



SCIENCE 400 ONLINE
NFC ACADEMY

**ACADEMIC
INSTRUCTIONAL
LIBRARY**
HOME TEACHER



SCIENCE 400 ONLINE

COURSE OVERVIEW

Science 400 is a basic elementary course intended to expose students to the designs and patterns in God's physical universe. This course builds on concepts taught in Science 300, providing a broad survey of the major areas of science. Some of the areas covered in Science 400 include the study of plants and animals, ecology, work and simple machines, electricity and magnetism, properties of water and matter, weather, solar system, and the different spheres of earth.

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 – PLANTS

1. **Course Overview**
2. **Plant Life**
3. **Plants Used As Food and Shelter**

4. **Project: Things Made of Wood**
5. **Plants Used For Enjoyment and Symbols**
6. **Report: Flowers as State Symbols**
7. **Report: Flower Paragraph**
8. **Quiz 1**
9. **Parts of Plants**
10. **How Plant Parts Function**
11. **Experiment: *Complete the Virtual Lab in your assignment. It is not necessary to do the experiments but observe the video experiment and complete the assignment.***
12. **How Plant Parts Function (Part 2)**
13. **How Plant Parts Function (Part 3)**
14. **Quiz 2**
15. **Review Game**
16. **Test**
17. **Alternate Test**
18. **Reference**

Unit 2 – ANIMALS

1. **How Animals are Structured**
2. **Whales**
3. **Report: Types of Whales – *Complete the report on the Types of Whales as listed in this assignment.***
4. **Birds**
5. **Reptiles and Fish**

6. **How Animals Eat and Digest Food**
7. **How Animals Breathe**
8. **Quiz 1**
9. **How Animals Act: Mammals**
10. **How Animals Act: Salmon**
11. **How Animals Act: Birds**
12. **How Animals Act: Insects**
13. **Report: Honeybee Habits - *Complete the report on the Honeybee Habits as listed in this assignment.***
14. **Quiz 2**
15. **Animal Instinct**
16. **Man Protects Animals**
17. **Project: Animal Scrapbook- *Complete this project on the Animal Scrapbook as listed in this assignment.***
18. **Quiz 3**
19. **Review Game**
20. **Test**
21. **Alternate Test**
22. **Reference**

Unit 3 - MAN AND HIS ENVIRONMENT

1. **Ecology**
2. **Project: Your Environment - *Complete this project on the Your Environment as listed in this assignment.***
3. **Resources**

4. **Food Chains**
5. **Ecosystem Populations**
6. **Balance of Nature**
7. **Quiz 1**
8. **Water Communities**
9. **Experiment: Still Water Life –**
 - *Complete the Virtual Lab in your assignment. It is not necessary to do the experiments but observe the video experiment and complete the assignment.*
 - *Pond Water Creatures*
 - *Microscopic Life In Single Drop Of Pond Water: Pond Safari*
10. **Land Communities**
11. **Report: Forest Community - Complete this report on the Forest Environment as listed in this assignment.**
12. **Quiz 2**
13. **Misuse of the Environment**
14. **Resource Conservation**
15. **Environmental Preservation**
16. **Quiz 3**
17. **Review Game**
18. **Test**
19. **Alternate Test**
20. **Reference**

Unit 4 – MACHINES

1. **Machines Are Needed: Work**
2. **Machines Are Needed: Energy**
3. **Quiz 1**
4. **Simple Machines: Lever**
5. **Experiment: Hammer and Nail – *Use the Virtual Lab in your assignment to answer the questions for this assignment.***
6. **Experiment Seesaw: *principal on which a see saw works***
7. **Simple Machines: Inclined Plane**
8. **Simple Machines: Wedge and Screw**
9. **Experiment: *Screw and Nail - Use the Virtual Lab in your assignment to answer the questions for this assignment.***
10. **Simple Machines: Wheel and Axle**
11. **Simple Machines: Pulleys**
12. **Experiment: *Pulleys - Use the Virtual Lab in your assignment to answer the questions for this assignment.***
13. **Quiz 2**
14. **Compound Machines**
15. **Quiz 3**
16. **Review Game**
17. **Test**
18. **Alternate Test**
19. **Reference**

Unit 5 - ELECTRICITY AND MAGNETISM

1. **Electricity**

2. **Report: Thomas Edison – *Write the report on Thomas Edison as noted for this assignment.***
3. **Experiment: *Static Electricity***
4. **Currents and Circuits**
5. **Project: Conductors – *Classify the items you believe are conductors.***
6. **Electrical Use and Safety**
7. **Quiz 1**
8. **Magnetism**
9. **Experiment: Use a Magnet**
 - ***Magnets for Kids***
 - ***Magnetism for Kids***
10. **Experiment: Make a Magnet - *Complete the Virtual Lab in your assignment. It is not necessary to do the experiments but observe the video experiment and complete the assignment.***
11. **Quiz 2**
12. **Review Game**
13. **Test**
14. **Alternate Test**
15. **Reference**

Unit 6 - WATER AND MATTER

1. **Water**
2. **Experiment: Ice – *Complete the Virtual Lab in your assignment. It is not necessary to do the experiments but observe the video experiment and complete the assignment.***
3. **Water as a Liquid**

4. **Experiment: Potato - *Complete the Virtual Lab in your assignment. It is not necessary to do the experiments but observe the video experiment and complete the assignment.***
5. **Water as a Gas**
6. **Water as a Solvent**
7. **Experiment: Solubility - *Complete the Virtual Lab in your assignment. It is not necessary to do the experiments but observe the video experiment and complete the assignment.***
8. **Quiz 1**
9. **Matter**
10. **Molecules and Atoms**
11. **Elements**
12. **Quiz 2**
13. **Review Game**
14. **Test**
15. **Alternate Test**
16. **Reference**

Unit 7 – WEATHER

1. **The Atmosphere**
2. **Experiment: Air and Space - *Complete the Virtual Lab in your assignment. It is not necessary to do the experiments but observe the video experiment and complete the assignment.***
3. **Temperature**
4. **Air Pressure**

5. **Experiment: Pressure - *Complete the Virtual Lab in your assignment. It is not necessary to do the experiments but observe the video experiment and complete the assignment.***
6. **Quiz 1**
7. **Forces of Weather**
8. **Sand and Dust Storms**
9. **Quiz 2**
10. **Prediction of Weather**
11. **Quiz 3**
12. **Review Game**
13. **Test**
14. **Alternate Test**
15. **Reference**

Unit 8 - OUR SOLAR SYSTEM AND THE UNIVERSE

1. **A Trip Through Space**
2. **Our Big Universe**
3. **Report: Astronomy Instruments - *Write the report on astronomy instruments as noted for this assignment.***
4. **Quiz 1**
5. **The Sun**
6. **Movements**
7. **Heavenly Bodies Around the Sun**
8. **Our Moon**
9. **Experiment: Moon Phases - *Lunar Cycle, Why The Moon Change Shapes, 8 Phases Of The Moon, Learning Videos For Children***

10. Quiz 2
11. The Stars and Space
12. The Milky Way and Other Galaxies
13. Quiz 3
14. Review Game
15. Test
16. Alternate Test
17. Reference

Unit 9 - THE PLANET EARTH

1. The Air (Atmosphere)
2. Experiment: Condensation - *Complete the Virtual Lab in your assignment. It is not necessary to do the experiments but observe the video experiment and complete the assignment.*
3. Gases in the Atmosphere
4. Quiz 1
5. The Water (Hydrosphere)
6. Salt Water
7. Quiz 2
8. The Land (Lithosphere)
9. Experiment: Shadows - *Complete the Virtual Lab in your assignment. It is not necessary to do the experiments but observe the video experiment and complete the assignment.*
10. Earth's Land Formations
11. Earth's Rotation and Revolution
12. Quiz 3

13. Review Game
14. Test
15. Alternate Test
16. Reference

Unit 10 - UNDERSTANDING GOD'S WONDERFUL CREATION

1. Review: The Solar System
2. Review: The Earth
3. Quiz 1
4. Review: Matter
5. Review: Water
6. Review: Weather
7. Quiz 2
8. Review: Electricity and Magnetism
9. Review: Machines
10. Quiz 3
11. Review: Ecology
12. Review: Conservation
13. Quiz 4
14. Review Game
15. Test
16. Alternate Test

