

# CURRICULUM OVERVIEW

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## Science 300



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## Table of Contents

<b>SCIENCE 300 COURSE OVERVIEW .....</b>	<b>1</b>
UNIT 1: YOU GROW AND CHANGE .....	1
UNIT 2: PLANTS .....	1
UNIT 3: ANIMALS .....	2
UNIT 4: BODY HEALTH .....	2
UNIT 5: PROPERTIES OF MATTER .....	2
UNIT 6: SOUND.....	2
UNIT 7: TIME AND SEASONS.....	3
UNIT 8: ROCKS AND THEIR CHANGE .....	3
UNIT 9: HEAT ENERGY .....	3
UNIT 10: REVIEW .....	3

## Science 300 Course Overview

Science 300 is a basic elementary course intended to expose students to the designs and patterns in the 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 curriculum seeks to develop the students' ability to understand and participate in scientific inquiry. The units contain experiments and projects to capitalize on children's natural curiosity. The students will explore, observe and manipulate everyday objects and materials in their environment. Collectively, this should help students develop a subject-matter knowledge base.

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

- Demonstrate a basic understanding of the systems in a human body.
- Discuss the process a plant goes through in order to grow.
- Explain the difference between types of animals.
- Determine which eating and care habits are the healthiest for students.
- Distinguish between the three phases of matter and describe their properties.
- Explain how sound travels.
- Describe why time and seasons change.
- Discuss how rocks are formed and how they change.
- Explain how heat is produced.

Unit 1: You Grow and Change	
Assignments	
1. Course Overview	11. Experiment: Taking Your Pulse
2. Your Body Breathes Air	12. Project: Bone Numbers
3. Your Body Needs Oxygen	13. Quiz 3: Your Body Moves
4. Experiment: Breathing Patterns	14. Your Body Thinks
5. Experiment: Your Lungs	15. Quiz 4: Your Body Thinks
6. Quiz 1: Your Body Breathes Air	16. Special Project
7. Your Body Digests Food	17. Test
8. Experiment: Taste Test	18. Alternate Test
9. Quiz 2: Your Body Digests Food	19. Glossary and Credits
10. Your Body Moves	

Unit 2: Plants	
Assignments	
1. Plant Parts	9. Experiment: Watch the Seeds Grow
2. Project: Root Hairs	10. Experiment: Plant a Piece of Potato
3. Experiment: Study a Stem	11. Experiment: Bean Plant
4. Quiz 1: Plant Parts	12. Quiz 3: Plant Changes
5. Plant Growth	13. Special Project
6. Experiment: Grow Some Plants	14. Test
7. Quiz 2: Plant Growth	15. Alternate Test
8. Plant Changes	16. Glossary and Credits

Unit 3: Animals		
Science 300	Assignments	
	1. Animals are Different	11. Quiz 2: Animals
	2. Insects and Spiders	12. Mammals
	3. Project: Metamorphosis	13. Special Mammals
	4. Fish	14. Project: Marsupials
	5. Project: Aquarium	15. Quiz 3: Animals
	6. Quiz 1: Animals	16. Special Project
	7. Amphibians	17. Test
	8. Reptiles	18. Alternate Test
	9. Birds	19. Glossary and Credits
	10. Project: Vertebrates	

Unit 4: Body Health		
Science 300	Assignments	
	1. Healthy Foods	9. Quiz 2: How to Plan for Healthy Eating
	2. Unhealthy Foods	10. Healthy Teeth
	3. Quiz 1: Healthy and Unhealthy Foods	11. Exercise
	4. Plan for Healthy Eating	12. Quiz 3: A Healthy Body
	5. Project: Breakfast Chart	13. Special Project
	6. Project: Lunch Chart	14. Test
	7. Project: Dinner Chart	15. Alternate Test
	8. Project: Chart Totals	16. Glossary and Credits

Unit 5: Properties of Matter		
Science 300	Assignments	
	1. Chemistry and Matter	10. Experiment: Mass
	2. Experiment: Be a Chemist	11. Experiment: Melting Ice Cubes
	3. Properties of Matter	12. Chemical Changes
	4. Project: Volume	13. Quiz 2: Changes in Matter
	5. Experiment: Is Air Matter?	14. Special Project
	6. Project: Matter	15. Test
	7. Experiment: Is Water Matter?	16. Alternate Test
	8. Quiz 1: Matter	17. Glossary and Credits
	9. Physical Changes	

Unit 6: Sound		
Science 300	Assignments	
	1. Sounds are Made	10. Sounds are Heard
	2. Experiment: Vibrations	11. Experiment: Hearing Sounds
	3. How Does Sound Travel?	12. Report: How Animals Hear
	4. Properties of Sound	13. Quiz 2: Sound
	5. Experiment: Sound Patterns	14. Special Project
	6. Report: Sound	15. Test
	7. Experiment: Pitch	16. Alternate Test
	8. Experiment: Loudness	17. Glossary and Credits
	9. Quiz 1: Sound	

Unit 7: Time and Seasons		
Science 300	Assignments	
	1. How the Earth Moves	8. Report: Months
	2. Experiment: The Earth	9. Why Seasons Change
	3. Experiment: Night	10. Quiz 2: Time and Seasons
	4. Experiment: Rotation	11. Special Project
	5. Quiz 1: How the Earth Moves	12. Test
	6. Why Time Changes	13. Alternate Test
	7. Project: Different Times	14. Glossary and Credits

Unit 8: Rocks and Their Change		
Science 300	Assignments	
	1. Igneous Rocks	10. Building With Rocks
	2. Volcanoes	11. Report: Mount Rushmore
	3. Sedimentary Rocks	12. Enjoying Rocks
	4. Experiment: Limestone	13. Project: Famous Rocks
	5. Metamorphic Rocks	14. Quiz 3: How Rocks Are Used
	6. Quiz 1: How Rocks Are Formed	15. Special Project
	7. Rocks Change: Water and Wind	16. Test
	8. Rocks Change: Temperature and Plants	17. Alternate Test
	9. Quiz 2: Rocks Are Changed	18. Glossary and Credits

Unit 9: Heat Energy		
Science 300	Assignments	
	1. Heat and Temperature	10. Experiment: Static Electricity
	2. Movement of Heat Energy	11. Quiz 2: Heat Energy
	3. Experiment: Water Molecules	12. Problems with Heat Energy
	4. Experiment: Changing Liquid to a Gas	13. Quiz 3: Heat Energy
	5. Quiz 1: Heat Energy	14. Special Project
	6. Friction and Fire	15. Test
	7. Experiment: Friction	16. Alternate Test
	8. Experiment: Oxygen and Fire	17. Glossary and Credits
	9. Electricity and the Sun	

Unit 10: Review		
Science 300	Assignments	
	1. Your Body	9. Sounds and Energy
	2. Plants	10. Experiment: How Sound Travels
	3. Animals	11. Experiment: Temperature Comparisons
	4. Quiz 1: Review	12. Quiz 3: Review
	5. Matter and Rocks	13. Special Project
	6. Project: Rock Collection	14. Test
	7. Seasons and Times	15. Alternate Test
	8. Quiz 2: Review	16. Glossary and Credits

(\*) Indicates alternative assignment