



2016 - 2017 Curriculum Catalog
General Science I

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General Science I Course Overview

General Science I is a basic intermediate course intended to expose students to the designs and patterns in God's physical universe. This course expands on the Science 600 course, providing a set of basic scientific skills and a broad survey of the major areas of science. Some of the areas covered in General Science I include the scientific method, overview of the four major areas of science, mathematics in science, astronomy, the atmosphere, natural cycles, weather and climate, human anatomy and physiology, and careers in science.

The course seeks to develop the student's ability to be aware of and participate in scientific inquiry. The units contain experiments and projects to capitalize on the students' natural curiosity. The student will explore, observe, and manipulate everyday objects and materials in their environment. Students at this level should show understanding of interrelationships between organisms, recognize patterns in systems, and expand their knowledge of cellular dimensions of living systems. Collectively, this should help students develop and build on their subject-matter knowledge base.

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

- Use their main senses for observation of the world around them.
- Demonstrate a knowledge of the different tools and methods used in science.
- Calculate and convert units in the metric system.
- Discuss historical and current views on astronomy.
- Describe the atmosphere and the weather around the earth.
- Demonstrate a basic knowledge of the different systems in the human body.

Unit 1: What is Science?		
Assignments		
General Science I	1. Course Overview	9. The Four Major Areas of Science
	2. Tools of a Scientist 1	10. Quiz 3: Work of a Scientist
	3. Tools of a Scientist 2	11. Careers in Science
	4. Quiz 1: Tools of a Scientist	12. Quiz 4: Careers in Science
	5. Methods of a Scientist 1	13. Special Project*
	6. Methods of a Scientist 2	14. Test
	7. Quiz 2: Methods of a Scientist	15. Alternate Test*
	8. The Scientist	16. Reference

Unit 2: Perceiving Things		
Assignments		
General Science I	1. Measurement: The Metric System	8. Graphs: Pictographs and Pie Charts
	2. Measurement: Size and Distance	9. Experiment: Making Graphs
	3. Measurement: Area	10. Quiz 2: Graphing Data
	4. Measurement: Volume	11. Special Project*
	5. Measurement: Mass and Density	12. Test
	6. Quiz 1: Measurement	13. Alternate Test*
	7. Graphs: Uses, Bar, and Line	14. Reference

Unit 3: Earth in Space (1)	
General Science I	Assignments
	1. Stargazing
	2. Star Charts
	3. Experiment: Constellations
	4. Quiz 1: Stargazing
	5. Astronomy
	6. Experiment: Astrolabe*
	7. Quiz 2: Astronomy
	8. Astronomers
	9. Essay: Galileo*
	10. Quiz 3: Astronomers
	11. Special Project*
	12. Test
	13. Alternate Test*
14. Reference	

Unit 4: Earth in Space (2)	
General Science I	Assignments
	1. The Sun's Energy
	2. Quiz 1: The Sun's Energy
	3. The Sun's Family
	4. Outer Planets
	5. Asteroids and Comets
	6. Quiz 2: The Sun's Family
	7. The Moon
	8. Quiz 3: The Moon
	9. Eclipses
	10. Quiz 4: Eclipses
	11. Special Project*
	12. Test
	13. Alternate Test*
14. Reference	

Unit 4: Earth in Space (2)	
General Science I	Assignments
	1. The Sun's Energy
	2. Quiz 1: The Sun's Energy
	3. The Sun's Family
	4. Outer Planets
	5. Asteroids and Comets
	6. Quiz 2: The Sun's Family
	7. The Moon
	8. Quiz 3: The Moon
	9. Eclipses
	10. Quiz 4: Eclipses
	11. Special Project*
	12. Test
	13. Alternate Test*
14. Reference	

Unit 5: The Atmosphere	
General Science I	Assignments
	1. Structure of the Atmosphere
	2. Solar Effects
	3. Experiment: The Greenhouse
	4. Quiz 1: Structure of the Atmosphere
	5. Water Cycle
	6. Other Natural Cycles
	7. Quiz 2: Natural Cycles
	8. Pollution
	9. Quiz 3: Pollution
	10. Special Project*
	11. Test
	12. Alternate Test*
	13. Reference

Unit 6: Weather	
General Science I	Assignments
	1. Elements of Weather
	2. Wind
	3. Pressure
	4. Experiment: Dew Point
	5. Quiz 1: Elements of Weather
	6. Weather in Motion
	7. Fronts
	8. Quiz 2: Weather in Motion
	9. Weather Forecasting
	10. Quiz 3: Weather Forecasting
	11. Special Project*
	12. Test
	13. Alternate Test*
14. Reference	

Unit 7: Climate		
General Science I	Assignments	
	1. Climate: General	7. Quiz 3: Regional Climate Types and Distribution of Climate Types
	2. Quiz 1: Climate: General	8. Special Project*
	3. Climate: Worldwide	9. Test
	4. Quiz 2: Climate: Worldwide	10. Alternate Test*
	5. Regional Climate Types	11. Reference
	6. Distribution of Climate Types in the World	

Unit 8: The Human Anatomy (Part 1)		
General Science I	Assignments	
	1. Human Building Blocks	8. Project: Human Brain*
	2. Experiment: Cheek Cell	9. Senses
	3. Quiz 1: Human Building Blocks	10. Quiz 3: Human Nervous System and Senses
	4. Human Framework	11. Special Project*
	5. Skin	12. Test
	6. Quiz 2: Human Framework	13. Alternate Test*
	7. Human Nervous System	14. Reference

Unit 9: The Human Anatomy (Part 2)		
General Science I	Assignments	
	1. The Respiratory System	8. The Excretory System
	2. Quiz 1: The Respiratory System	9. Quiz 4: The Excretory System
	3. The Circulatory System	10. The Endocrine System
	4. Experiment: Heart Rate	11. Quiz 5: The Endocrine System
	5. Quiz 2: The Circulatory System	12. Special Project*
	6. The Digestive System--Part 1	13. Test
	7. The Digestive System--Part 2	14. Alternate Test*
	8. Quiz 3: The Digestive System	16. Reference

Unit 10: Working In Science		
General Science I	Assignments	
	1. Scientists at Work	12. The Medical Scientist at Work
	2. Experiment: Red Celery	13. Nervous and Endocrine Systems
	3. Famous Scientists	14. Circulatory and Respiration Systems
	4. Quiz 1: Scientists at Work	15. Digestive and Excretory Systems
	5. The Astronomer at Work	16. Quiz 4: The Medical Scientist at Work and Body Systems
	6. Planets	17. Special Project*
	7. Quiz 2: The Astronomer at Work	18. Test
	8. The Meteorologist at Work	19. Alternate Test*
	9. Studying the Weather	20. Reference
	10. Studying Climates	
	11. Quiz 3: The Meteorologist at Work	

(*) Indicates alternative assignment