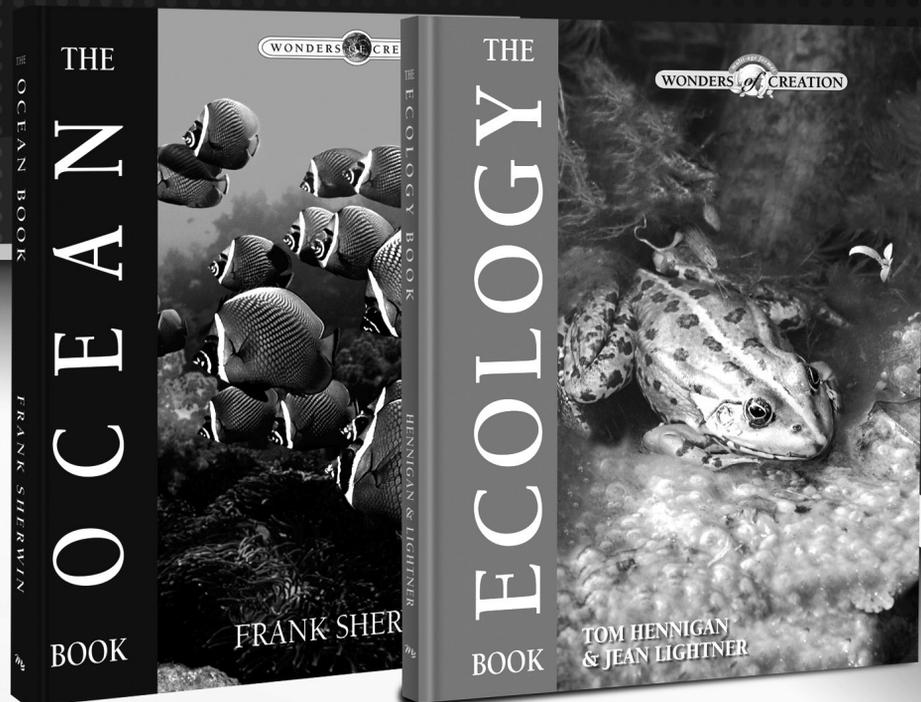


# INTRO TO OCEANOGRAPHY & ECOLOGY

## Parent Lesson Planner (PLP)



-  Weekly Lesson Schedule
-  Student Worksheets
-  Quizzes & Test
-  Answer Key

7th – 9th grade

1 Year  
Science

1/2 Credit

First printing: March 2013

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Unless otherwise noted, Scripture quotations are from the New King James Version of the Bible.

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Psalm 11:3; NKJV

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that is in you, with meekness and fear.*

1 Peter 3:15; NKJV

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## Suggested Optional Science Lab

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There are a variety of companies that offer science labs that complement our courses. These items are only suggestions, not requirements, and they are not included in the daily schedule. We have tried to find materials that are free of evolutionary teaching, but please review any materials you may purchase. The following items are available from [www.HomeTrainingTools.com](http://www.HomeTrainingTools.com).

### *The Ocean Book*

LM-SEAMONK Sea Monkey Ocean Zoo

PM-OSTRACO “Sea-Firefly” Bioluminescence Kit (requires microscope)

BE-SEACOLL Sea Life Shell Collection

### *The Ecology Book*

PM-BOTANY Botany Survey Set

BE-TREERNG Tree Ring Kit

## Lessons for a 36-week course:

**Overview:** This *Introduction to Ocean and Ecology PLP* contains materials for use with *The Ocean Book* and *The Ecology Book* in the Wonders of Creation series. Materials are organized by book in the following sections:

	Study guide worksheets
	Quizzes
	Semester Tests
	Answer Key

**Features:** Each suggested weekly schedule has three easy-to-manage lessons which combine reading, worksheets, and vocabulary-building opportunities including an expanded glossary for each book. Designed to allow your student to be independent, materials in this resource are divided by section so you can remove quizzes, tests, and answer keys before beginning the coursework. As always, you are encouraged to adjust the schedule and materials needed to in order to best work within your educational program.

**Workflow:** Students will read the pages in their book and then complete each section of the PLP. They should be encouraged to complete as many of the activities and projects as possible as well. Tests are given at regular intervals with space to record each grade. If used with younger students, they may be given the option of only choosing activities or projects of interest to them and taking open book tests.

**Lesson Scheduling:** Space is given for assignment dates. There is flexibility in scheduling. For example, the parent may opt for a M–W schedule rather than a M, W, F schedule. Each week listed has five days but due to vacations the school work week may not be M–F. Adapt the days to your school schedule. As the student completes each assignment, he/she should put an “X” in the box.

	Approximately 30 to 45 minutes per lesson, three days a week
	Includes answer keys for worksheets, quizzes, and semester tests
	Worksheets for each chapter
	Quizzes are included to help reinforce learning and provide assessment opportunities; optional semester exams included
	Designed for grades 7 to 9 in a one-year course to earn 1/2 science credit

**Frank Sherwin** (The Ocean Book) received his bachelors degree in biology from Western State College and later obtained a masters degree in zoology. He is currently a Research Associate, Senior Lecturer, and Science Writer for the Institute for Creation Research.

**Tom Hennigan** (The Ecology Book) is an Associate Professor of Organismal Biology at Truett-McConnell College and has an A.A.S. from the New York State Forest Ranger School, a B.S. in Natural Resources Management from the University of Alaska, an M.S. in Education from Syracuse University, and an M.P.S. in Environmental and Forest Biology from SUNY College of Environmental Science and Forestry.

**Dr. Jean Lightner** (The Ecology Book) is an adjunct professor with Liberty University Online. She has a B.S. in Agriculture, a D.V.M., and an M.S. in veterinary preventive medicine, all from the Ohio State University. She is a member of the Creation Biology Society, Christian Veterinary Mission, and the National Animal Health Emergency Response Corps.

# Introduction to Ocean and Ecology

## Course Description

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This is the suggested course sequence that allows one core area of science to be studied per semester. You can change the sequence of the semesters per the needs or interests of your student; materials for each semester are independent of one another to allow flexibility.

## Semester 1: Oceans

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The oceans may well be earth's final frontier. These dark and sometimes mysterious waters cover 71 percent of the surface area of the globe and have yet to be fully explored. Under the waves, a watery world of frail splendor, foreboding creatures, and sights beyond imagination awaits. In *The Ocean Book* you will study a variety of topics: giant squid and other "monsters" of the seas; centuries of ocean exploration; hydrothermal vents; the ingredients that make up the ocean; harnessing the oceans' energy; icebergs; coral reefs; ships, submarines, and other ocean vessels; the major ocean currents; El Niño; whirlpools and hurricanes; harvesting the ocean's resources; whales, dolphins, fish, and other sea creatures. Learning about the oceans and their hidden contents is exciting and rewarding. The abundance and diversity of life, the wealth of resources, and the simple mysteries there have intrigued explorers and scientists for centuries,. A better understanding of our oceans ensures careful conservation of their grandeur and beauty for future generations, and a deeper respect for the delicate balance of life on planet Earth.

## Semester 2: Ecology

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Study the relationship between living organisms and our place in God's wondrous creation! Learn important words and concepts from different habitats around the world to mutual symbiosis as a product of the relational character of God. This is a powerful biology-focused course specially designed for multi-age teaching. Students will:

- Study the intricate relationship between living organisms and our place in God's wondrous creation
- Examine important words and concepts, from different habitats around the world to our stewardship of the world's resources
- Gain insight into influential scientists and their work
- More fully understand practical aspects of stewardship
- Investigate ecological interactions and connections in creation

*The Ecology Book* encourages an understanding of a world designed not as a series of random evolutionary accidents but as a wondrous, well-thought out system of life around the globe created to enrich and support its different features. Activities provide additional ways to make the learning experience practical.

## First Semester Suggested Daily Schedule

Date	Day	Assignment	Due Date	✓	Grade
First Semester-First Quarter — <i>The Ocean Book</i>					
Week 1	Day 1	Read Pages 4-5 • Ocean Book (OB) • Sample map • Page 14 • (LP) <b>Ocean: Intro Worksheet 1 • Terms to Know • Page 17 • (LP)</b>			
	Day 2				
	Day 3	Introduction - Short Answer, Discussion Questions <b>Ocean: Intro Worksheet 1 • Page 17 • (LP)</b>			
	Day 4				
	Day 5	Introduction - Activities <b>Ocean: Intro Worksheet 1 • Page 18 • (LP)</b>			
Week 2	Day 6	Read Pages 6-9 • (OB)			
	Day 7				
	Day 8	Research & the Deep Oceans - Terms to Know and Spell <b>Ocean Ch 1: Worksheet 1 • Page 19 • (LP)</b>			
	Day 9				
	Day 10	Research & the Deep Oceans - Short Answer, Discussion Questions <b>Ocean Ch 1: Worksheet 1 • Page 19 • (LP)</b>			
Week 3	Day 11	Research & the Deep Oceans - Activities <b>Ocean Ch 1: Worksheet 1 • Page 20 • (LP)</b>			
	Day 12				
	Day 13	Research & the Deep Oceans - Projects <b>Ocean Ch 1: Worksheet 1 • Page 20 • (LP)</b>			
	Day 14				
	Day 15	Read Pages 10-15 • (OB)			
Week 4	Day 16	Physical Characteristics of the Ocean - Terms to Know and Spell <b>Ocean Ch 2: Worksheet 1 • Page 21 • (LP)</b>			
	Day 17				
	Day 18	Physical Characteristics of the Ocean - Short Answer, Discussion <b>Ocean Ch 2: Worksheet 1 • Page 21 • (LP)</b>			
	Day 19				
	Day 20	Physical Characteristics of the Ocean - Activities <b>Ocean Ch 2: Worksheet 1 • Page 22 • (LP)</b>			
Week 5	Day 21	Read Pages 16-21 • (OB)			
	Day 22				
	Day 23	Composition of the Oceans - Terms to Know and Spell <b>Ocean Ch 3: Worksheet 1 • Page 23 • (LP)</b>			
	Day 24				
	Day 25	Composition of the Oceans - Short Answer, Discussion Questions <b>Ocean Ch 3: Worksheet 1 • Page 23 • (LP)</b>			

Date	Day	Assignment	Due Date	✓	Grade
Week 6	Day 26	Composition of the Oceans - Activities <b>Ocean Ch 3: Worksheet 1 • Page 24 • (LP)</b>			
	Day 27				
	Day 28	Ocean Intro - Ch. 3 Study Day			
	Day 29				
	Day 30	Ocean Intro - Ch. 3 Quiz 1 • Page 65 • (LP)			
Week 7	Day 31	Read Pages 22-33 • (OB)			
	Day 32				
	Day 33	Tides, Waves, and Currents - Terms to Know and Spell <b>Ocean Ch 4: Worksheet 1 • Page 25 • (LP)</b>			
	Day 34				
	Day 35	Tides, Waves, and Currents - Short Answer, Discussion Questions <b>Ocean Ch 4: Worksheet 1 • Page 25 • (LP)</b>			
Week 8	Day 36	Tides, Waves, and Currents - Activities <b>Ocean Ch 4: Worksheet 1 • Page 26 • (LP)</b>			
	Day 37				
	Day 38	Read Pages 34-37 • (OB) Weather - Terms to Know and Spell <b>Ocean Ch 5: Worksheet 1 • Page 27 • (LP)</b>			
	Day 39				
	Day 40	Weather - Short Answer, Discussion Questions <b>Ocean Ch 5: Worksheet 1 • Page 27 • (LP)</b>			
Week 9	Day 41	Weather - Activities <b>Ocean Ch 5: Worksheet 1 • Page 28 • (LP)</b>			
	Day 42				
	Day 43	Ocean Book Chs 4-5: Study Day			
	Day 44				
	Day 45	Ocean Book Chs 4-5 Quiz 2 • Page 67			
First Semester — Second Quarter — <i>The Ocean Book</i>					
Week 1	Day 46	Read Pages 38-43 • (OB) Harvesting the Ocean - Terms to Know and Spell <b>Ocean Ch 6: Worksheet 1 • Page 29 • (LP)</b>			
	Day 47				
	Day 48	Harvesting the Ocean - Short Answer, Discussion Questions <b>Ocean Ch 6: Worksheet 1 • Page 29 • (LP)</b>			
	Day 49				
	Day 50	Harvesting the Ocean - Activities <b>Ocean Ch 6: Worksheet 1 • Page 30 • (LP)</b>			
Week 2	Day 51	Read Pages 44-49 • (OB)			
	Day 52				
	Day 53	Read Pages 50-55 • (OB)			
	Day 54				
	Day 55	Marine Life - Terms to Know and Spell <b>Ocean Ch 7: Worksheet 1 • Page 31 • (LP)</b>			

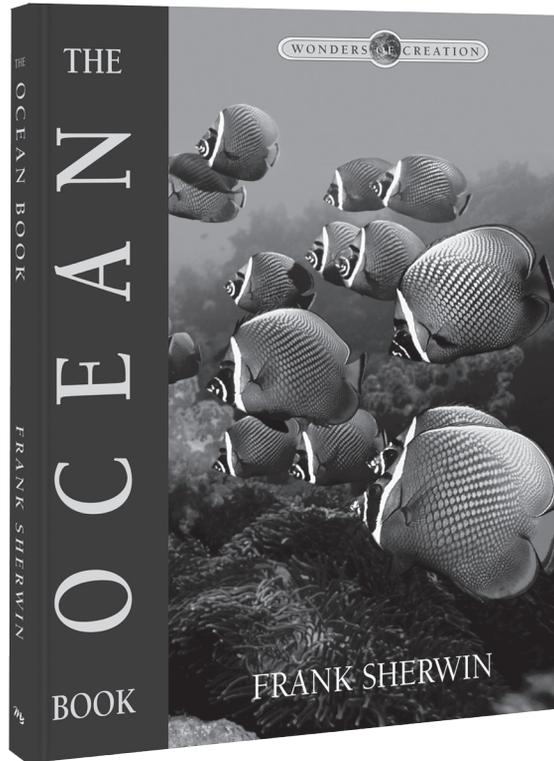
Date	Day	Assignment	Due Date	✓	Grade
Week 3	Day 56	Marine Life - Short Answer, Discussion Questions <b>Ocean Ch 7: Worksheet 1</b> • Pages 31-32 • (LP)			
	Day 57				
	Day 58	Marine Life - Activities <b>Ocean Ch 7: Worksheet 1</b> • Page 33 • (LP)			
	Day 59				
	Day 60	Ocean Book Chs 6-7: Study Day			
Week 4	Day 61	Ocean Book Chs 6-7 Quiz 3 • Page 69 • (LP)			
	Day 62				
	Day 63	Read Pages 56-59 • (OB)			
	Day 64				
	Day 65	Exploring the Coral Reef - Terms to Know and Spell <b>Ocean Ch 8: Worksheet 1</b> • Page 35 • (LP)			
Week 5	Day 66	Exploring the Coral Reef - Short Answer, Discussion Questions <b>Ocean Ch 8: Worksheet 1</b> • Page 35 • (LP)			
	Day 67				
	Day 68	Exploring the Coral Reef - Activities <b>Ocean Ch 8: Worksheet 1</b> • Page 36 • (LP)			
	Day 69				
	Day 70	Read Pages 60-65 • (OB)			
Week 6	Day 71	Ocean Vessels – Terms to Know and Spell <b>Ocean Ch 9: Worksheet 1</b> • Page 37 • (LP)			
	Day 72				
	Day 73	Ocean Vessels- Short Answer, Discussion Questions <b>Ocean Ch 9: Worksheet 1</b> • Pages 37-38 • (LP)			
	Day 74				
	Day 75	Ocean Vessels - Activities <b>Ocean Ch 9: Worksheet 1</b> • Page 38 • (LP)			
Week 7	Day 76	Read Pages 66-71 • (OB)			
	Day 77				
	Day 78	The Genesis Flood - Terms to Know and Spell <b>Ocean Ch 10: Worksheet 1</b> • Page 39 • (LP)			
	Day 79				
	Day 80	The Genesis Flood - Short Answer, Discussion Questions <b>Ocean Ch 10: Worksheet 1</b> • Pages 39-40 • (LP)			
Week 8	Day 81	The Genesis Flood - Activities <b>Ocean Ch 10: Worksheet 1</b> • Page 40 • (LP)			
	Day 82				
	Day 83	Ocean Book Chs 8-10 Study Day			
	Day 84				
	Day 85	Ocean Book Chs 8-10 Quiz 4 Page 71 (LP)			
Week 9	Day 86	Ocean Book Intro – Ch 10 Study Day			
	Day 87				
	Day 88	Ocean Book Intro –Ch 10 Study Day			
	Day 89				
	Day 90	Ocean Book Intro – Ch 10 Mid-Term Test (Optional) • Page 73			
		<b>Mid-Term Grade</b>			

## Second Semester Suggested Daily Schedule

Date	Day	Assignment	Due Date	✓	Grade
Second Semester-First Quarter — <i>The Ecology Book</i>					
Week 1	Day 91	Read Pages 6-9 • The Ecology Book • (EB)			
	Day 92				
	Day 93	Harmony in Creation - Vocabulary Words Ecology Ch 1: Worksheet 1 • Page 43 • Lesson Planner (LP)			
	Day 94				
	Day 95	Harmony in Creation - Multiple Choice, Discussion Questions Ecology Ch 1: Worksheet 1 • Page 43 • (LP)			
Week 2	Day 96	Harmony in Creation - Projects Ecology Ch 1: Worksheet 1 • Page 44 • (LP)			
	Day 97				
	Day 98	Read Pages 10-13 • (EB)			
	Day 99				
	Day 100	Read Pages 14-17 • (EB)			
Week 3	Day 101	Ecology: The Study of “Our House” - Vocabulary Words <b>Ecology Ch 2: Worksheet 1 • Page 45 • (LP)</b>			
	Day 102				
	Day 103	Ecology: The Study of “Our House” - Multiple Choice, Discussion <b>Ecology Ch 2: Worksheet 1 • Pages 45-46 • (LP)</b>			
	Day 104				
	Day 105	Ecology: The Study of “Our House” - Projects <b>Ecology Ch 2: Worksheet 1 • Page 46 • (LP)</b>			
Week 4	Day 106	Read Pages 18-23 • (EB)			
	Day 107				
	Day 108	The Dominion Mandate - Vocabulary Words <b>Ecology Ch 3: Worksheet 1 • Page 47 • (LP)</b>			
	Day 109				
	Day 110	The Dominion Mandate - Multiple Choice, Discussion Questions <b>Ecology Ch 3: Worksheet 1 • Pages 47-48 • (LP)</b>			
Week 5	Day 111	The Dominion Mandate - Projects <b>Ecology Ch 3: Worksheet 1 • Page 48 • (LP)</b>			
	Day 112				
	Day 113	<b>Ecology Ch 1-3: Study Day</b>			
	Day 114				
	Day 115	<b>Ecology Ch 1-3: Unit 1 Quiz • Page 77 • (LP)</b>			
Week 6	Day 116	Read Pages 24-27 • (EB)			
	Day 117				
	Day 118	Read Pages 28-31 • (EB)			
	Day 119				
	Day 120	What’s on the Menu Today? - Vocabulary Words <b>Ecology Ch 4: Worksheet 1 • Page 49 • (LP)</b>			

Date	Day	Assignment	Due Date	✓	Grade
Week 7	Day 121	What's on the Menu Today? - Multiple Choice, Discussion Questions <b>Ecology Ch 4: Worksheet 1</b> • Pages 49-50 • (LP)			
	Day 122				
	Day 123	What's on the Menu Today? - Projects <b>Ecology Ch 4: Worksheet 1</b> • Page 50 • (LP)			
	Day 124				
	Day 125	Read Pages 32-36 • (EB)			
Week 8	Day 126	Read Pages 37-41 • (EB)			
	Day 127				
	Day 128	Taking a Liking to Lichens - Vocabulary Words <b>Ecology Ch 5: Worksheet 1</b> • Page 51 • (LP)			
	Day 129				
	Day 130	Taking a Liking to Lichens - Multiple Choice, Discussion Questions <b>Ecology Ch 5: Worksheet 1</b> • Pages 51-52 • (LP)			
Week 9	Day 131	Taking a Liking to Lichens - Projects <b>Ecology Ch 5: Worksheet 1</b> • Page 52 • (LP)			
	Day 132				
	Day 133	<b>Ecology Ch 4-5: Study Day</b>			
	Day 134				
	Day 135	<b>Ecology Ch 4-5: Unit 2 Quiz</b> • Page 79 • (LP)			
Second Semester — Second Quarter — <i>The Ecology Book</i>					
Week 1	Day 136	Read Pages 42-46 • (EB)			
	Day 137				
	Day 138	Read Pages 47-51 • (EB)			
	Day 139				
	Day 140	A Fungus Among Us - Vocabulary Words <b>Ecology Ch 6: Worksheet 1</b> • Page 53 • (LP)			
Week 2	Day 141	A Fungus Among Us - Multiple Choice, Discussion Questions <b>Ecology Ch 6: Worksheet 1</b> • Page 53-54 • (LP)			
	Day 142				
	Day 143	A Fungus Among Us - Projects <b>Ecology Ch 6: Worksheet 1</b> • Page 54 • (LP)			
	Day 144				
	Day 145	Read Pages 52-61 • (EB)			
Week 3	Day 146	The Plant-Bacteria Connection - Vocabulary, Multiple Choice <b>Ecology Ch 7: Worksheet 1</b> • Pages 55-56 • (LP)			
	Day 147				
	Day 148	The Plant-Bacteria Connection - Discussion Questions, Projects <b>Ecology Ch 7: Worksheet 1</b> • Page 56 • (LP)			
	Day 149				
	Day 150	<b>Ecology Ch 6-7: Study Day</b>			

Date	Day	Assignment	Due Date	✓	Grade
Week 4	Day 151	<b>Ecology Ch 6-7: Unit 3 Quiz</b> • Page 81 • (LP)			
	Day 152				
	Day 153	Read Pages 62-69 • (EB)			
	Day 154				
	Day 155	Of Bacteria, Cattle, and Men - Vocabulary Words <b>Ecology Ch 8: Worksheet 1</b> • Page 57 • (LP)			
Week 5	Day 156	Of Bacteria, Cattle, & Men - Multiple Choice, Discussion Questions <b>Ecology Ch 8: Worksheet 1</b> • Pages 57-58 • (LP)			
	Day 157				
	Day 158	Of Bacteria, Cattle, and Men - Projects <b>Ecology Ch 8: Worksheet 1</b> • Page 58 • (LP)			
	Day 159				
	Day 160	Read Pages 70-75 • (EB)			
Week 6	Day 161	To the Root of the Matter - Vocabulary Words <b>Ecology Ch 9: Worksheet 1</b> • Page 59 • (LP)			
	Day 162				
	Day 163	To the Root of the Matter - Multiple Choice, Discussion Questions <b>Ecology Ch 9: Worksheet 1</b> • Pages 59-60 • (LP)			
	Day 164				
	Day 165	To the Root of the Matter - Projects <b>Ecology Ch 9: Worksheet 1</b> • Page 60 • (LP)			
Week 7	Day 166	Read Pages 76-83 • (EB)			
	Day 167				
	Day 168	Ecology in God's Creation - Vocabulary Words <b>Ecology Ch 10: Worksheet 1</b> • Page 61 • (LP)			
	Day 169				
	Day 170	Ecology in God's Creation - Multiple Choice, Discussion <b>Ecology Ch 10: Worksheet 1</b> • Page 61 • (LP)			
Week 8	Day 171	Ecology in God's Creation - Projects <b>Ecology Ch 10: Worksheet 1</b> • Page 62 • (LP)			
	Day 172				
	Day 173	<b>Ecology Ch 8-10: Study Day</b>			
	Day 174				
	Day 175	<b>Ecology Ch 8-10: Unit Quiz 4</b> • Page 83 • (LP)			
Week 9	Day 176	Tips for Good Science Experiments Simplified Ecological Sampling Methods <b>Study Appendix A &amp; B</b> • Pages 84-87 • (EB)			
	Day 177				
	Day 178	<b>Ecology Ch 1-10: Study Day</b>			
	Day 179				
	Day 180	<b>Ecology Ch 1-10: Final Test</b> (optional) • Page 87 • (LP)			
		<b>Final Grade</b>			



**Ocean Worksheets**

**for use with**

***The Ocean Book***



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## **Terms to Know and Spell**

Locations of the various oceans and seas (see page 14.)

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## **Short Answer**

1. The oceans cover \_\_\_\_ percent of the earth's surface area and contain \_\_\_\_ percent of all the surface water on the planet.
2. How do the oceans protect the earth?
3. How do the oceans provide both food and oxygen for mankind?
4. What are some of the sources of power in the ocean?
5. About how much of the current production of oil and petroleum comes from the ocean?
6. The oceans have been used throughout history as a means of \_\_\_\_\_; this is one of the reasons that three-fourths of the American population lives within \_\_\_\_\_ miles of a seacoast.

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## **Discussion Questions**

1. How might life on earth be different if the oceans were larger or smaller than they are now?
2. Why should we care about what lives in the oceans when we can only live on land?
3. Should one country have a say in how another country cares for its neighboring marine habitats?

## Activity

Label the following bodies of water on the map. You may use a world ocean map ([www.mapsofworld.com/world-ocean-map.htm](http://www.mapsofworld.com/world-ocean-map.htm)) in addition to the map on page 5 of *The Ocean Book*:

Arabian Sea  
China Sea  
Norwegian Sea  
Sea of Japan

Bay of Bengal  
Greenland Sea  
Philippine Sea  
Sea of Okhotsk

Bering Sea  
Labrador Sea  
Red Sea  
South China Sea

Coral Sea  
North Sea  
Scotia Sea  
Weddell Sea

East

