

**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. The student 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 most healthy 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				
Assignment Titles				
SCIENCE 300	1.	Course Overview	11.	Experiment: Taking Your Pulse
	2.	Your Body Breathes Air	12.	Project: Bone Numbers*
	3.	The Body Needs Oxygen	13.	Quiz 3
	4.	Experiment: Breathing Patterns	14.	Your Body is Different from an Animal
	5.	Experiment: Your Lungs*	15.	Quiz 4
	6.	Quiz 1	16.	Special Project*
	7.	Your Body Digests Food	17.	Review Game
	8.	Experiment: Taste Test	18.	Test
	9.	Quiz 2	19.	Alternate Test*
	10.	Your Body Exercises and Rests	20.	Reference

UNIT 2: PLANTS				
Assignment Titles				
SCIENCE 300	1.	Plant Parts	10.	Experiment: Plant a Piece of Potato*
	2.	Experiment: Root Hairs	11.	Experiment: Bean Plant*
	3.	Experiment: Study a Stem*	12.	Quiz 3
	4.	Quiz 1	13.	Special Project*
	5.	Plant Growth	14.	Review Game
	6.	Experiment: Grow Some Plants	15.	Test
	7.	Quiz 2	16.	Alternate Test*
	8.	Plant Changes	17.	Reference
	9.	Experiment: Watch Bean Seeds Grow		

UNIT 3: ANIMALS: GROWTH AND CHANGE		
SCIENCE 300	<b>Assignment Titles</b>	
	1. Animals and The Environment	11. Quiz 2
	2. Experiment: Hourly Temperature Changes	12. How Animals Grow and Change
	3. Experiment: Heat Energy Comparison*	13. Project: Sow Bug Environment
	4. Project: Desert Locations*	14. Quiz 3
	5. Quiz 1	15. Special Project*
	6. How Animals are Different	16. Review Game
	7. Animal Structures	17. Test
	8. Project: Vertebrate Chart	18. Alternate Test*
	9. Eating and Breathing	19. Reference
10. Project: Sort Birds By Type*		

UNIT 4: YOU ARE WHAT YOU EAT		
SCIENCE 300	<b>Assignment Titles</b>	
	1. How to Build a Healthy Body	10. How to Form Good Health Habits
	2. How to Build a Healthy Body-2	11. Caring for the Eyes and Body
	3. Quiz 1	12. Quiz 3
	4. How to Plan for Healthy Eating	13. Special Project*
	5. Project: Breakfast Chart	14. Review Game
	6. Project: Lunch Chart*	15. Test
	7. Project: Dinner Chart*	16. Alternate Test*
	8. Project: Chart Totals*	17. Reference
	9. Quiz 2	

UNIT 5: PROPERTIES OF MATTER		
SCIENCE 300	<b>Assignment Titles</b>	
	1. Chemistry and Robert Boyle	11. Experiment: Mass Measurement
	2. Experiment: Be a Chemist	12. Experiment: Melting Ice Cubes*
	3. Properties of Matter	13. Chemical Changes
	4. Experiment: Volume	14. Quiz 2
	5. Experiment: Think about Mass*	15. Special Project*
	6. Experiment: Is Air Matter?*	16. Review Game
	7. Project: Matter List*	17. Test
	8. Experiment: Is Water Matter?*	18. Alternate Test*
	9. Quiz 1	19. Reference
10. Physical Changes		

UNIT 6: SOUNDS AND YOU		
SCIENCE 300	<b>Assignment Titles</b>	
	1. What is Sound?	11. How Do You Hear Sounds?
	2. Experiment: Vibrations	12. Experiment: Think About Hearing
	3. Quiz 1	13. Report: How Animals Hear*
	4. How Does Sound Travel?	14. Quiz 3
	5. How Are Different Sounds Made?	15. Special Project*
	6. Experiment: Sound Patterns	16. Review Game
	7. Report: Read and Write About Sound	17. Test
	8. Experiment: High and Low Sounds	18. Alternate Test*
	9. Experiment: Loud or Soft?*	19. Reference
10. Quiz 2		

**UNIT 7: TIME AND SEASONS**

SCIENCE 300

**Assignment Titles**

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|--------------------------------------|------------------------|
| 1. How the Earth Moves               | 9. Quiz 2              |
| 2. Experiment: The Earth             | 10. Why Seasons Change |
| 3. Experiment: Night                 | 11. Quiz 3             |
| 4. Experiment: The Earth's Rotation* | 12. Special Project*   |
| 5. Quiz 1                            | 13. Review Game        |
| 6. Why Time Changes                  | 14. Test               |
| 7. Experiment: Different Times       | 15. Alternate Test*    |
| 8. Report: Months*                   | 16. Reference          |

**UNIT 8: ROCKS AND THEIR CHANGE**

SCIENCE 300

**Assignment Titles**

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|---|----------------------------------|
| 1. How Rocks are Formed: By Heat        | 10. Report: Mount Rushmore       |
| 2. Rocks Formed by Volcanoes            | 11. Rocks are Used for Enjoyment |
| 3. How Rocks are Formed: By Pressure    | 12. Quiz 3                       |
| 4. Experiment: Bubbling Grains of Rock  | 13. Special Project*             |
| 5. Quiz 1                               | 14. Review Game                  |
| 6. Rocks are Changed by Wind and Water  | 15. Test                         |
| 7. Rocks are Changed by Heat and Plants | 16. Alternate Test*              |
| 8. Quiz 2                               | 17. Reference                    |
| 9. Rocks are Used for Building          |                                  |

**UNIT 9: HEAT ENERGY**

SCIENCE 300

**Assignment Titles**

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|------------------------------------|--|
| 1. Heat Energy (Part 1)            | 10. Experiment: Changing Liquid to Gas |
| 2. Experiment: Feeling Friction    | 11. Quiz 2                             |
| 3. Experiment: Oxygen and Fire     | 12. Heat Energy Affects Our Lives      |
| 4. Heat Energy (Part 2)            | 13. Quiz 3                             |
| 5. Experiment: Static Electricity* | 14. Special Project*                   |
| 6. Quiz 1                          | 15. Review Game                        |
| 7. What Heat Energy Is and Does    | 16. Test                               |
| 8. Experiment: Water Molecules     | 17. Alternate Test*                    |
| 9. Movement of Heat Energy         | 18. Reference                          |

**UNIT 10: REVIEW**

SCIENCE 300

**Assignment Titles**

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|---------------------------------------|---|
| 1. Physical Change: Change in Man     | 10. Experiment: How Sound Travels       |
| 2. Physical Change: Change in Plants  | 11. Experiment: Temperature Comparisons |
| 3. Physical Change: Change in Animals | 12. Quiz 3                              |
| 4. Quiz 1                             | 13. Special Project*                    |
| 5. The Earth                          | 14. Review Game                         |
| 6. Seasons and Times                  | 15. Test                                |
| 7. Project: Rock Collection           | 16. Alternate Test*                     |
| 8. Quiz 2                             | 17. Reference                           |
| 9. Sounds and Energy                  |   |

(\*) Indicates alternate assignment