



2019-20

CALVERT HOMESCHOOL™ CURRICULUM CATALOG

Science 300



Table of Contents

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

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

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

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

(*) Indicates alternative assignment