Discovery Education Science Connection

Curriculum Coverage

Interact, Watch, Read

Science Connection's instructional resources are presented three ways — Interact, Watch, and Read — so educators can choose the mode that best relates to their teaching objectives and their students' individual learning styles. This document demonstrates the depth and breadth of Science Connection within **Life Science**, **Physical Science**, and **Earth and Space Science**.

INTERACT

Within each concept, educators and students will find extraordinary resources designed to encourage exploration, stimulate critical thinking, and deepen understanding. Three flexible components integrate easily with your curriculum:

- **Explorations** allow students to explore a concept and gain a greater understanding of how models work and how different inputs affect an outcome.
- **Interactive Video** lets students click on "hotspots" during a selected video clip to gain additional information and to reinforce key learning points.
- **Integrated Science Simulations (ISSs)** from Discovery Education's award-winning CD-ROM collection open the door for students to explore real-world situations from a variety of science perspectives.
- **Virtual Labs** let students exercise their science process skills by investigating a problem, creating a testable question, and performing a virtual experiment.

WATCH

Discover a comprehensive collection of full-length videos and segmented video clips to communicate with visual and auditory learners. Most videos are exclusive to Science Connection.

Like Discovery Education *unitedstreaming*, the video-on-demand service that reaches more than 1 million educators, Science Connection transforms video into a valuable learning experience.

READ

We provide the quality, targeted readings you are seeking for your students. Clearly written articles in printable PDF format support key concepts and enhance reading proficiency:

- Engaging, informative selections from WRC Media's award-winning libraries feature on-level, above-level, and below-level reading passages to support a range of student reading proficiencies.
- Passages from Discovery Education's award-winning book series offer highly visual and dynamic reading.

Discovery Education Science Connection
Life Science Curriculum Coverage

			Interact				Watch	Read	
Unit	**Topic**	**Concept**	**Integrated Science Simulations**	**Interactive Videos**	**Explorations**	**Virtual Labs**	**Standard Videos**	**Reading Passages**	**Articles**
Organisms	Classification	Binomial Nomenclature			•		•	•	•
		Classification Levels		•	•		•	•	•
		Features and Naming		•	•		•	•	•
		Species			•		•	•	•
	Diversity of Life	Animals			•	•	•	•	•
		Characteristics of Living Things			•	•	•	•	•
		Fungi			•		•	•	•
		Plants	•	•	•	•	•	•	•
		Prokaryotes			•		•	•	•
		Protists			•	•	•	•	•
Genetics	Genetic Traits	DNA	•	•	•		•	•	•
		Genes	•	•	•	•	•	•	•
		Mendel and Heredity	•	•	•	•	•	•	•
	Reproduction	Asexual	•	•	•		•	•	•
		Sexual		•	•	•	•	•	•
Ecosystems and Environment	Ecosystems	Aquatic Biomes	•		•		•	•	•
		Habitats and Niches	•	•	•	•	•	•	•
		Terrestrial Biomes			•		•	•	•
	Populations and Communities	Populations	•		•	•	•	•	•
		Relationships Among Organisms	•	•	•	•	•	•	•
		Trophic Relationships			•	•	•	•	•
	Problems and Solutions	Endangered Species			•		•	•	•
		Habitat Destruction	•		•	•	•	•	•
		Overpopulation	•		•	•	•	•	•
		Pollution		•	•	•	•	•	•
		Resource Exploitation	•	•	•		•	•	•

Discovery Education Science Connection
Life Science Curriculum Coverage

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Unit	**Topic**	**Concept**	**Integrated Science Simulations**	**Interactive Videos**	**Explorations**	**Virtual Labs**	**Standard Videos**	**Reading Passages**	**Articles**
Human Systems	System 1	Circulatory			•	•	•	•	•
		Digestive	•		•		•	•	•
		Muscular			•		•	•	•
		Respiratory			•		•	•	•
		Skeletal			•		•	•	•
	System 2	Endocrine			•		•		•
		Excretory			•		•		•
		Immune	•	•	•		•	•	•
		Integumentary			•		•	•	•
		Nervous		•	•		•	•	•
		Reproductive			•		•		•
Cells	Cell Processes	Cell Cycle and Mitosis	•	•	•		•	•	•
		Cellular Respiration			•	•	•	•	•
		Diffusion and Osmosis			•		•	•	•
		Meiosis	•		•		•	•	•
		Photosynthesis			•		•	•	•
	Cell Types	Cell Theory	•	•	•	•	•	•	•
		Eukaryotic Cells and Cell Differentiation	•	•	•		•	•	•
		Prokaryotic Cells	•		•		•	•	•
	Evolution	Adaptations	•	•	•		•	•	•
		Change Over Time and the Fossil Record	•		•		•	•	•
		Darwin and Natural Selection	•	•	•		•	•	•
	Hearing	Echolocation	•		•		•	•	•
		Hearing Loss		•	•	•	•	•	•
		Hearing Process		•	•	•	•	•	•
	Seeing Light	Parts of the Eye and How the Eye Perceives Light		•	•		•	•	•
		Vision Issues			•		•	•	•

Discovery Education Science Connection
Physical Science Curriculum Coverage

			Interact				Watch	Read	
Unit	**Topic**	**Concept**	**Integrated Science Simulations**	**Interactive Videos**	**Explorations**	**Virtual Labs**	**Standard Videos**	**Reading Passages**	**Articles**
Matter	Properties of Matter	Density	•	•	•	•	•		•
		Mass	•	•	•	•	•		•
		Volume	•	•	•	•	•	•	•
	Physical Changes in Matter	Changes in States	•	•	•		•	•	•
		Combining and Separating		•	•		•		•
		States of Matter	•	•	•		•	•	•
Chemical Changes	Atoms and Elements	Atomic Structure and Elements		•	•		•	•	•
		Molecules		•	•		•	•	•
		Periodic Table		•	•		•	•	•
	Chemical Reactions	Acids and Bases		•	•	•	•	•	•
		Chemical Reactions	•		•	•	•	•	•
		Compounds			•		•	•	•
Light	Interaction of Light	Nature of Light	•	•	•	•	•	•	•
		Reflection	•	•	•	•	•	•	•
		Refraction	•	•	•	•	•	•	•
		Transmission and Absorption	•	•	•	•	•	•	•
	Light Spectrum and Wave Theory	Beyond Visibility		•	•		•	•	•
		Color and the Electromagnetic Spectrum	•	•	•	•	•	•	•
		Light as Wave Energy	•	•	•		•	•	•
	Seeing Light	Parts of the Eye and How the Eye Perceives Light	•		•	•	•		•
		Vision Issues	•		•	•	•	•	
Electricity and Magnetism	Electricity and Magnetism	How Electricity and Magnetism are Related	•	•	•		•	•	•
		Magnets	•	•	•		•	•	•
	Static Electricity	Lightning		•	•		•	•	•
		Static Charges		•	•		•	•	•
	Current Electricity	Circuits and Switches	•	•	•	•	•	•	•
		Production and Storage of Electricity	•		•	•	•	•	•
Sound	Nature of Sound	Transmission, Reflection, and Absorption	•	•	•		•	•	•
		Volume and Pitch	•	•	•	•	•	•	•
		Waves	•	•	•		•	•	•
	Hearing	Echolocation	•	•	•	•	•	•	
		Hearing Loss	•		•	•	•		•
		Hearing Process	•		•	•	•		•

Discovery Education Science Connection
Physical Science Curriculum Coverage

			Interact				Watch	Read	
Unit	**Topic**	**Concept**	**Integrated Science Simulations**	**Interactive Videos**	**Explorations**	**Virtual Labs**	**Standard Videos**	**Reading Passages**	**Articles**
Heat	Thermal Energy	Conduction	•		•	•	•	•	•
		Convection	•	•	•	•	•		•
		Heat and Temperature	•	•	•	•	•	•	•
Energy Sources	Introduction	Energy Storage and Transport	•	•	•	•	•	•	•
		Human Use of Energy	•	•	•	•	•	•	•
	Electrical Energy	Electricity to Heat and Light Energy	•		•		•	•	•
		Electricity to Motion and Sound Energy	•	•	•		•	•	•
	Renewable Energy	Hydroelectric and Geothermal Energy	•	•	•		•	•	•
		Solar and Wind Energy	•	•	•	•	•	•	•
	Nuclear	Atomic Structure and the Nucleus		•	•		•	•	•
		Fission and Fusion		•	•		•	•	•
		Issues of Nuclear Energy	•	•	•	•	•	•	•
	Fossil Fuel	How Fossil Fuels Came to Be		•	•	•	•		•
		Issues of Fossil Fuels	•	•	•	•	•	•	•
		Types and Uses of Fossil Fuels	•	•	•	•	•	•	•
Force	Forces	Friction			•		•	•	•
		Gravity	•		•	•	•	•	•
		Net Force	•		•	•	•	•	•
		Newton's Laws		•	•	•	•	•	•
	Motion	Circular Motion	•		•		•	•	•
		Direction of Motion	•	•	•		•		•
		Straight Line Motion	•	•	•		•	•	•
Energy and Work	Energy and Work	Transfer and Conservation of Energy	•	•	•	•	•	•	•
		Transformation of Energy			•		•		•
		Work	•	•	•	•	•		•
		Energy Storage and Transport	•		•	•	•	•	•
		Human Use of Energy	•		•	•	•	•	•
	Potential and Kinetic Energy	Kinetic Energy	•	•	•	•	•		•
		Potential Energy	•	•	•	•	•		•
	Simple Machines	Inclined Plane		•	•		•		•
		Lever		•	•		•		•
		Pulley		•	•		•		•
		Screw		•	•		•		•
		Wedge		•	•		•		•
		Wheel		•	•		•		•

			Interact				Watch	Read	
Unit	**Topic**	**Concept**	**Integrated Science Simulations**	**Interactive Videos**	**Explorations**	**Virtual Labs**	**Standard Videos**	**Reading Passages**	**Articles**
Our Solar System	Parts of Our Solar System	Formation of Our Solar System					•	•	•
		Non-Planetary Objects					•	•	•
		The Inner Planets		•	•	•	•	•	•
		The Outer Planets		•	•	•	•	•	•
	Characteristics of the Sun-Earth-Moon System	Sun			•		•	•	•
		Earth		•	•	•	•	•	•
		Moon		•	•	•	•	•	•
	Interactions in the Sun-Earth-Moon System	Eclipses					•		•
		Phases			•		•		•
		Rotation, Orbits, and the Seasons		•	•		•		•
		Tides			•		•	•	•
Universe	Stars and Galaxies	Characteristics of Stars		•	•	•	•	•	•
		Life Cycle of a Star		•	•	•	•	•	•
		Types of Galaxies			•	•	•	•	•
	Origin of the Universe	Evidence		•	•		•	•	•
		Structure of the Universe			•	•	•	•	•
		Theories		•			•	•	•
	How We Study the Universe	Ancient Astronomy			•		•	•	•
		Modern Astronomy			•		•	•	•
Weather and Climate	Climate	Climate and the Factors that Affect It		•	•	•	•	•	•
		Climate Regions		•			•	•	•
	Climate Change	Anthropogenic Changes		•	•	•	•	•	•
		Long Term Changes					•	•	•
		Short Term Changes		•	•	•	•	•	•
	Weather	Energy Transfer and the Water Cycle	•	•	•	•	•	•	•
		Extreme Weather	•		•		•	•	•
		Meteorology	•	•	•		•	•	•

			Interact				Watch	Read	
Unit	**Topic**	**Concept**	**Integrated Science Simulations**	**Interactive Videos**	**Explorations**	**Virtual Labs**	**Standard Videos**	**Reading Passages**	**Articles**
Earth's Changing Surface	Rocks and Minerals	Fossils and Studying Earth's Past	•		•		•	•	•
		Igneous Rocks	•	•	•		•	•	•
		Metamorphic Rocks	•	•	•		•	•	•
		Minerals	•	•	•		•	•	•
		Rock Cycle	•	•	•		•	•	•
		Sedimentary Rocks	•	•	•		•	•	•
	Change Over Time	Erosion by Gravity	•	•	•	•	•	•	•
		Erosion by Water	•	•	•	•	•	•	•
		Mechanical Weathering	•	•	•	•	•	•	•
		Soil	•		•		•	•	•
Earth's Changing Interior	Earthquakes	Preparation	•	•		•	•	•	•
		Seismic Waves	•	•		•	•	•	•
		Where They Occur	•	•			•	•	•
		Why They Occur	•	•		•	•	•	•
	Plate Tectonics	Continental Drift and the Evidence for it	•				•	•	•
		Development of Plate Tectonic Theory	•	•	•		•	•	•
		Geological Evidence	•				•	•	•
		Physical Evidence	•	•	•		•	•	•
		What Plate Tectonics Is	•	•	•		•	•	•
	Structure of the Earth	Physical Characteristics		•			•	•	•
		Structure Based on Composition		•			•	•	•
		Studying Earth's Interior			•		•	•	•
	Thermal Energy	Conduction		•	•	•	•	•	•
		Convection	•	•	•	•	•	•	•
		Heat and Temperature	•	•	•	•	•	•	•
		Radiation	•	•	•		•	•	•
	Volcanoes	Effects of Volcanoes		•			•	•	•
		Types		•			•	•	•
		Where They Form	•	•			•	•	•
		Why They Form		•			•	•	•
	Waves	Characteristics / Properties of Waves	•	•		•	•	•	•
		Types of Waves	•	•	•	•	•	•	•