

Earth Science Course of Study: NovaNet

The course combines the NovaNet and computer applications to provide learning experience which employing software mastery and higher order learning skills.

Module 1: The Earth and The Moon (DAYS 001 - 007)

1. Pretest
2. Lesson: Astronomy
3. Lesson: Man Flies to the Moon
4. Lesson: Phases of the Moon
5. Post-test
6. PowerPoint: Space Missions (See sign-up for assignment)
7. Space Exploration Video Clip (23:58 min)
8. A Closer Look at the Moon Video Clip (18:10 min)
9. Early Apollo Mission Video Clip (4:08 min)
10. Apollo 13, Challenger, Mars Pathfinder Video Clips (2:53 min)
11. Mar's Pathfinder and Sojourner Roves Video Clips (2:34 min)

Module 2: The Earth, The Sun and The Universe (DAYS 008 - 016)

1. Pretest
2. Lesson: Cosmology
3. Lesson: The Earth in Space
4. Lesson: The Earth and The Sun
5. Lesson: Isaac Newton's Universal Law
6. Post-test
7. PowerPoint: Planets (See sign-up for assignment)
8. Bill Nye Astronomy Video Clip (41:41 min)
9. Exploring the Universe Video Clip (27:42 min)
10. The Universe Video Clip (G 18:41 min)
11. The Solar System Video Clip (18:15 min)
12. Story of the Solar System 4 Parts (24:34 min)
13. Mars Video Clip (7:54 min)
14. Destination Mars Video Clip (49:19 min)
15. Weather on Mars, Weather on Jupiter Video Clip (26:44 min)
16. The Inner Planets Video Clip (G 18:54 min)
17. Examining Jupiter: Storm Planet Video Clip (10:28 min)
18. Future of the Milky Way Video Clip (49:53 min)
19. Comets Video Clip (G 1:34 min)
20. Neutron Stars and Black Holes Video Clips (G 8:37 min)
21. Movement in Space Video Clip (9:27 min)
22. Planets Move Video Clip (G 2:27 min)
23. The Earth Moves Video Clip (G 2:07 min)

Module 3: The Earth in Motion (DAYS 017 - 023)

1. Pretest
2. Lesson: Earth in Motion
3. Lesson: The Changing Earth
4. Lesson: Global Tectonics and Continental Drift
5. Post-test
6. PowerPoint: Continents and Landmasses (See sign-up for assignment)
7. Our Changing Earth Video Clip (24:00 min)
8. Continents Adrift Video Clip (26:05 min)
9. Earthquakes, Volcanoes, and Other Earth Movements Video Clip (15:03 min)
10. Earthquakes Video Clip (17:46 min)
11. Earthquakes: Our Restless Planet Video Clip (20:27 min)
12. Great Quakes Video Clip (29:26 min)
13. Plate Tectonics Video Clip (5:46 min)
14. Geologist's Notebook: Why Land Goes Up and Down Video Clip (10:50 min)

Module 4: Eras of the Earth (DAYS 024 - 030)

1. History of the Earth Video Clip (22:47 min)
2. Pretest
3. Lesson: Eras of the Earth
4. Lesson: Composition of the Earth
5. Post-test
6. PowerPoint: Eras, Epochs, and Ages (See Sign-up for Assignment)
7. Historical Geology: A Glimpse into the Earth's Past Captured Video (28:53 min)
- 8.

Module 5: The Rock Cycle (DAYS 031 - 035)

1. Pretest
2. Lesson: The Rock Cycle
3. Lesson: The Earth's History
4. Post-test
5. PowerPoint: Volcanoes (See Sign-up sheet for Assignment)
6. Volcanoes: Mountains of Fire Video Clip (7:40 min)
7. Volcanoes Video Clip (17:00 min)
8. Weathering and Erosion Video Clip (G 20:25 min)

Module 6: Landforms and Earth Processes (DAYS 036 - 045)

1. Pretest
2. Lesson: Exogenous Process
3. Lesson: Endogenous Process
4. Lesson: Natural Resources
5. Lesson: Landforms
6. Lesson: Earth and It's Resources
7. Lesson: Some Geologically Important Minerals
8. Lesson: Name that Mineral
9. Post-test
10. PowerPoint: Minerals and Gemstones (See Sign-up for Assignment)
11. Cave Formation Video Clip (7:52 min)
12. Forces Shaping The Earth Video Clip (28:14 min)

Module 7: The Atmosphere (DAYS 046 - 052)

1. Pretest
2. Lesson: The Atmosphere
3. Lesson: Clouds and the Atmosphere
4. Post-test
5. PowerPoint: Clouds types and Formation (See Sign-up for Assignments)
6. Meteorology Video Clip (G 7:06 min)
7. Extreme Storms Video Clips (G 7:52 min)
8. Predicting Weather Video Clip (G 4:07 min)

Module 8: Weather Systems (DAYS 053 - 061)

1. Pretest
2. Lesson: Weather
3. Lesson: Measuring Gas Samples
4. Lesson: Sequence Reports
5. Lesson: The Synoptic Code
6. Lesson: Climate and Weather
7. Lesson: Thunderstorms
8. Post-test
9. PowerPoint: Clouds, Storms, Tornados, and Hurricanes (Group Assignment)
10. Raging Planet: Avalanches Video Clip (G 24:50 min)
11. Raging Planet: Droughts and Floods Video Clip (G 24:10 min)
12. Raging Planet: Hurricanes Video Clip (G 23:59 min)
13. Raging Planet: Tornado Video Clip (G 24:37 min)
14. Raging Planet: Tsunami Video Clip (G 43:38 min)
15. Hurricanes, Tornadoes and Thunderstorms Video Clip (G 25:56 min)

Module 9: Climates (DAYS 062 - 070)

1. Pretest
2. Lesson: Introduction to Climates
3. Lesson: Tropical Climates
4. Lesson: Dry Climates
5. Lesson: Temperate Climates
6. Lesson: Colder Climates
7. Post-test
8. PowerPoint: Climates and the Environment (See Sign-up for Assignments)
9. Everglades Ecosystems Video Clip (G 7:34 min)
10. Water Cycle and Climate Video Clip (G 14:59 min)
- 11.

Module 10: Pollution and Erosion (DAYS 071 - 076)

1. Pretest
2. Lesson: Drainage and Erosion
3. Lesson: Biogeochemical Cycles
4. Lesson: Pollution of the Air and Water
5. Lesson: Pollution
6. Post-test
7. PowerPoint: Pollution and Man-Made Issues (See Sign-up for Assignment)
8. Earth's Changing Landscape Video Clip (G 7:40 min)
9. Erosion and Conservation Video Clip (G 24:34 min)
10. Extreme Erosion Video Clip (G 7:13 min)

Module 11: The Oceans and Seas of the World (DAYS 077 - 081)

1. Pretest
2. Lesson: The Oceans of the World
3. Lesson: The Seas in Motion
4. Post-test
5. PowerPoint: Oceans and Seas Presentations (See Sign-up for Assignment)

Module 12: Maps and Topography (DAYS 082 - 090)

1. Pretest
2. Lesson: Physical Features
3. Lesson: Location
4. Lesson: Scale
5. Lesson: Direction
6. Lesson: Legends
7. Lesson: Longitude and Latitude
8. Lesson: Reading Contour Lines
9. Lesson: Compasses (Uses and Types)
10. Lesson: Geographic Grid Coordinates
11. Post-test
12. PowerPoint: "My Trip Around the World"
13. **MASTERY ASSESSMENT**