

EVERGREEN COMMUNITY CHARTER SCHOOL CURRICULUM
SCIENCE

Subject: Earth Science
Grade: 11

Reading Informational Text

Students read, Understand, and respond to informational text – with emphasis on comprehension, making connections among ideas and between texts with focus on textual evidence.

Writing

Students write for different purposes and audiences. Students write clear and focused text to convey a well-defined perspective and appropriate content.

PA Core Standards/Assessment Anchors	Methods/Materials/Evaluation	Objectives
<p>CC.3.5.11.A-J CC.3.6.11.A-J 3.3.11.A1-3.3.8-11.A7 3.3.11.B1-3.3.8-11.B3</p> <p>3.1.11.A, B, D, E 3.2.11.A-D 3.3.11.A- D 3.4.11.A-C 3.5.11.A-D 3.6.11C 3.7.11.A-B 3.8.11.C 4.1.11.A-E 4.2.11.A-D 4.4.11.A-D 4.5.11.A-C 4.6.11.B 4.8.11.A-D 4.9.11.A 5.5.11.A</p> <p>S11.A.2 S11.A.3 S11.B.1 S11.B.2 S11.B.3 S11.C.1</p>	<p><u>Unit 1</u>: Exploring Planet Earth</p> <p>Chapter 1: Mapping the Earth’s Surface Chapter 2: Minerals Chapter 3: Rocks</p> <p>Resources: Prentice Hall- <u>Earth Science</u>, 2001.</p> <p>Teacher Developed activities and worksheets</p> <p>Methods:</p> <ul style="list-style-type: none"> • Diagram, model, interpretation and construction • Study guides • Class discussions • Lecture/Demonstrations • Cooperative grouping • Guided reading • Note-taking • AV resources • Drawings • Visit local mine <p>Evaluation Strategies:</p> <ul style="list-style-type: none"> • Written tests & Quizzes • Projects/Demonstrations • Homework • Class discussion 	<p>Explain/Describe</p> <ul style="list-style-type: none"> • What determines the topography of Earth’s surface? • What are the main types of landforms • What are the four spheres that make up Earth’s surface • How do maps and globes represent Earth’s surface • How are latitude and longitude used to locate points on Earth’s surface • How are satellites and computers used in mapmaking • What is a topographic map • How are elevation, relief, and slope represented on maps • What is the Global Positioning System <ul style="list-style-type: none"> • What are the characteristics of a mineral • How are minerals identified • What are the processes by which minerals form • How are minerals used • Name the three types of mines • How are ores processed to obtain metals <ul style="list-style-type: none"> • What characteristics are used to identify rocks • What are the three major groups of rocks • What are the characteristics of igneous rock • How do sedimentary rocks form • Name the three major types of sedimentary rocks

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S11.C.3
S11.D.1
S11.D.2

- How do coral reefs form
- How do coral reefs become organic limestone deposits on land
- Under what conditions do metamorphic rocks form
- How do geologists classify metamorphic rocks
- What is the rock cycle

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S11.D.1
S11.D.2

differ

- What are some hazards of volcanoes
- What landforms does lava create on Earth's surface
- How does magma that hardens beneath the surface create landforms
- How do volcanoes on Mars and Venus compare with volcanoes on Earth
- What volcanic activity is found on the moons of Jupiter and Neptune

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S11.D.1
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- How do waves shape a coast
- How does wind cause erosion
- What features result from deposition by wind

- How do fossils form
- What are the different kinds of fossils
- What do fossils tell about how organisms have changed over time
- How do geologists determine the relative age of rocks
- How are index fossils useful to geologists
- What happens during radioactive decay
- What can be learned from radioactive dating
- How did scientists determine the age of Earth
- What is the geologic time scale used to show Earth's history
- What are the different units of the geologic time scale
- What were the major events in Earth's geologic history, and the development of life on Earth

- How do fuels provide energy
- What are the three fossil fuels
- Why are fossil fuels considered nonrenewable resources
- How does the sun provide energy
- What are some renewable sources of energy
- What happens during fission and fusion reactions
- How does a nuclear power plant produce electricity
- What are two ways to make sure there will be enough energy for the future
- How does insulation help conserve energy

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- What are the main types of fronts
- What are cyclones and anticyclones
- What are the main kinds of storms and how do they form
- What measures can you take to ensure safety in a storm
- What causes flooding
- How can the dangers of floods be reduced
- How does technology help forecasters predict the weather
- What types of information are shown on weather maps

- What are the factors that influence temperature and precipitation
- What causes the seasons
- What factors are used to define climates
- What are the five main climate regions
- What principle do scientists follow in studying ancient climates
- What changes occur on Earth's surface during an ice age
- What theories have been proposed to explain natural climate change
- How might human activities be affecting the temperature of Earth's atmosphere
- How have human activities affected the ozone layer

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- What is the electromagnetic spectrum
- What is the main purpose of a telescope
- Why do astronomers use spectrographs
- How do astronomers measure distances to nearby stars
- How are stars classified
- How does the life of a star begin
- What determines how long a star will live
- What happens to a star when it runs out of fuel
- What is a star system
- What are the three types of galaxies
- How did the universe form
- How did the solar system form