



# 2012 Curriculum Catalog

General Science I

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### 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?	
Assignment Titles	
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	
Assignment Titles	
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	12. Test
6. Quiz 1: Measurement	13. Alternate Test
7. Graphs: Uses, Bar, and Line	14. Reference

UNIT 3: EARTH IN SPACE (PART 1)	
Assignment Titles	
1. Stargazing	8. Astronomers
2. Star Charts	9. Essay: Galileo
3. Experiment: Constellations	10. Quiz 3: Astronomers
4. Quiz 1: Stargazing	11. Special Project
5. Astronomy	12. Test
6. Experiment: Astrolabe	13. Alternate Test
7. Quiz 2: Astronomy	14. Reference

**UNIT 4: EARTH IN SPACE (PART 2)**
**Assignment Titles**

- |                             |                      |
|-----------------------------|----------------------|
| 1. The Sun's Energy         | 8. Quiz 3: The Moon  |
| 2. Quiz 1: The Sun's Energy | 9. Eclipses          |
| 3. The Sun's Family         | 10. Quiz 4: Eclipses |
| 4. Outer Planets            | 11. Special Project  |
| 5. Asteroids and Comets     | 12. Test             |
| 6. Quiz 2: The Sun's Family | 13. Alternate Test   |
| 7. The Moon                 | 14. Reference        |

**UNIT 5: THE ATMOSPHERE**
**Assignment Titles**

- |  |                      |
|--|----------------------|
| 1. Structure of the Atmosphere         | 7. Pollution         |
| 2. Solar Effects                       | 8. Quiz 3: Pollution |
| 3. Experiment: The Greenhouse          | 9. Special Project   |
| 4. Quiz 1: Structure of the Atmosphere | 10. Test             |
| 5. Natural Cycles                      | 11. Alternate Test   |
| 6. Quiz 2: Natural Cycles              | 12. Reference        |

**UNIT 6: WEATHER**
**Assignment Titles**

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

**UNIT 7: CLIMATE**
**Assignment Titles**

- |                               |                              |
|-------------------------------|------------------------------|
| 1. Climate: General           | 7. Quiz 3: Climate: Regional |
| 2. Quiz 1: Climate: General   | 8. Special Project           |
| 3. Climate: Worldwide         | 9. Test                      |
| 4. Quiz 2: Climate: Worldwide | 10. Alternate Test           |
| 5. Climate: Regional          | 11. Reference                |
| 6. Climate: Regional (Part 2) |                              |

**UNIT 8: THE HUMAN ANATOMY (PART 1)**
**Assignment Titles**

- |                                  |                                  |
|----------------------------------|----------------------------------|
| 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 |
| 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)**
**Assignment Titles**

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| 1. The Respiratory System         | 9. The Excretory System          |
| 2. Quiz 1: The Respiratory System | 10. Quiz 4: The Excretory System |
| 3. The Circulatory System         | 11. The Endocrine System         |
| 4. Experiment: Heart Rate         | 12. Quiz 5: The Endocrine System |
| 5. Quiz 2: The Circulatory System | 13. Special Project              |
| 6. The Digestive System--Part 1   | 14. Test                         |
| 7. The Digestive System--Part 2   | 15. Alternate Test               |
| 8. Quiz 3: The Digestive System   | 16. Reference                    |

**UNIT 10: WORKING IN SCIENCE****Assignment Titles**

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