

# **EARTH SCIENCE**

## **SCOPE AND SEQUENCE, LEVEL B**

### **WEEK 1**

#### **INTRODUCTION**

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- Introduction to Earth Science
- Creation
- Chronogenealogies
- Observation and Interpretation

### **WEEK 5**

#### **GEOLOGY & GLACIERS**

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- Creation and Sedimentation
- Naturalism and Sedimentation
- Igneous and Metamorphic Rock
- Erosion and Glaciers
- More About Glaciers

### **WEEK 2**

#### **WORLDVIEWS**

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- Introduction to Worldviews
- Worldviews and Science
- Interpretation: The Age of the Universe

### **WEEK 6**

#### **GLACIERS**

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- Two Types of Glaciers
- How Glaciers Change the Earth
- Evidence of Glaciers
- More Glacial Features

### **WEEK 3**

#### **GEOLOGY**

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- Introduction to Geology
- Earth's Structure
- Layers of the Earth

### **WEEK 7**

#### **PLATE TECTONICS**

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- Introduction to Plate Tectonics
- Plates in the Bible

### **WEEK 4**

#### **GEOLOGY**

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- Rocks and Minerals
- Types of Rocks and Weathering
- Erosion and Sedimentary Rock
- Erosion and the Age of the Earth

### **WEEK 8**

#### **PLATE TECTONICS**

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- What Did the Earth Look Like Before the Flood?
  - Catastrophic Plate Tectonics
  - Plate Tectonics and Fossils
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**WEEK 9**  
**EARTHQUAKES**

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- Introduction to Earthquakes
- What Causes Earthquakes
- Types of Boundaries
- Measuring an Earthquake, The Mercalli Scale and The Richter Scale

**WEEK 12**  
**VOLCANOES**

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- Volcanic Activity: Lava
- Different Kinds of Lava
- Introduction to Types of Volcanoes
- Volcanoes: Craters and Calderas

**WEEK 10**  
**EARTHQUAKES & VOLCANOES**

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- More Earthquake-Related Terms and Events
- Earthquake Safety
- Introduction to Volcanoes
- Basics of Volcano Formation
- More About Volcanoes

**WEEK 13**  
**VOLCANOES**

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- Types of Volcanoes: Composite (Stratovolcano)
- Other Volcanic Features
- Famous Volcanoes
- Volcanoes Through Creation and Naturalism Lenses

**WEEK 11**  
**VOLCANOES**

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- How Volcanism Can Form Islands
- How Divergent Plates Form Volcanoes
- Intraplate Volcanism
- Volcanic Activity: Not Just Lava!
- Volcanic Activity: Pyroclastic Material

**WEEK 14**  
**PALEONTOLOGY**

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- Paleontology . . . It Begins
- For Better Understanding: The Naturalism Timeline
- What is a Fossil?
- Altered and Unaltered Fossils

**WEEK 15**  
**PALEONTOLOGY**

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- Altered and Unaltered Fossils
- Dinosaur "Bones"

**WEEK 16**  
**PALEONTOLOGY & OCEANOGRAPHY**

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- Permineralization
- Carbonization
- Introduction to Oceanography
- Latitude and Longitude

**WEEK 17**  
**OCEANOGRAPHY**

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- Latitude and Longitude
- How We Figured Out Latitude and Longitude
- Introduction to the Oceans

**WEEK 18**  
**OCEANOGRAPHY**

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- The Salt in Seawater
- Where Ocean Salt Comes From
- Salinity

**WEEK 19**  
**OCEANOGRAPHY**

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- How Much Water is There, Even?
- Ocean Basin Anatomy
- Active and Passive Continental Margins
- SONAR and Oceanography

**WEEK 20**  
**OCEANOGRAPHY**

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- Bathymetry
- Ocean Floor Topography: Plains and Seamounts
- Ocean Floor Topography: Mid-Ocean Ridge System and Hydrothermal Vents
- Ocean Floor Topography: Reefs, Guyots and Trenches

**WEEK 21**  
**OCEANOGRAPHY**

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- Introduction to Ocean Zones
- Ocean Zones in More Depth
- Food Chains
- Energy Transfers
- Chemosynthesis

**WEEK 22**  
**OCEANOGRAPHY**

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- More Ways the Oceans Support Life
- Ocean Temperatures
- Water Pressure
- Decompression Sickness

**WEEK 23**  
**OCEANOGRAPHY**

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- Decompression Sickness
- Introduction to Ocean Currents
- History of Ocean Currents

**WEEK 24**  
**OCEANOGRAPHY**

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- What Causes Surface Currents
- More About Surface Currents and Wind
- The Coriolis Effect
- Ocean Gyres

**WEEK 25**  
**OCEANOGRAPHY**

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- More Detail About Surface Currents
- The Antarctic Circumpolar Current
- The Equatorial Countercurrents
- Introduction to Deep-Water Currents
- How Deep-Water Currents Form

**WEEK 26**  
**OCEANOGRAPHY**

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- The Paths of the Deep-Water Currents
- A Few More Facts About Currents
- Introduction to Surface Waves
- How Surface Waves Move

**WEEK 27**  
**OCEANOGRAPHY**

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- How Surface Waves Move
- How Surface Waves Change

**WEEK 28**  
**OCEANOGRAPHY**

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- Surface Waves Cause Weathering and Erosion
- Introduction to Tides
- Gravity: A Massive Subject

**WEEK 29**  
**OCEANOGRAPHY & LIMNOLOGY**

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- Gravity and Tides
- Introduction to Limnology
- Freshwater Systems
- How Water Moves in a Watershed

**WEEK 32**  
**METEOROLOGY**

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- Convection
- Cumulonimbus Cloud Formation
- Thunderstorms and Lightning
- Thunder, Hail and Tornadoes
- A Bit More About Cumulonimbus Clouds

**WEEK 30**  
**LIMNOLOGY**

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- How Rivers and Streams Move Sediments
- Following a Flowing River
- River Features: The Upper Course
- River Features: The Middle & Lower Course
- Floodplains and Levees

**WEEK 33**  
**METEOROLOGY**

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- Introduction to Hurricanes
- Hurricane Anatomy and Damage
- Predicting the Weather
- The Climate

**WEEK 31**  
**METEOROLOGY**

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- Introduction to Meteorology
- Layers of the Atmosphere in Detail
- Introduction to Clouds
- Basic Types of Clouds

**WEEK 34**  
**CLIMATE CHANGE**

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- The Climate and Critical Thinking

**WEEK 35**  
**ENERGY & DOMINION**

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- Energy
- Making Electricity
- Dominion