



SCIENCE 300 ONLINE
NFC ACADEMY

**ACADEMIC
INSTRUCTIONAL
LIBRARY**
HOME TEACHER



SCIENCE 300

COURSE OVERVIEW

Science 300 is a basic elementary course intended to expose students to the designs and patterns in God's physical universe. This course provides a broad survey of the major areas of science. Some of the areas covered in Science 300 include the human body, plants, animals, health and nutrition, matter, sound waves, earth science, and heat energy.

The course seeks to develop the student's ability to understand and participate in scientific inquiry. The units contain experiments and projects designed to build on children's natural curiosity.

HOME TEACHER LABS

Labs for the Homeschool Edition program are those contained in the Ignitia Online Curriculum. No expensive equipment is required with only several requiring the purchase of small items or household items to conduct the experiments.

It is always advisable to be familiar with your surroundings and wear protective equipment when conducting any experiment. Never allow yourself to be distracted when completing an experiment.

Unit 1 - YOU GROW AND CHANGE

1. Course Overview

2. **Your Body Breathes Air**
3. **The Body Needs Oxygen**
4. **Experiment: Breathing Patterns**
5. **Experiment: [Your Lungs - Kid Science Balloon](#)**
6. **Quiz 1**
7. **Your Body Digests Food**
8. **Experiment: Taste Test**
9. **Quiz 2**
10. **Your Body Exercises and Rests**
11. **[Experiment: How To Take Your Pulse](#)**
12. **Quiz 3**
13. **Your Body is Different from an Animal**
14. **Quiz 4**
15. **Review Game**
16. **Test**
17. **Alternate Test**
18. **Reference**

Unit 2 – PLANTS

1. **Plant Parts**
2. **[Experiment: Study a Stem - Plant Stems Are Like Pipes - Celery Experiment](#)**
3. **Quiz 1**
4. **Plant Growth**
5. **Quiz 2**

6. Plant Changes

7. [Experiment: Plant a Piece of Potato - Alyssa | How to grow potatoes](#)

8. Quiz 3

9. Review Game

10. [Test](#)

11. Alternate Test

12. Reference

Unit 3 - ANIMALS: GROWTH AND CHANGE

1. Animals and The Environment

2. Experiment: Heat Energy Comparison

1. [How Heat affects Soil and Water](#)

2. [Inquiry 3.1 Heating of Soil, Water and Sand.MP4](#)

3. Quiz 1

4. How Animals are Different

5. Animal Structures

6. Eating and Breathing

7. [Project: Sort Birds By Type - Bird Feeding Adaptations: How Beaks are Adapted to What Birds Eat](#)

8. Quiz 2

9. How Animals Grow and Change

10. Quiz 3

11. Review Game

12. Test

13. Alternate Test

14. Reference

Unit 4 – YOU ARE WHAT YOU EAT

1. **How to Build a Healthy Body**
2. **How to Build a Healthy Body-2**
3. **Quiz 1**
4. **How to Plan for Healthy Eating**
5. **Project: Breakfast Chart**
 1. [How to Follow the USDA MyPlate Dietary Guidelines](#)
 2. [Healthy Breakfast Scramble Using MyPlate Guidelines - ChooseHealthLA.com](#)
6. [Project: Lunch Chart - Choose My Plate: A Lunch Lady's Guide to Healthier Eating](#)
7. [Project: Dinner Chart - MyPlate Nutrition Guide](#)
8. **Quiz 2**
9. **How to Form Good Health Habits**
10. **Caring for the Eyes and Body**
11. **Quiz 3**
12. **Review [Game](#)**
13. **Test**
14. **Alternate Test**
15. **Reference**

Unit 5 – PROPERTIES OF MATTER

1. **Chemistry and Robert Boyle**
2. **Properties of Matter**

3. [Experiment: Volume - Math Learning: Learn about Volume of objects](#)
4. **Experiment: Is Air Matter?**
 1. [Air is Matter, Really?](#)
 2. [Air is Matter?!](#)
 3. [Balancing Balloons - Air Has Weight](#)
5. [Experiment: Is Water Matter? - Finding the Mass of a Liquid](#)
6. **Quiz 1**
7. **Physical Changes**
8. [Experiment: Melting Ice Cubes](#)
9. **Chemical Changes**
10. **Quiz 2**
11. **Review Game**
12. **Test**
13. **Alternate Test**
14. **Reference**

Unit 6 – SOUNDS AND YOU

1. **What is Sound?**
2. **Quiz 1**
3. **How Do Sounds Travel?**
4. **How Does Sound Travel?**
5. **How Are Different Sounds Made?**
6. [Experiment: Loud or Soft? - Sounds of Science - Cool Science Experiment – \(adapt using the sounds to the questions\)](#)
7. **Quiz 2**

8. How Do You Hear Sounds?
9. Report: How Animals Hear – *Write about animals hearing. Look at the picture of the different animal ears. Look up these animals in a reference book to find out how each animal hears. Type a report about one of the animals.*
10. Quiz 3
11. Review Game
12. Test
13. Alternate Test
14. Reference

Unit 7 - TIME AND SEASONS

1. How the Earth Moves
2. [Experiment: The Earth's Rotation - Earth's Rotation & Revolution: Crash Course Kids 8.1](#)
3. Quiz 1
4. Why Time Changes
5. [Report: Months - How the Months Got Their Names](#)
6. Quiz 2
7. Why Seasons Change
8. Quiz 3
9. Review Game
10. Test
11. Alternate Test
12. Reference

Unit 8 -ROCKS AND THEIR CHANGE

1. **How Rocks are Formed: By Heat**
2. **Rocks Formed by Volcanoes**
3. **How Rocks are Formed: By Pressure**
4. **[Experiment: Bubbling Grains of Rock - Limestone Vinegar Test aka Acid Test for Carbonate Minerals](#)**
5. **Quiz 1**
6. **Rocks are Changed by Wind and Water**
7. **Rocks are Changed by Heat and Plants**
8. **Quiz 2**
9. **Rocks are Used for Building**
10. **Report: Mount Rushmore**
11. **Rocks are Used for Enjoyment**
12. **Quiz 3**
13. **Review Game**
14. **Test**
15. **Alternate Test**
16. **Reference**

Unit 9 - HEAT ENERGY

1. **Heat Energy (Part 1)**
2. **Heat Energy (Part 2)**
3. **[Experiment: Static Electricity \(ADULT SUPERVISION REQUIRED\)- "Do Try This @ Home 2010" - Episode 27 - "Lightning in Your Hand"](#)**
4. **Quiz 1**

5. **What Heat Energy Is and Does**
6. [Experiment: Water Molecules - Moving Water Molecules](#)
7. **Movement of Heat Energy**
8. **Quiz 2**
9. **Heat Energy Affects Our Lives**
10. **Quiz 3**
11. **Review Game**
12. **Test**
13. **Alternate Test**
14. **Reference**

Unit 10 – REVIEW

1. **Physical Change: Change in Man**
2. **Physical Change: Change in Plants**
3. **Physical Change: Change in Animals**
4. **Quiz 1**
5. **The Earth**
6. **Seasons and Times**
7. **Quiz 2**
8. **Sounds and Energy**
9. [Experiment: How Sound Travels - How sound travels through different media](#)
10. **Quiz 3**
11. **Review Game**
12. **Test**

13. Alternate Test