

DIVE Earth Science eLearning Course Middle School Teacher's Guide

The image displays a variety of educational resources for an Earth Science course. On the left is a spiral-bound notebook titled "DIVE EARTH SCIENCE Laboratory Workbook and Weekly Assignment Schedule" by David E. Shormann, PhD. In the center is a laboratory kit labeled "ALPHA III" containing various mineral samples in a tray, along with other supplies like a pencil and a container of fiber. In the foreground, a tablet displays a lesson titled "Mineral Shapes" (Lesson 1.3A Minerals). The tablet screen includes a navigation menu with options like "What Are Minerals?", "How Are Minerals Formed?", and "Mineral Shapes". The main content area features diagrams of mineral cleavage (one, two, and three directions) and a list of gypsum varieties: selenite, satin spar, massive gypsum (rock gypsum), gypsite, and alabaster. It also lists Plaster of Paris ($\text{CaSO}_4 \cdot 0.5 \text{H}_2\text{O}$) and Anhydrite (CaSO_4). Handwritten green notes on the tablet include Ca^{2+} and SO_4^{2-} . A progress bar at the bottom of the tablet shows the current position in the lesson.

Parents: Course Setup Instructions

While this course provides instruction, grading, and Q&A support, a parent must supervise the student to ensure assignments are completed as instructed and to monitor student progress.

1. The prerequisite for this course is the student must be taking [Pre-Algebra](#) or higher. If not, see: [Science Placement Chart](#)
2. **Parents:** Watch the [Getting Started](#) video with your student.
3. Read pages 3-12 of this guide.
4. **Hands-On Lab Instructions:** If your student will do the labs hands-on, print and follow these instructions for every lab: [Instructions & Supply List for Hands-on Labs](#) For details, see [Labs](#).
5. **Lab Workbook:** If you did not purchase a hard copy of the lab workbook, you can print it here: [Lab Workbook for DIVE Earth Science](#)
6. **Lecture Notes:** Optional fill-in-the-blank lecture notes can be printed here: [DIVE Lecture Notes](#)
7. **Glossary:** If your student will use the integrated flashcards you can skip this step. If they will write the definitions, print this file: [DIVE Glossary](#)
8. If you are using this course as a high school course or an honors middle school course, read: [Instruction Sheet for Quarterly Reviews](#).
9. To ensure you receive important emails from us, add these email addresses to Contacts* in your's and your student's email account:
 - o support@diveintomath.zendesk.com
 - o support@diveintomath.com
 - o noreply@educadium.com
10. Bookmark, save, or print this Teacher's Guide.
11. See: [How to Login to the eLearning Campus](#)

Need help? [Contact Us!](#)

Teacher Guide

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Welcome!

DIVE Earth Science is a complete, digital curriculum that can be used as a middle school or high school course.

Middle School Course

Standard Middle School Course:

- Skip the Quarterly Reviews
- Use the Running Average (in the online grade book) for the final grade.
- All other assignments should be completed as instructed in the course.

Honors Middle School Course

- Administer the 100 Question Quarterly Reviews as exams. Students can make one review sheet to use during the exam. No notes or other resources. For details, see [Instructions for Quarterly Reviews](#).
- All other assignments should be completed as instructed in the course.
- Use the Honors Grade Scale to assign the final grade.

Honors High School or Standard High School Course

Honors High School Course:

- Administer the 100 Question Quarterly Reviews as exams. Students can make one review sheet to use during the exam. For details, see: Honors High School Course: [Instructions for Quarterly Reviews](#)
- All other assignments should be completed as instructed in the course.
- Use the Honors Grade Scale to assign the final grade.
- List the course as 1 credit of Honors Earth Science with Lab and adjust the grade point scale to A=5, B=4, etc. For details and a free transcript template see: [Transcripts & Credits](#)

Standard High School Course

- Administer the 100 Question Quarterly Reviews but students can use their notes. For details, see [Instructions for Quarterly Reviews](#).
- All other assignments should be completed as instructed in the course..
- Use the Standard Grade Scale to assign the final grade.
- List the course as 1 credit of Earth Science with Lab. [Transcripts & Credits](#)

Schedule & Timed Method

While this course is set up on a 32 week schedule, a standard school year is 36 weeks. This provides four weeks that can be used when extra time is needed to grasp or master a concept. A good way to do this is to **use the timed method**. Have the student work on science four or five days per week for around 45 minutes to an hour. At the end of that time, if the lesson is not completed, have the student stop and pick-up where they left off the next school day. Knowing that science will take no more than one hour, they are free to focus on learning instead of worrying, “how much longer?” I encourage you to give this a try for a few weeks.

The eLearning subscription is for 12 months. If needed, a [12 month extension can be purchased here](#).

Course Components

DIVE Earth Science is a complete, digital curriculum that can be used as a middle school course or a high school course. See this article to use it as a [High School Course](#). Below you will find detailed instructions on each component.

Assignment Chart

The Earth Science Assignment Chart is integrated in the eLearning course.

Lessons

There are 2 lessons per week. Each lesson is made up of 3 parts: Rules & Definitions, a video lecture, and Review Questions (digital worksheet).

Reading Assignments: To provide a developmentally appropriate transition from a textbook based curriculum to a lecture based course, DIVE Earth Science does not have reading assignments. All the reading and instruction is in the digital flashcards, video lectures, review questions, facts quizzes, and lab activities. The [Optional Resources](#) lists books, movies, and websites that can be used for further study on each topic. However, Dr. Shormann does not create reading syllabi for textbooks.

1. Rules & Definitions

While it is not necessary to memorize the rules and definitions, it is important to be familiar with them so the student can understand the lecture. There are two options: digital flashcards, handwriting the terms using the DIVE Glossary, or a combination of the two.

Digital Flashcards are a quick and easy way to learn the definitions. There is a link to each flashcard set in the eLearning system. Click Flashcards, Options, then Both. This will show the term and the definition on the same side. Read through the flashcard set twice.

The **DIVE Glossary** is used by those who prefer to handwrite their definitions. The glossary can be found on the eLearning course Home page. It can be printed or viewed on the computer. After hand writing the terms, students can use the digital flashcards to review the terms.

2. Video Lecture

Students should take notes during the lecture, pausing and rewinding as necessary. While taking notes is a critical skill for college preparation, please be patient as this skill develops slowly. [Printable, fill in the blank notes with graphics are available in the eLearning course.](#) Because the notes are used to answer the Review Questions, students learn the importance of taking good notes. An answer key for the lecture notes is not available. They are designed to be self-correcting by the student. If they get a question wrong the system will help them learn the correct answer. Then, they correct or add missing information to their notes. Be patient. Over time, the student will get better at taking notes.

3. Review Questions (Homework)

The review questions are based on the lecture and vocabulary. Although the eLearning course calls this a quiz, it is not. These questions are designed to teach students to apply what was taught in the lecture to a new situation.

- Students should use their lecture notes and Definitions to complete the Review Questions. The digital flashcards can be opened in a separate tab or they can be printed.
- After answering each question, click Submit. The system will tell you if the answer is right or wrong.
- If wrong, a small penalty (10%) is assessed. The penalty can vary depending on the type of question.
- Check your notes, rules and definitions. If you know the correct answer, try again. If not, skip it and you will re-learn and correct in the last steps below. Do not spend more than a few minutes “stuck” on a question.
- If you need to stop before completing the assignment, click Save Without Submitting. To resume, restart your computer, login, open the assignment, and click Continue. When logging in again, we recommend restarting your device to ensure all updates are completed. It is good practice to click Save Without Submitting any time you stop work on an assignment because of power outages, random computer shutdowns, or session expiration (usually 2 hours).
- When finished, click Submit All & Finish. This will record the grade in the online grade book and send an email notification to the student’s email address.
- The Results Page lists each question, the correct answer, and the student’s answer attempts. The Results Page can be viewed later by clicking the assignment in the online grade book. Learn more in the Grades section below.
- Go back to the lecture video and watch the video solutions at the end of the lecture.
- Use these solutions to add missing information to your notes. This is very important as you will use your notes later to study for each Quarterly Review.
- **Unless you have a technical issue, do not re-take Review Questions to improve the grade.** The Review Question grades are a small percentage of the overall grade. The Quarterly Reviews are most heavily weighted. So focus on re-learning and creating a good set of notes for the Quarterly Reviews.

4. Facts Practice Quizzes

The purpose of these flashcard-style quizzes is to help students become better stewards by memorizing the names of rocks, minerals, etc.

1. Study the Digital Facts Practice flashcards, linked in the eLearning course, 5-10 minutes per day. Hosted on Quizlet, there are also games and quizzes that make memorizing the facts fun!
2. Take the Quiz. While the Facts Quiz can be taken anytime, we usually do this on lab day (Day 4 or 5). Hopefully, you made a 100% on your first try, but if not, you can try again.
3. Only the highest score of all attempts is recorded in the online grade book. Facts Quizzes are the smallest portion of your grade (10%), but they are an “easy A” if you take the time to memorize daily.

Labs

Each week there is 1 video lab. A printable PDF of the lab manual is posted on the eLearning course home page. A hard copy of the lab manual can also be purchased [here](#).

While we recommend doing as many hands-on labs as possible, it is not required. In fact, our video labs were designed so that even if the labs are not completed hands-on, the student would still get an excellent college preparatory lab experience. Both options earn one science lab credit.

Complete Labs Hands-On

A [DIVE lab kit](#) is available from Nature's Workshop Plus. If you prefer to purchase supplies, please see the [list of lab supplies here](#). Students first watch the video lab, then complete the lab with the lab supplies while filling out the lab activity sheet in the lab manual.

Watch Video Labs & Complete Lab Workbook Pages

With this option, the student views the video lab, filling out their lab as they watch. Then, they use the video solutions at the end of the lab to grade their work. If all of the lab activity sheet is completed, graded and corrected, a 100 is awarded.

Grading Labs

At the end of the video lab, there are video solutions to the lab workbook pages. Students watch the solutions and correct the lab workbook pages as needed. No grades are assigned and no grades are recorded in the online grade book. However, at the end of the course, you can manually add extra credit for the labs and other handwritten work as described in the "Extra Credit" section below.

Quarterly Reviews

Every 8 weeks there is a Quarterly Review. While this is not an exam, it does help students learn how to prepare for an eight week exam. There are no other assignments due on the week of the Review. This gives the student a full week to study for the review. Please read the [Instruction Sheet for Quarterly Reviews](#).

Q&A Email Support

If your student has a question about a homework or test question. Have them complete and submit the assignment, then contact him here: [Ask Dr. Shormann a Question](#)

Struggling Student? We can help!

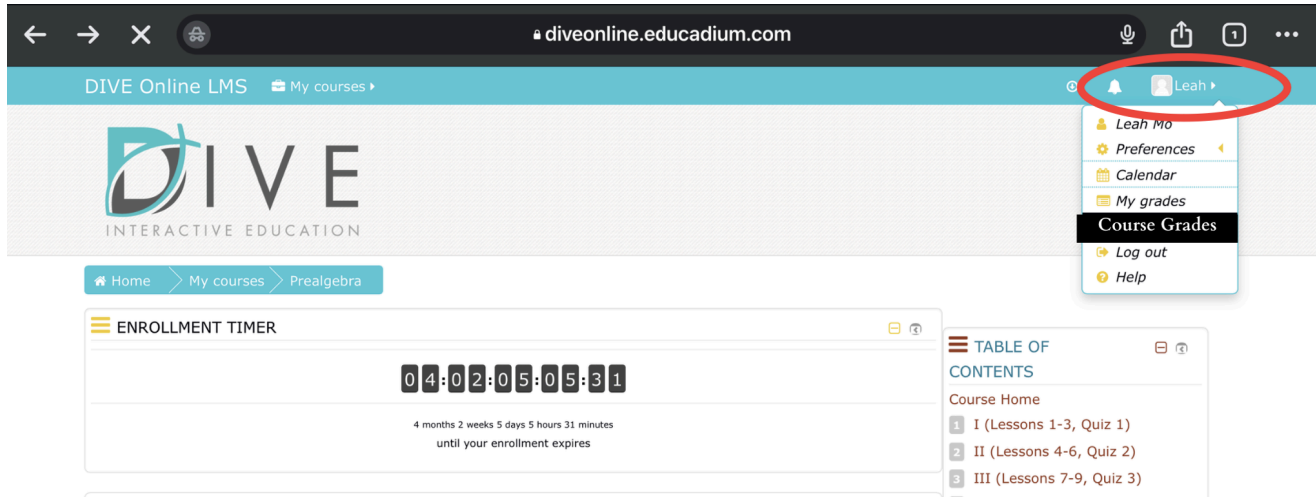
Most issues are easily solved by following the tips linked below. If you would like to speak with a consultant, please [schedule a phone appointment](#).

Technical Issues & Grades

If your child experiences technical difficulties while completing an assignment, have the student complete all the other questions he can and submit it. Then We can also reset or change grades. To request a reset or grade change, please fill out the form here: [Grade Changes & Reset](#)

Online Grade Book & Grading

Login using the same login as the student, select “My Courses” in the top menu, then select the course title. In the top right corner, select the student’s name, then “Course Grades”.



Grade: This is your student’s grade in points.

Percentage: This is your student’s grade as a percentage.

Class Average: This is **NOT** your student’s grade. It’s the average grade of ALL the students who have taken this assignment.

Assignments	<i>Your Student's Grades</i>		<i>Average Grade of All Students in this Course</i>
	Grade	Percentage	Class Average
Grading Shormann Prealgebra			
Lesson 1 Practice Set	90.00	90.00 %	86.95
Lesson 2 Practice Set	85.00	85.00 %	84.59
Lesson 3 Practice Set	95.00	95.00 %	91.60
Quiz 1(Lessons 1-3)	10.00	100.00 %	9.71
Lesson 4 Practice Set	90.00	90.00 %	93.36
Lesson 5 Practice Set	97.50	97.50 %	94.04
Lesson 6 Practice Set	92.50	92.50 %	91.64
Quiz 2(Lessons 4-6)			

Running Average:

This is the grade for all the assignments that have been completed so far. It does not average the zero for assignments that have not been completed. So, as long as the student has not skipped any assignments, this is where you would see the student's current grade based on the assignments they have completed.

Assignments	Grade	Percentage	Class Average
Lesson 4.7A Review	-	-	93.55
Lesson 4.7B Review	-	-	95.28
Quarterly Review 4	-	-	81.77
Earth Science			
Earth Science Final Grade Include empty grades.	4.21	4.21 %	18.93
Running Average	786.29	87.37 %	2070.98

Final Grade

Running Average - Only Completed Assignments

Final Grade:

This is the grade used at the end of the course for the final grade. It includes the zeros for assignments that were not completed. In this example, only a few of the assignments have been completed so the final grade is very low. At the end of the course, if all assignments are completed, the Final Grade and Running Average are the same.

Add Extra Credit to the Final Grade

For details, see "[Optional Extra Credit](#)" below.

Transcripts & Credits

For a free transcript template and detailed instructions, see [Transcripts & Credits](#)

ISSUES WITH THE GRADE BOOK

Issue: Final Grade and Running Average Are Not the Same

This means one or more assignments were not completed. Scroll through the grade book and look for assignments in the "Percentage" column that don't have a grade. See the next section to resolve this issue.

Issue: No Grade in the Percentage Column

1. Select the title of the assignment in the Grade Book.
2. If there is a button that says "Continue Last Attempt", this means the student opened and/or started the assignment but did not click Submit All & Finish. Select the "Continue Last Attempt" button, "Finish Attempt" then, "Submit All & Finish".
3. If there is a "Start Quiz" button, this means the student did not start the assignment. You can either leave it as a 0 or have the student do the assignment, which will raise the final grade.

Grade Weights

The following describes how the grades are "weighted".

Review Questions	30%
Facts Quizzes	10%
Quarterly Reviews	60%

Optional: Extra Credit

Keep in mind, as the parent and/or teacher, you are responsible for assigning grades. Our grading system is a tool to help you. You are not required to use the grades in the eLearning grade book or follow any of our recommendations. Use the course like you would any other curriculum, like Abeka or Bob Jones.

While the grades in the eLearning system for Review Questions, Facts Quizzes, and Quarterly Reviews account for good lecture notes and labs, some extra credit can be added for handwritten work. If your student corrected missed problems, took good lecture notes, corrected lab activities by watching the video solutions at the end of the lab, extra credit can be added at the end of the course by following the options below. However, this is not necessary because the eLearning system already includes extra credit by allowing students to take the exams twice and averaging the scores which is like adding up to 10 points to each exam grade.

Option 1: Add up to 3 points to the Final Grade in the Grade Book. After determining the new grade, add it to the Certificate (see below). The new grade should not be more than 100.

Option 2: Use the “Simplified Grading Method” below.

Honors Course Grading Scale

A – 93-100
B – 84 – 92
C – 74 – 83
D – 65 – 73
F – 64 or below
I – Incomplete

Standard Course Grading Scale

A – 90 -100
B – 80 – 90
C – 70 – 80
D – 60 – 70
F – 60 or below
I – Incomplete

Certificate of Completion

Upon course completion, a certificate of achievement can be printed. Go to the Course Home page, scroll down the left menu, then click **Certificate**.

Grade Changes and Assignment Resets

If, for any reason, you want the student to retake an assignment, or you want to change a grade, please follow the instructions below. While we are happy to adjust grades and assignments, don't overemphasize grades. The grade book is simply a tool to help you quickly evaluate your student's progress and understanding. DIVE does not report your grades to anyone or keep long-term records of grades. Once the subscription expires, all the grades disappear. [Request Grade Changes & Assignment Resets Here](#)

Learning Disabilities: How to Modify the Timed Exams

While we cannot change the timer on the exams or quizzes, you can give the student more time by following these steps. However, you will need to manually record grades or use the [“Simplified Grading Method”](#) (below) instead of using the online grade book.

Parent Supervision Required: The exams are normally limited to one hour. This method doubles the time to two hours.

1. Study using the Study Instructions linked just above the exam.
2. Have the student take the exam twice. In the first attempt, complete only the first half of the exam. In the second attempt, complete the second half. This gives the student 2 hours to complete the exam.
3. Add the two scores together.
4. Have the student correct all missed problems on paper. If they correct all missed problems, **add 100 points to their grade then, divide it by two.** This is the equivalent of giving them two attempts and averaging the scores.
5. For grade recording and calculating a final grade, see the next section below.

Grading for Learning Challenged Students

Because students with learning challenges often require many accommodations, instead of using the grades in the eLearning course and submitting multiple grade change requests, manually record the four exams, then use the Simplified Grading Method to calculate the final grade.

Simplified Grading Method

If you allow your student to skip assignments, modify the time for learning disabilities, etc, the online grade book will not accurately calculate a final grade. Instead, use this simple method to give a completion grade of 90 for all Review Questions, Facts Quizzes, Labs, Notes, etc,. This way, you don't need to submit multiple grade change requests or manually record all the scores. All you need is the average of the four exam grades to put in the formula below. This new grade can be added to the Certificate.

Exam Average = Sum of all the exam grades divided by 4.

Final Grade = Exam Average (.60) + 36

For Example: If the exam average is a 70, it would be: $70 (.60) + 36 = 78$

To use a different completion grade for the Review Questions and Facts Quizzes, use this formula:

Final Grade = Exam Average (.60) + Completion Grade (.40)

To calculate an exact score manually using the original weights, record all the grades, then use this formula:

Exam Avg. (.60) + Review Questions Avg. (.30) + Facts Quizzes Avg. (.10)

You can also request a grade change for each assignment by using the "Request A Grade Change Form" on the Course Home page.

DIVE Earth Science Assignment Chart

Important: Read the Assignments and Schedule sections on the following pages.

Week	Lessons & Topics	Lab Activity
1	1.1A & 1.1 B - Science	1.1-Scientific Method
2	1.2A & 1.2B - Earth Anatomy	1.2-Compass and Map
3	1.3A & 1.3 B - Rocks and Minerals	1.3-Contour Lines
4	1.4 & 1.1B Limnology and Oceanography	1.4-Study of Minerals
5	1.5A & 1.1B Meteorology	1.5-Study of Rocks
6	1.6A & 1.6B Astronomy	1.6-Study of Mud and Clay
7	1.7A & 1.7B Cartography	1.7-How to Find Gold
8	Study for Quarterly Review (Honors & High School)	Quarterly Review 1
9	2.1A & 2.1B Creation: Earth Formation	2.1-Using GPS
10	2.2A & 2.2B Global Cataclysm	2.2-The Earth Under Your House
11	2.3A & 2.3B Fossil Burial	2.3-Liquefaction and Fossil Sorting
12	2.4A & 2.4B Receding Flood Waters	2.4-Canyon Formation
13	2.5A & 2.5B Ice Age	2.5-Glacial Landscapes
14	2.6A & 2.6B Stasis (volcanoes, earthquakes)	2.6-Tephra Formation
15	2.7A & 2.7B Origins of the Universe	2.7-Moving Earth's Crust
16	Study for Quarterly Review (Honors & High School)	Quarterly Review 2
17	3.1A & 3.1B The Water Cycle	3.1-Thermoclines
18	3.2A & 3.2B Other Aquatic Cycles	3.2-Haloclines
19	3.3A & 3.3B Waves, Currents, and Tides	3.3-Currents and Waves
20	3.4A & 3.4B Rivers and Streams	3.4-Erosion Control
21	3.5A & 3.5B Lakes and Reservoirs	3.5-Building Reservoirs
22	3.6A & 3.6B Estuaries and Coasts	3.6-Delta Formation
23	3.7A & 3.7B The Sea	3.7-Hypoxia
24	Study for Quarterly Review (Honors & High School)	Quarterly Review 3
25	4.1A & 4.1B Atmos. Heating and Cooling	4.1-Atmos. Heating and Cooling
26	4.2A & 4.2B Moisture, Pressure, and Wind	4.2-Measuring Humidity
27	4.3A & 4.3B Global Climate Patterns	4.3-Tracking Hurricanes
28	4.4A & 4.4B The Weather at Your House	4.4-Collecting Weather Data
29	4.5A & 4.5B The Solar System	4.5-Kepler's Laws
30	4.6A & 4.6B The Sun and Moon	4.6-Rockets
31	4.7A & 4.7B Beyond the Solar System	4.7-Computer-based Astronomy
32	Study for Quarterly Review (Honors & High School)	Quarterly Review 4

Optional Resources for DIVE Earth Science

If your child (or you!) express a special interest in a topic, you may want to consider researching the following Internet links and/or purchasing the materials listed. DIVE does not currently sell any of the materials listed, but you can find them easily enough at a homeschool conference and/or online.

PLEASE NOTE: Some of the Internet links contain highly speculative statements about past and future events that are usually presented as “scientific fact.” Be skeptical about this information!

Week #	Internet Links (click on the blue underlined text to open a link)	Books/DVDs
1	Minerals	--
2	Earth's Interior1 ; Earth's Interior2 ; Compass and Map	The Geology Book by Dr. John D. Morris
3	Rocks and Minerals ; Igneous Rocks ; YouTube video on Supercritical Fluids ; Topographic Map Symbols	--
4	Water and Oceans ; Oceans and Coasts	The Ocean Book by Frank Sherwin
5	NOAA education resources	The Weather Book by Mike Oard
6	NASA "Image of the Day"	The Astronomy Book by Dr. Jonathan Henry
7	Topographic Map Symbols ; Gold ; YouTube video on gold panning	--
8	-	--
9	Natural History in the Christian Worldview, a paper by Dr. John K. Reed	Read Genesis, Chapters 1 and 2; God of Wonders DVD
10	In the Beginning by Dr. Walt Brown, online book	In the Beginning by Dr. Walt Brown; The Genesis Flood by John Whitcomb and Henry Morris
11	Experiments in Stratification video by Dr. Guy Berthault ; Dr. Shormann's YouTube video, Crushing Tiktaalik	Living Fossils book and DVD by Dr. Carl Werner; Evolution, The Grand Experiment book and DVD by Dr. Carl Werner
12	Tas Walker's Biblical Geology website	Earth's Catastrophic Past books by Dr. Andrew Snellin; Grand Canyon, Monument to the Flood DVD
13	Frozen in Time by Mike Oard, online book	Frozen in Time by Mike Oard
14	Dr. Shormann's YouTube video, Novarupta	Mount St Helen's DVD by Dr. Steve Austin

15	truorigin.org/astrometry links	Thousands... Not Billions by Dr. Don DeYoung; Starlight, Time, and the New Physics by Dr. John Hartnett
16	-	--
17	Water Cycle	God's Design for Heaven and Earth: Our Weather and Water, by Debbie and Richard Lawrence (Answers in Genesis)
18	Nitrogen Cycle (terrestrial)	"
19	National Data Buoy Center	"
20	Mississippi River History	"
21	Reservoirs, Lakes	"
22	National Estuary Program	Exploring Creation with Marine Biology, by Sherri Seligson (Apologia); Our Weather and Water
23	Oceans	"
24	-	-
25	NWS Jet Stream Weather School, heat , energy	The Weather Book by Mike Oard; God's Design for Heaven and Earth: Our Weather and Water, by Debbie and Richard Lawrence (Answers in Genesis)
26	clouds , precipitation types	"
27	climate , ENSO	"
28	Doppler Radar sites , thunderstorms , tornadoes , flash floods , lightning , hurricanes	"
29	Solar system	The Astronomy Book by Dr. Jonathan Henry
30	Sun , Moon	"
31	Universe	"
32	-	--