:	Florida's Preinternational Baccalaureate Physics 1 (Specifically in versions: 2015 - 2022 (current), 2022 and beyond)
2003838:	Florida's Preinternational Baccalaureate Physics 2 (Specifically in versions: 2015 and beyond (current))
7920022:	Access Physical Science (Specifically in versions: 2016 - 2018, 2018 and beyond (current))
2001341:	Environmental Science Honors (Specifically in versions: 2016 - 2022 (current), 2022 and beyond)

Related Access Points

Access Points Number	Access Points Title
SC.912.N.3.In.1:	Recognize that a scientific theory is developed by repeated investigations of many scientists and agreement on the likely explanation.
SC.912.N.3.Su.1:	Recognize that scientific theories are supported by evidence and agreement of many scientists.
SC.912.N.3.Pa.1:	Recognize examples of cause-effect descriptions or explanations related to science.

Related Resources

Lesson Plans

Name	Description
Opening New Windows to the Cosmos: Detecting Gravitational Waves:	In this lesson, students will analyze an informational text that describes the first detection of gravitational waves. The text seeks to define gravitational waves, the technology used to detect them, and the impact this discovery may have on future scientific endeavors. This informational text is designed to support reading in the content area. The lesson plan includes a note-taking guide, text-dependent questions, a writing prompt, sample answers, and a writing rubric.
Cells Are Alive!:	This lesson plan guides the student to examine the reasoning behind each of the tenets of the cell theory. Students will explore the formulation of cell theory and why this fundamental principle is important to biology by watching a video, conducting their own research, and discussing ideas with their peers.

Lesson Study Resource Kit

Name	Description
Exploring Diversity and Evolution: A Lesson Study Resource Kit for grades 9-12:	This lesson study resource kit is designed to support lesson study teams in developing a unit of instruction for students in grades 9-12 on the topic of diversity and evolution.

Original Student Tutorial

Name	Description
Cool Case Files:	Learn that a scientific theory is the culmination of many experiments and supplies the most powerful explanation that scientists have to offer with this interactive tutorial.

Teaching Idea

Name	Description
Island of Stability:	A video and supporting activities about the Periodic Table. The context is man's quest to create elements. The focus is atomic structure and atomic theory.

Text Resources

Name	Description
	This informational text resource is designed to support reading in the content area. The text describes the first

[Gravitational Waves Detected 100 Years After Einstein's Prediction:](#)

observation of gravitational waves by scientists, confirming Albert Einstein's 100-year-old prediction. The article describes the phenomena of gravitational waves, the technology used to detect them, and the impact of this discovery on future scientific endeavors. The importance of this discovery as the culmination of 100 years of research is emphasized.

[History Of Chemistry/Famous Chemists:](#)

This informational text resource is intended to support reading in the content area. This article describes the history of chemistry through the scientific findings and major contributions of several important chemists. These chemists, including Joseph Priestly, Dmitri Mendeleev, and Niels Bohr, discovered properties of gases and other materials, developed the Law of Conservation of Mass and the periodic table, and contributed to the development of atomic theory.

Video/Audio/Animation

Name	Description
Evolving Ideas: Isn't evolution just a theory?:	This video examines the vocabulary essential for understanding the nature of science and evolution and illustrates how evolution is a powerful, well-supported scientific explanation for the relatedness of all life. A clear definition and description of scientific theory is given.

Student Resources

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