

Science DesCartes: General Science – Earth and Space Science

Skills: Forces that Shape the Earth

Students:	DesCartes Skills: (Highlight the skills related to your chosen standard/concept)	<p>interpreted</p> <ul style="list-style-type: none"> • Defines climate • Explains how uneven heating at the shore/ocean interface by the Sun creates winds • Analyzes the role of temperature in producing ocean currents • Recognizes the Sun's role in the water cycle • Describes how slow and rapid processes cause the Earth's surface to change constantly • Describes how constructive forces create land forms • Analyzes the role of destructive forces in shaping Earth's surface • Gives examples of fault zones • Recognizes that faults are breakages in rock associated with movement of Earth's plates • Explains how mountain building is caused by movement of tectonic plates • Relates plate movement to geologic events • Explains how plate tectonic theory accounts for movement of landforms over time • Defines magma • Explains that the geologic processes we observe today have also occurred in the geologic past
	RIT Above 240: • Predicts what will result from the collision of two oceanic plates	
	RIT 231-240: • Orders steps of the water cycle • Predicts the movement of air that will result from uneven heating of air at the ocean shore interface • Describes the measurement of an earthquake's magnitude using the Richter scale • Explains how volcanic eruptions are caused by movement of tectonic plates • Explains how sea floor spreading is caused by movement of tectonic plates • Explains how plate movement produces sea floor spreading • Predicts what will result from the collision of two oceanic plates	<p>RIT 201-210:</p> <ul style="list-style-type: none"> • Describes physical properties of the ocean • Analyzes processes which comprise the water cycle • Describes the movement of water through a complete turn of the water cycle • Describes the water cycle • Interprets models that show how water is recycled in the Earth system • Understands that meteorologists use multiple measurements of weather conditions to make forecasts • Describes how changes in the composition of the atmosphere can affect Earth's climate • Recognizes that uneven heating of air by the Sun causes convection currents • Recognizes that rapid processes which change Earth's surface include landslides, volcanic eruptions, and earthquakes • Distinguishes among processes that do and do not change Earth's surface • Infers that Earth's surface is constantly changing • Describes how destructive forces create land forms • Explains how processes such as erosion, weathering, and flow cause slow change to Earth's surface features • Infers that effects of an earthquake depend on its strength • Understands that earthquakes cause differences in the movement of land • Describes causes of earthquakes • Describes tools used to measure
	RIT 221-230: • Describes chemical properties of the ocean • Orders steps of the water cycle • Explains how uneven heating at the shore/ocean interface by the Sun creates winds • Relates differences in air pressure to movement of surface winds • Identifies diagrams illustrating convection • Analyzes the role of destructive forces in shaping Earth's surface • Sequences events that occur during a volcanic eruption • Explains that faults are associated with earthquakes • Explains that seismographs measure the energy released during an earthquake • Explains how sea floor spreading is caused by movement of tectonic plates • Predicts the landform that will result from the collision of two continental plates • Interprets diagrams showing divergent plate movement • Recognizes that the mid-Atlantic ridge is the result of sea-floor spreading • Explains features of the Earth's surface using plate tectonic theory • Recognizes that most of the world's volcanoes are located along the Pacific rim • Describes the structure of the geological time scale	
	RIT 211-220: • Describes the composition of the Earth's bodies of water • Describes geologic features of the ocean • Orders steps of the water cycle • Describes processes that make up the water cycle • Analyzes processes which comprise the water cycle • Describes how weather conditions are measured • Explains how barometric pressure is	

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	<p>earthquakes</p> <ul style="list-style-type: none"> • Describes folding and faulting • Recognizes that plate tectonics is the theory that accounts for the movement of the continents • Describes relative dating techniques
	<p>RIT 191-200:</p> <ul style="list-style-type: none"> • Recognizes that climate depends on an interaction of factors (e.g., latitude, atmospheric composition, prevailing wind, ocean temperature, pollution) • Explains how volcanoes cause pollution • Explains that the Sun is the major source of heat and light for Earth • Describes the Sun as the major source of energy for Earth • Explains that the Sun is the major energy source for Earth • Recognizes that rapid processes which change Earth's surface include landslides, volcanic eruptions, and earthquakes • Explains how plate movement produces earthquakes • Explains how magma and lava are involved in volcanic eruptions
	<p>RIT 181-190:</p> <ul style="list-style-type: none"> • Recognizes that oceans are bodies of salt water • Interprets data related to the composition of the ocean • Recognizes processes that make up the water cycle • Draws conclusions about the role of clouds in reflecting the Sun's light • Interprets data to identify existing weather conditions • Compares weather from season to season • Describes seasonal patterns in weather • Measures air temperature • Chooses the appropriate tool to measure changes in air temperature (term not used) • Recognizes that the Sun produces heat and light energy
	<p>RIT 171-180:</p> <ul style="list-style-type: none"> • Relates the type of weather experienced to personal choices and activities (e.g., dressing warmly in cold weather, sunglasses on sunny days) • Explains that temperature is a measurement of how hot or cold something is

Lesson Title:

Standard/Concept for All:

Introduction: (Get Attention; Connect to Prior Knowledge)

For Students Ready for a Challenge:

Lesson/Activity:

Resources:

Means of Assessment:

For Most Students:

Lesson/Activity:

Resources:

Means of Assessment:

For Students Needing Extra Support:

Lesson/Activity:

Resources:

Means of Assessment:

Closure/Summary for All: