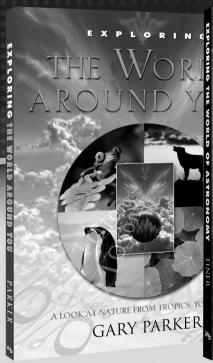
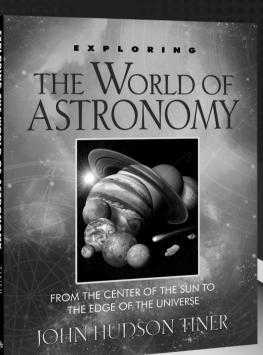
# CONCEPTS OF BIOGEOGRAPHY & ASTRONOMY

# Parent Lesson Planner (PLP)







Weekly Lesson Schedule



Student Worksheets



Quizzes & Test



Answer Key

7th — 9th grade

1 Year Science

1/2 Credit

First printing: April 2014

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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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### Lessons for a 36-week course!

**Overview:** This *Concepts of Biogeography and Astronomy PLP* contains materials for use with *Exploring the World Around You* and *Exploring the World of Astronomy* in the Exploring series. Materials are organized by each book in the following sections:



**Features:** Each suggested weekly schedule has two to three easy-to-manage lessons that combine reading, worksheets, and vocabulary-building opportunities. Worksheets, quizzes, and tests are perforated and three-hole punched — materials are easy to tear out, hand out, grade, and store. As always, you are encouraged to adjust the schedule and materials needed to best work within your educational program. Space is given for assignments dates. There is flexibility in scheduling. Adapt the days to your school schedule.

**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.

Calculating Credits: This course should take between 60 to 90 hours to complete, depending on any additional hours spent on added research, bonus activities, essay writing assignments, or suggested lab work, if assigned. Elective courses that take 60 hours are commonly assigned ½ credit, while those 120 hours or more are assigned a full credit; core courses require over 150 hours for a credit. Based on whether this is being used as a core or elective course, make your final credits calculation based on the total hours of coursework completed in the year.

	Approximately 30 to 45 minutes per lesson, two to three days a week
-	Includes answer keys for worksheets, quizzes, and semester exams
#≣	Worksheet 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

Course includes books from authors with solid, biblical worldviews:

**Dr. Gary Parker** brings his vast knowledge of our planet, its ecology, and its habitat, with respect to creationism. Dr. Parker and his wife, Mary, also run family camps, workshops, and credit courses through the Creation Adventures Museum.

John Hudson Tiner received five National Science Foundation teaching fellowships during his 12 years as a teacher of mathematics and science that allowed him to study graduate chemistry, astronomy, and mathematics.

# **Concepts of Biogeography and Astronomy**

# **Course Description**

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: Biogeography

It has been said that our planet is really just an insignificant speck in a vast universe, but that's not true! In fact, the conditions for life found on Earth are supremely unique and make our life here comfortable. This despite the reality that the world around us is also tainted and in need of careful calibration to continue. This book opens a window to the spectacular environments found on our planet, from deserts to the tropics. Researcher and biologist Dr. Gary Parker brings his vast knowledge of ecology to a teaching setting, exploring and explaining ecosystems, population growth, habitats, adaptations, energy problems, and much more. Learn about insect control in California, why mammals have fur, and how sharks maintain "friendships" with small fish known as remora. *Exploring the World Around You* brings the varieties of our planet's habitats alive to the reader.

# **Semester 2: Astronomy**

Think you know all there is to know about our solar system? You might be surprised at some of the amazing details that you find when you begin *Exploring the World of Astronomy*! From the rugged surface of the moon to the distant and mysterious constellations, this book provides an exciting educational tour for students of different ages and skill levels. Learn about a blue moon, the 400-year storm on Jupiter, and what is meant by "the zone of life." Discussion ideas, questions, and research opportunities help expand this great resource on observational astronomy into an unforgettable educational course for middle school to high school students!

# First Semester Suggested Daily Schedule

Date	Day	Assignment	Due Date	<b>√</b>	Grade
		First Semester-First Quarter — Exploring the World Around 1			
	Day 1	7 3			
	Day 2	Read pages 4–9 • Exploring the World Around You • (WAY)			
Week 1	Day 3				
WCCK 1	Day 4	Building on the Right Foundation Biogeography Ch 1: Worksheet 1 • Pages 17–18 • Lesson Plan • (LP)			
	Day 5				
	Day 6				
	Day 7	Read Pages 10–15 • (WAY)			
Week 2	Day 8				
	Day 9	Ecosystems and Biogeography  Biogeography Ch 2: Worksheet 1 • Pages 19–20 • (LP)			
	Day 10				
	Day 11				
Week 3	Day 12	Read Pages 16–23 • (WAY)			
	Day 13				
	Day 14	Biomes Biogeography Ch 3: Worksheet 1 • Page 21 • (LP)			
	Day 15				
	Day 16				
	Day 17	Read Pages 24–28 • (WAY)			
Week 4	Day 18				
Week 1	Day 19	Aquatic Ecosystems  Biogeography Ch 4: Worksheet 1 • Pages 23–24 • (LP)			
	Day 20				
	Day 21				
	Day 22	Biogeography Chs 1–4: Quiz 1 • Page 79–80 • (LP)			
Week 5	Day 23				
	Day 24	Read Pages 30–35 • (WAY)			
	Day 25				
	Day 26				
	Day 27	Light and the Rhythms of Life  Biogeography Ch 5: Worksheet 1 • Page 25 • (LP)			
Week 6	Day 28				
	Day 29	Read Pages 36–42 • (WAY)			
	Day 30				
	Day 31				
	Day 32	Temperature, Water, and Minerals  Biogeography Ch 6: Worksheet 1 • Pages 27–28 • (LP)			
Week 7	Day 33				
	Day 34	Read Pages 43–50 • (WAY)			
	Day 35				

Date	Day	Assignment	Due Date	$\checkmark$	Grade
Date	Day 36	Assignment		, 	Grade
	Day 37	Food			
Week 8	Day 37	Biogeography Ch 7: Worksheet 1 • Pages 29–30 • (LP)			
	Day 39	Read Pages 52–58 • (WAY)			
	Day 40	read rages 72 70 (WIII)			
	Day 41				
	Day 42	Energy Flow  Biogeography Ch 8: Worksheet 1 • Pages 31–32 • (LP)			
Week 9	Day 43				
	Day 44	<b>Chapters 5–8: Quiz 2 •</b> Page 81–82 • (LP)			
	Day 45				
		First Semester-Second Quarter — Exploring the World Around	You		
	Day 46				
	Day 47	Read Pages 60–66 • (WAY)			
Week 1	Day 48				
	Day 49	Population Balance Biogeography Ch 9: Worksheet 1 • Pages 33–34 • (LP)			
	Day 50				
	Day 51				
	Day 52	Read Pages 68–72 • (WAY)			
Week 2	Day 53				
	Day 54	Population Growth and Control  Biogeography Ch 10: Worksheet 1 • Pages 35–36 • (LP)			
	Day 55				
	Day 56				
	Day 57	Read Pages 74–82 • (WAY)			
Week 3	Day 58				
	Day 59	Succession Biogeography Ch 11: Worksheet 1 • Pages 37–38 • (LP)			
	Day 60				
	Day 61				
	Day 62	Read Pages 84–90 • (WAY)			
Week 4	Day 63				
	Day 64	Niches, Habitats, and Adaptations  Biogeography Ch 12: Worksheet 1 • Page 39 • (LP)			
	Day 65				
	Day 66				
	Day 67	Biogeography Chs 9–11: Quiz 3 • Page 83–84 • (LP)			
Week 5	Day 68				
	Day 69	Read Pages 92–96 • (WAY)			
	Day 70				

Date	Day	Assignment	Due Date	<b>√</b>	Grade
	Day 71				
	Day 72	Symbiosis <b>Biogeography Ch 13: Worksheet 1 •</b> Pages 41–42 • (LP)			
Week 6	Day 73				
	Day 74	Read Pages 98–104 • (WAY)			
	Day 75				
	Day 76				
Week 7	Day 77	Pollution Biogeography Ch 14: Worksheet 1 • Pages 43 • (LP)			
	Day 78				
	Day 79	Read Pages 106–112 • (WAY)			
	Day 80				
	Day 81				
W 1 o	Day 82	Energy Problems <b>Biogeography Ch 15: Worksheet 1 •</b> Pages 45–46 • (LP)			
Week 8	Day 83				
	Day 84	Read Pages 114–120 • (WAY)			
	Day 85				
	Day 86	Preservation and Human Population  Biogeography Ch 16: Worksheet 1 • Page 47 • (LP)			
	Day 87				
Week 9	Day 88	Biogeography Chs 13–16: Quiz 4 • Page 85–86 • (LP)			
	Day 89				
	Day 90	Biogeography Chs 1-16: Test • Page 87-89 • (LP)			
		Mid-Term Grade			

# Second Semester Suggested Daily Schedule

Date	Day	Assignment	Due Date	<b>√</b>	Grade
		Second Semester-Third Quarter — Exploring the World of Astro	onomy		
	Day 91	Read Pages 6–11 • Exploring the World of Astronomy • (WOA)			
	Day 92				
Week 1	Day 93	Read Pages 12–17 • (WOA)			
	Day 94				
	Day 95	Exploring the Moon Astronomy Ch 1: Worksheet 1 • Page 51 • (LP)			
	Day 96	Read Pages 18–23 • (WOA)			
	Day 97				
Week 2	Day 98	Read Pages 24–29 • (WOA)			
	Day 99				
	Day 100	Mars Astronomy Ch 2: Worksheet 1 • Pages 53–54 • (LP)			
	Day 101				
	Day 102	Read Pages 30–35 • (WOA)			
Week 3	Day 103				
	Day 104	Read Pages 36–41 • (WOA)			
	Day 105				
	Day 106				
	Day 107	Terrestrial Planets Astronomy Ch 3: Worksheet 1 • Pages 55–56 • (LP)			
Week 4	Day 108				
	Day 109	Astronomy Chs 1–3: Quiz 1 • Page 91–92 • (LP)			
	Day 110				
	Day 111	Read Pages 42–47 • (WOA)			
	Day 112				
Week 5	Day 113	Read Pages 48–53 • (WOA)			
	Day 114				
	Day 115	Jupiter Astronomy Ch 4: Worksheet 1 • Pages 57–58 • (LP)			
	Day 116	Read Pages 54–59 • (WOA)			
	Day 117				
Week 6	Day 118	Read Pages 60–65 • (WOA)			
	Day 119				
	Day 120	Saturn Astronomy Ch 5: Worksheet 1 • Pages 59–60 • (LP)			

Date	Day	Assignment	Due Date	<b>√</b>	Grade
	Day 121	3			
	Day 122	Read Pages 66–71 • (WOA)			
Week 7	Day 123				
	Day 124	Read Pages 72–77 • (WOA)			
	Day 125				
	Day 126				
	Day 127	Jovian Planets Astronomy Ch 6: Worksheet 1 • Pages 61–62 • (LP)			
Week 8	Day 128	-			
	Day 129	Astronomy Chs 4–6: Quiz 2 • Page 93–94 • (LP)			
	Day 130				
	Day 131	Read Pages 78–83 • (WOA)			
	Day 132				
Week 9	Day 133	Read Pages 84–91 • (WOA)			
	Day 134				
	Day 135	Plutoids and Denizens of Space Astronomy Ch 7: Worksheet 1 • Pages 63–64 • (LP)			
		Second Semester-Fourth Quarter — Exploring the World of Astro	nomy		
	Day 136				
	Day 137	Read Pages 92–97 • (WOA)			
Week 1	Day 138				
	Day 139	Read Pages 98–105 • (WOA)			
	Day 140				
	Day 141				
W/ 1 2	Day 142	Telescopes Astronomy Ch 8: Worksheet 1 • Pages 65–66 • (LP)			
Week 2	Day 143				
		Read Pages 106–111 • (WOA)			
	Day 145				
	Day 146				
	Day 147	Read Pages 112–117 • (WOA)			
Week 3	Day 148				
	Day 149	Breakthroughs in Astronomy Astronomy Ch 9: Worksheet 1 • Pages 67–68 • (LP)			
	Day 150				
	Day 151				
	Day 152	Read Pages 118–123 • (WOA)			
Week 4	Day 153				
	Day 154	Read Pages 124–129 • (WOA)			
	Day 155				

Date	Day	Assignment	Due Date	<b>√</b>	Grade
	Day 156				
	Day 157	Deep Sky Wonders <b>Astronomy Ch 10: Worksheet 1 •</b> Pages 69–70 • (LP)			
Week 5	Day 158				
	Day 159	<b>Astronomy Chs 7–10: Quiz 3 •</b> Page 95–96 • (LP)			
	Day 160				
	Day 161	Read Pages 130–135 • (WOA)			
	Day 162				
Week 6	Day 163	Read Pages 136–141 • (WOA)			
Week	Day 164				
	Day 165	Stars Astronomy Ch 11: Worksheet 1 • Pages 71–72 • (LP)			
	Day 166	Read Pages 142–147 • (WOA)			
	Day 167				
Week 7	Day 168	Read Pages 148–151 • (WOA)			
WCCK /	Day 169				
	Day 170	Extrasolar Planets Astronomy Ch 12: Worksheet 1 • Pages73–74 • (LP)			
	Day 171	Read Pages 152–157 • (WOA)			
	Day 172				
Week 8	Day 173	Read Pages 158–161 • (WOA)			
WCCK 0	Day 174				
	Day 175	Starlighted Nights Astronomy Ch 13: Worksheet 1 • Page 75 • (LP)			
	Day 176				
	Day 177	<b>Astronomy Chs 11–13: Quiz 4 •</b> Page 97–98 • (LP)			
Week 9	Day 178				
	Day 179	Astronomy Chs 1-13: Test • Page 99–100 • (LP)			
	Day 180				
		Final Grade			

# Suggested Optional Science Lab:

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.

Concepts of Biogeology & Astronomy

Exploring the World Around Us

KT-YNATKID Backyard Naturalist's Backpack Kit

Exploring the World of Astronomy

PP-KTEART1 RSO Earth & Space Science Kit Level 1

# **Special Projects**

The Exploring series offers a unique perspective filled with biographical, historical, and scientific perspectives. By highlighting the work and relevance of scientists and innovators, students are introduced to the people behind the knowledge and discoveries that continue to impact their world. This provides exceptional learning opportunities above and beyond the worksheets, quizzes, and tests. Below are three areas of possible activities or bonus point projects that can be undertaken to enhance study.

# **Biographical**

- Select your favorite scientist mentioned in the book and do a research paper on this person's life and/or
  work. Be sure to include details that enhance the understanding of why he or she worked in the area of
  science that he or she chose, information on his or her worldview (Christian or secular), and why his or
  her work remains relevant.
- There have been some amazing discoveries by women see if you can find three discoveries by researching at your local library or online at parent-approved sites.

### Historical

- Do three short essays no more than two typed pages each on discoveries that laid the groundwork for future science fields or the advancement of knowledge.
- Discover where 25 important discoveries related to the universe or understanding life on earth.
- The Bible contains some amazing mathematical and scientific information. Using the geneaological information in Genesis 5, see if you can calculate how many years took place between creation and early biblical history. Explore what other examples you can find.

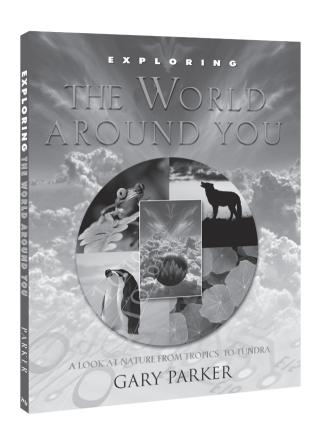
### Scientific

• Imagine an invention related to science that could change the way you and others live. See if you can visualize your invention by drawing it out or providing details that would enable someone else to understand the relevance of your invention and how it works.

# **Applied Learning**

These ideas provide a way for the student to acquire knowledge and then apply it — whether that is done in a technical sense or by being able to recognize the concepts at work in the course of their daily experiences. Consider doing one of the following options as an opportunity to earn bonus points or to extend the learning process:

- Each worksheet in this parent lesson planner contains suggested "Bonus Activities to Explore More." The student can be allowed a choice of the projects or the parent/educator can assign one or as many as needed. These are considered bonus material, and it is important that they be used to enhance and extend learning, but not become burdensome in terms of time. If reports or essays are assigned, limit them to 2 to three pages if possible. Some activities can be part of an ongoing effort with a student journal or notebook. The parent/educator can determine how many points they feel is appropriate for any activities chosen.
- Take a spiral notebook and name it "My Learning Observations." Then, using the following concepts,
  mark the date and time you observe each example over a two-week period. Remember, science is
  happening around you all the time in everyday life, so make sure your observations correlate with
  mathematics or science.
- You can keep a running study journal using the words and people to know on the following pages. By writing down the definition of words, or the contribution of an individual, you can develop a deeper understanding of the subject matter and have notes available when studying for quizzes and exams.



Biogeography Worksheets
for Use with

Exploring the World Around You



Building the Right..., p. 4–9

Day 4

Chapter 1 Worksheet 1 Name

1.	God created our home, the earth, as a "garden of" (the meaning of the word "Eden").
2.	What word means "the study of [our] home"?
3.	If God created our home in peace and harmony, why do we have mosquitoes, disease, death, and disaster?
4.	God's original stewardship ecology command was to "till and"; in our fallen (sin-ruined) world, the command, following Christ's example, might be to "heal and"
5.	Catastrophe, Christ, Corruption, Creation: Put this alphabetized list of the "four Cs" of earth history in correct order from first to last
Di	scussion Questions
6.	Associate each of the following with one of the "four Cs" of earth history:
	a. billions of dead thing (fossils) buried in rock layers laid down by water all over the earth
	b. struggle, disease, and death
	c. a perfect world in the past with no pain, suffering, or death
	d. a perfect world in the future, with no pain, suffering, or death
7.	What belief says that time, chance, struggle, and death will go on for "millions of years" until finally death wins?

8. What book says that life wins when Christ comes to restore peace and joy forever?

# **Bonus Activities to Explore More**

- 1. Read Genesis chapters 1–3.
- 2. Create a time-line of the events in Genesis 1–3.
- 3. Test yourself on "The Mysteries of Life" on page 5. Have a parent or friend ask you the questions and give him or her an answer.
- 4. Start a Scripture notebook. Include notes on how the verses relate to this chapter. Begin by writing out these verses:

Romans 6:4

2 Peter 3:13

Isaiah 65:25

1 Peter 3:15

5. Look up in the glossary each bold word in this chapter and read the definition. Start a Glossary Notebook. Add at least five new words and the definition from this chapter to your Glossary Notebook.