



monarch

Curriculum Catalog

General Science III

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General Science III Course Overview

General Science III is a basic intermediate course intended to expose students to the designs and patterns in God's physical universe. This course expands on General Science I and II courses. Some of the areas covered in General Science III include the structure of matter, atomic nuclei and radioactivity, geology, oceanography, astronomy, microbiology, medicine, and science today and in the future.

Students at this level should show development in their ability and understanding of scientific inquiry. Some of the units contain experiments and projects that seek to develop meaning for the student and to engage the student actively. The continued exposure of science concepts and scientific inquiry will serve to improve the student's skill and understanding.

Upon completion of the course, students should be able to do the following:

- Use their main senses for observation of the world around them.
- Describe the atomic structure of different elements.
- Calculate and measure volume, mass, and density for different objects.
- Identify different types of geological changes.
- Discuss how the layers of the earth's crust can show history.
- Describe the different parts of the ocean, both living and non-living.
- Explain the differences in the stars and constellations.
- Distinguish between bacterial infections, viral infections, and other types of infections.
- Develop a plan to prevent and treat common diseases through proper health.
- Demonstrate an understanding of the resources of the earth and what is needed to conserve those resources.

Unit 1: Our Atomic World	
General Science III	Assignments
	1. Course Overview
	2. Structure of Matter
	3. Quiz 1: Structure of Matter
	4. Radioactivity
	5. Quiz 2: Radioactivity
	6. Atomic Nuclei
	7. Quiz 3: Atomic Nuclei
8. Nuclear Energy	
9. Essay: Reactors	
10. Quiz 4: Nuclear Energy	
11. Applications and Environmental Hazards	
12. Quiz 5	
13. Special Project*	
14. Test	
15. Alternate Test*	
16. Reference	

Unit 2: Volume, Mass, and Density	
General Science III	Assignments
	1. Volume
	2. Experiment: Determining Volume
	3. Quiz 1: Volume
	4. Mass
	5. Experiment: Mass of Gas
6. Quiz 2: Mass	
7. Density	
8. Quiz 3: Density	
9. Special Project*	
10. Test	
11. Alternate Test*	
12. Reference	

Unit 3: Physical Geology	
General Science III	Assignments
	1. Earth Structures
	2. Internal Structures
	3. Igneous Structures
	4. Essay: Volcanic Eruptions
	5. Mountains
	6. Quiz 1: Earth Structures
	7. Earth Changes
	8. Erosion and Sediment
	9. Oceans
	10. Quiz 2: Earth Changes
	11. Earth Movements
	12. Experiment: Specific Gravity
	13. Experiment: Gravity
	14. Plate Tectonics
	15. Quiz 3: Earth Movements
	16. Special Project*
	17. Test
	18. Alternate Test*
19. Reference	

Unit 4: Historical Geology	
General Science III	Assignments
	1. An Observational Science
	2. Sedimentary Rock
	3. Fossils
	4. Crustal Changes
	5. Quiz 1: An Observational Science
	6. Measuring Time
	7. Absolute Time
	8. Quiz 2: Measuring Time
	9. Special Project*
	10. Test
	11. Alternate Test*
12. Reference	

Unit 5: Oceanography	
General Science III	Assignments
	1. Chronology and Techniques for Investigation
	2. Major Discoveries and Submersible Research
	3. Essay: The Moon and Tides
	4. Quiz 1: The History of Oceanography
	5. Geological Structure and Results of Profiling
	6. Turbidity, Sedimentation, and Currents
	7. Quiz 2: Geology of the Ocean
	8. Biology of the Ocean
	9. Chemistry of the Ocean
	10. Physical Properties of the Ocean
	11. Essay: Marine Report
	12. Quiz 3: Biological, Physical, and Chemical Properties
	13. Special Project*
	14. Test
15. Alternate Test*	
16. Reference	

Unit 6: Astronomy	
General Science III	Assignments
	1. Presuppositions
	2. Extent of the Universe
	3. Constellations
	4. Measuring the Universe
	5. Quiz 1: The Universe
	6. Gathering Light and Types of Telescopes
	7. Other Types of Telescopes
	8. Essay: Telescopes
	9. Quiz 2: Telescopes and Optics
	10. Space Explorations
	11. Quiz 3: Space Explorations
	12. Special Project*
	13. Test
	14. Alternate Test*
15. Reference	

Unit 7: Body Health (Part 1)		
Assignments		
General Science III	1. Microorganisms	12. More Serious Viral Infections
	2. Categories of Pathogenic Organisms	13. Quiz 3: Viral Infections
	3. Characteristics of Infectious Diseases	14. Protozoan Infections
	4. Essay: Medical Science	15. Rickettsial Infections
	5. Quiz 1: Microorganisms	16. Fungal Infections
	6. Digestive Infections	17. Quiz 4: Protozoan, Rickettsial, and Fungal Infections
	7. Respiratory Infections	18. Special Project*
	8. Nervous System Infections	19. Test
	9. Quiz 2: Bacterial Infections	20. Alternate Test*
	10. Common Viral Infections	21. Reference
	11. Childhood Viral Infections	

Unit 8: Body Health (Part 2)		
Assignments		
General Science III	1. Body Defense Mechanisms	8. Governmental Agencies and Volunteer Groups
	2. Medical Drugs	9. Medical and Drug Control Organizations
	3. Essay: Chemotherapy	10. Quiz 3: Community Agencies
	4. Quiz 1: Disease Treatment	11. Special Project*
	5. Environmental Conditions	12. Test
	6. Medical Advances and Total Health	13. Alternate Test*
	7. Quiz 2: Disease Prevention	14. Reference

Unit 9: Science and Tomorrow		
Assignments		
General Science III	1. Ecology	9. Outer Space
	2. Agriculture and Waste	10. Inner Space and Self Exploration
	3. Population	11. Quiz 3: People and Their New Frontiers
	4. Quiz 1: People and Their Land	12. Special Project*
	5. Energy Sources	13. Test
	6. Debate: Fossil Fuels, Nuclear/Natural Power	14. Alternate Test*
	7. Industry, Transportation, and Urbanization	15. Reference
	8. Quiz 2: People and Their Work Environment	

Unit 10: Review		
Assignments		
General Science III	1. Nuclear Power	9. Practical Health
	2. The Metric System	10. Population and Environment
	3. Quiz 1: Nuclear Power	11. Quiz 4: Practical Health
	4. Weight Versus Mass	12. Special Project*
	5. Quiz 2: Weight Versus Mass	13. Test
	6. Deposition Versus Erosion	14. Alternate Test*
	7. The Oceans, Continents; Earth in Space	15. Reference
	8. Quiz 3: Deposition Versus Erosion	

(*) Indicates alternative assignment