



GENERAL SCIENCE I  
ONLINE- HSE

**NFC ACADEMY**

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# GENERAL SCIENCE I HSE

## COURSE OVERVIEW

General Science I (7<sup>th</sup> Grade) 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.

[See As Web Page](#)

## ***Homeschool Parent Teacher Led – Home Science Labs***

### **UNIT 1 - WHAT IS SCIENCE?**

- 1. Course Overview**
- 2. Tools of a Scientist 1**
- 3. Tools of a Scientist 2**
- 4. Quiz 1: Tools of a Scientist**
- 5. Methods of a Scientist 1**
- 6. Methods of a Scientist 2**
- 7. Quiz 2: Methods of a Scientist**

8. **The Scientist**

9. **The Four Major Areas of Science**

10. **Quiz 3: Work of a Scientist**
11. **Careers in Science**
12. **Quiz 4: Careers in Science**
13. **Special Project: Smart Science Virtual Labs – Systematic Errors**
14. **Test**
15. **Alternate Test**
16. **Reference**

## **UNIT 2 – PERCEIVING THINGS**

1. **Measurement: The Metric System**
2. **Measurement: Size and Distance**
3. **Measurement: Area**
4. **Measurement: Volume**
5. **Measurement: Mass and Density**
6. **Quiz 1: Measurement**
7. **Graphs: Uses, Bar, and Line**
8. **Graphs: Pictographs and Pie Charts**
9. **Experiment: Making Graphs** *(In this project, you will be designing three graphs based on information given to you in tables. You must organize the information into graphs and make them clear and understandable. There are two sections included in this assignment. The first section provides instruction for designing three graphs using paper and pencil. The second section is provided with instruction for designing the three graphs using the Microsoft® Excel® application. You only need to do one or the other. The advantage of using the Excel application is that you will have electronic copies that may be sent using the upload button provided)*

*in the first section. It also provides practice using technology in a practical way)*

10. **Quiz 2: Graphing Data**
11. **Test**
12. **Alternate Test**
13. **Reference**

### **UNIT 3 - EARTH IN SPACE (PART 1)**

1. **Stargazing**
2. **Star Charts**
3. **Experiment: Constellations**
4. **Quiz 1: Stargazing**
5. **Astronomy**
6. **Quiz 2: Astronomy**
7. **Astronomers**
8. **Quiz 3: Astronomers**
9. **Test**
10. **Alternate Test**
11. **Reference**

### **UNIT 4 – EARTH IN SPACE (PART 2)**

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. **Test**
12. **Alternate Test**
13. **Reference**

#### **UNIT 5 – THE ATMOSPHERE**

1. **Structure of the Atmosphere**
2. **Solar Effects**
3. **Quiz 1: Structure of the Atmosphere**
4. **Water Cycle**
5. **Other Natural Cycles**
6. **Quiz 2: Natural Cycles**
7. **Pollution**
8. **Quiz 3: Pollution**
9. **Test**
10. **Alternate Test**
11. **Reference**

#### **UNIT 6 – WEATHER**

1. **Elements of Weather**
2. **Wind**
3. **Pressure**
4. **Experiment: Dew Point – Complete the experiment using the video lab provided in the lesson.**
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. **Test**
12. **Alternate Test**
13. **Reference**

## **UNIT 7 – CLIMATE**

1. **Climate: General**
2. **Quiz 1: Climate: General**
3. **Climate: Worldwide**
4. **Quiz 2: Climate: Worldwide**
5. **Regional Climate Types**
6. **Distribution of Climate Types in the World**
7. **Quiz 3: Regional Climate Types and Distribution of Climate Types**
8. **Test**
9. **Alternate Test**

10. Reference

**UNIT 8 – THE HUMAN ANATOMY (PART 1)**

1. Human Building Blocks
2. Experiment: Cheek Cell
3. Quiz 1: Human Building Blocks
4. Human Framework
5. Skin
6. Quiz 2: Human Framework
7. Human Nervous System
8. Senses
9. Quiz 3: Human Nervous System and Senses
10. Test
11. Alternate Test
12. Reference

**UNIT 9 - THE HUMAN ANATOMY (PART 2)**

1. The Respiratory System
2. Quiz 1: The Respiratory System
3. The Circulatory System
4. Experiment: Heart Rate (*In this investigation, you will take your own pulse and a friend's to measure the rate of the beating of your hearts. Then, you will see what happens to your heart rates after strenuous exercise*)
5. Quiz 2: The Circulatory System
6. The Digestive System--Part 1



7. **The Digestive System--Part 2**
8. **Quiz 3: The Digestive System**
9. **The Excretory System**
10. **Quiz 4: The Excretory System**
11. **The Endocrine System**
12. **Quiz 5: The Endocrine System**
13. **Test**
14. **Alternate Test**
15. **Reference**

#### **UNIT 10 - WORKING IN SCIENCE**

1. **Scientists at Work**
2. **Famous Scientists**
3. **Quiz 1: Scientists at Work**
4. **The Astronomer at Work**
5. **Planets**
6. **Quiz 2: The Astronomer at Work**
7. **The Meteorologist at Work**
8. **Studying the Weather**
9. **Studying Climates**
10. **Quiz 3: The Meteorologist at Work**
11. **The Medical Scientist at Work**
12. **Nervous and Endocrine Systems**
13. **Circulatory and Respiration Systems**

14. **Digestive and Excretory Systems**
15. **Quiz 4: The Medical Scientist at Work and Body Systems**
16. **Test**
17. **Alternate Test**
18. **Reference**