Science — Earth Science

Levels:
L — 1st through 4th
M — 5th through 8th

Please review the FAQs and contact us if you find a problem with a link.

Course Description: This course in earth science will engage students with experiments and projects. Students will also learn through text, video and online interactives. Their study of the earth will include learning the rock and water cycles. They will study rocks and the make up of the earth. They will learn about the types and causes of weather as well as how to predict the weather. Students will follow and learn about the numerous types of bodies of water in our world. They will dive into the ocean and discover what’s hidden in its depths. Students will learn about the atmosphere and fly up into space. They will study objects in space and learn the history of space exploration.

Note: As always, this course supports a literal interpretation of the Bible that the earth was created in six days. I bring this up with the students and make notes in the curriculum about it as it comes up. I also included links to Answers in Genesis and 4th Day Alliance.

Reading List
L: The First Book of Water, Norling; Paddle to the Sea, Holling (partial)
M: Madam How and Lady Why, Kingsley (partial)

Materials:
• Basic Supplies
• Science, Year 3, Level L
• Science, Year 3, Level M

Day 1
L*

1. This year you are going to be learning about the world. We’ll go into the earth, under the ocean, and even out into space. Let’s start with the world and look at a map.
2. *Print out this map.
3. Color on mountains and deserts. Color in the mountain areas brown and the desert areas yellow.
4. Spelling tip: desserts (as in a sweet treat after dinner) is spelled with 2 S’es (deSSert) because everyone wants more dessert.
5. Now go to this map. Click on where you live. Keep clicking on where you live to zoom
in. Can you find it? Are there any mountains or deserts near you? What about rivers or oceans?

M*

1. This year you are going to be learning about the world. We’ll go into the earth, under the ocean, and even out into space. Let’s start with the world and look at a map.
2. *Print out this map. You’ll notice it’s called a physical map. A political map shows countries and capitals. A physical map shows the physical lay of the land, the mountains, the rivers, etc.
3. Use this atlas to label 5 mountain ranges and 5 rivers on your map. You have to click on the continent and then the country and then sometimes an area within the country before you can see the names. (Mts. is an abbreviation for mountains.) You can label them with numbers and then on the paper write the number and then the name.
4. Color in deserts on your map. (It doesn’t have to be perfectly exact.)
5. Label two deserts on your map.
6. If you are having a difficult time with this, here’s another map.

Day 2

L

1. When we read about science, we often come across people saying that the world is billions of years old. People who believe this don’t believe that God created the world in six days as described in Genesis.
2. Here’s what the Bible teaches about creation. How can we know what is true?
3. There are resources online if your family wants to study more about creation and the age of the earth. I have written about this on other science courses and have posted links to articles.
4. You can talk with your parents about what they believe. When you come across millions and billions of years, just remember that it’s just what that person believes. It doesn’t make it fact because they said it. How can those scientists and creation scientists come to completely different ideas about how the world began? Because they come to the question with different assumptions. When you assume the Bible is true and the biblical story of creation is true, then you can view the scientific evidence as affirming that truth. When you assume that the earth had to come from somewhere, that it couldn’t have been just created, then it doesn’t make sense that all of a sudden there was a whole earth and all the vegetation and all the animals, etc. They have to come up with an idea to explain it. It hasn’t been tested. It hasn’t been proven. Science is based on measurable observations. They can’t observe the creation of the world. It’s an idea that they have faith in. I would rather have faith in God and the Bible.

M

1. When we read about science, we often come across people saying that the world is billions of years old. People who believe this don’t believe that God created the world in six days as described in Genesis.
2. Here’s an overview of the worldly teaching on the beginnings of the universe.
3. So, if they say our earth and things like mountains took millions of years to form, what do Christians say?
4. There are resources online if your family wants to study more about creation and the age of the earth. I have written about this on other science courses and have posted links to articles.

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to articles.
5. You can talk with your parents about what they believe. When you come across millions and billions of years, just remember that it’s just what that person believes. It doesn’t make it fact because they said it. How can those scientists and creation scientists come to completely different ideas about how the world began? Because they come to the question with different assumptions. When you assume the Bible is true and the biblical story of creation is true, then you can view the scientific evidence as affirming that truth. When you assume that the earth had to come from somewhere, that it couldn’t have been just created, then it doesn’t make sense that all of a sudden there was a whole earth and all the vegetation and all the animals, etc. They have to come up with an idea to explain it. It hasn’t been tested. It hasn’t been proven. Science is based on measurable observations. They can’t observe the creation of the world. It’s an idea that they have faith in. I would rather have faith in God and the Bible.

Day 3
L
1. Read about hot and cold deserts. Did you know there were cold deserts? How can that be? A desert is where there is very little precipitation, very little rainfall (or snowfall).
2. Look up the highest high and the lowest low temperatures in Fahrenheit.
3. Tell someone how there can be cold deserts. What else did you read about deserts?

M
1. Back to earth. Now that you know where the deserts are, learn these desert terms: arroyo, desert varnish, detritus, dune, dromedary, semiarid.
2. Read about the desert.
3. Tell someone what the words mean. What types of deserts are there?

Day 4
L
1. One exciting area of the earth is the Amazon rain forest.
2. Why do you think they call it a rain forest? (hint)
3. Explore the rain forest. Use the links on the left.
4. Where is the Amazon rain forest?

M
1. Learn about rain forests.
2. See how much rain the rain forests get each year. How does that compare to deserts?
3. Explore the rain forest some more.

Day 5
L
1. One more day in the rain forest. Then we’ll go down into the earth.
2. Play Amazon Explorer.

M
1. Journey into Amazonia. Read the info on the link. Then choose one of the other links to read more animals or plants or the water. If you want to play the game, you may, but use
the other links first!

The Earth’s Crust

Day 6

L

1. Read the first two pages about the earth. (Here is an alternate link if that one isn’t working.) On the second page you might see a black box at the bottom of the screen. Give it a minute to load. It’s a spinning earth. Move your mouse over it and find the four different layers of the earth. Read about them.  
2. Label the layers of the earth.

M

1. Read the first 10 pages of Madam How and Lady Why. Please ignore the silly mention of a fairy. These are metaphorical “women,” like “Wisdom” in Proverbs. Stop in the middle of page 10.  
2. There is an audio book, but if you use it, you’ll have to follow along to know where to stop and you’ll have to keep track of where to start the next day.  
3. Read this page about the structure of the earth.  
4. Take a look at it on this page. Roll over to see the information again.

Day 7

L

1. Read more about the earth’s crust. (Just this one page) (Here is an alternate link if that one is not working)  
2. Learn more about the earth’s crust and mantle. (Read just the crust and mantle sections.) This mentions that the earth’s crust is actually broken into sections called plates. These plates float on the mantle level.  
3. How can the earth we stand on be floating!? Explain!

M

1. Read the next 10 pages of Madam How and Lady Why. Stop at the paragraph break on page 20. (audio book)  
2. Read about what’s really going on with the earth’s crust underneath our feet.  
3. Take a quiz on plate tectonics.

Day 8  
(Materials for L: play dough or salt dough of some sort, preferably in two colors, can be just a little, BUT on Day 9 they will be building a volcano and can use this dough)

L

1. Read about the movement of the earth’s crust. Stop on the page with the picture of a mountain and a picture of a valley. (This site mentions millions of years. You don’t have to accept that as fact.)  
2. You read that there were three ways that the earth’s plates moved. The could pull apart, crash together, or slide past each other.  
3. Take your dough and make two thick plates of the earth’s crust out of them. Now smoosh them together a little bit to connect them. Now try the three ways of plates moving. What do you think would happen in those places where the plates were
touching?

M
1. Read the next 10 pages of Madam How and Lady Why. Stop at the paragraph break in the middle of page 30. (audio book)
2. Read this page about how the different plates interact with each other.
3. Draw a diagram of each type. What do you think might happen when each of those things occurs?

Volcanoes
Day 9
L
1. Read about what plate collisions can do. Move through the pages until you read about the creation of islands.
2. If you have dough from Day 8, form it into a volcano shape around a cup. Put baking soda into the cup. Pour in vinegar to make your volcano explode. Here are some directions. (She uses a soda bottle, not a cup, whatever you have. Also, the first part of the directions is for making salt dough. You already should have that covered, but it is unnecessary for making the “volcano” explode.

M
1. Read the next 10 pages of Madam How and Lady Why. Stop at the first paragraph break on page 40. (audio book)
2. Read this page on colliding plates.
3. What’s happening in each diagram?

Day 10
L
1. Read about volcanoes. Stop after you read about the Hawaiian Islands.
2. Look at this list of all the volcanoes by country. Find your country. Did you realize that there were so many volcanoes?
3. You can look at this map to see all of the volcanoes.

M
1. Read the next 10 pages of Madam How and Lady Why. Stop at the first paragraph break on page 50. (audio book)
2. Does this book always agree with what you read on modern websites? Why do you think there might be discrepancies?
3. Read about volcanoes.
4. Take the quiz.

Earthquakes
Day 11
L
1. Read about another way plates can move and what can happen when they do. Keep reading and clicking next. Stop after you read about tsunamis.

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2. That list you saw is a list of today’s earthquakes!
3. View pictures from different strength earthquakes to see what they can do.

M
1. Read to the end of the chapter of Madam How and Lady Why. (audio book)
2. Read about what happens when plates slide alongside each other.
3. Take the plate challenge.

Day 12
L
1. Read again about earthquakes.
2. In what country and state is the San Andreas Fault?
3. What does it mean to the people living there that they are living on a fault line?
   (answer: They can expect earthquakes.)

M
1. Read the next 10 pages of Madam How and Lady Why. Stop at the picture on page 68.
   (audio book)
2. Read more about earthquakes.
3. Take the earthquake quiz.

Day 13
L
1. Read about glaciers. (Young earth scientists view the earth as being between 6000 and 10,000 years old.)
2. Keep reading and watching and listening and clicking next until you read about the Scablands in the state of Washington.
3. Tell someone how glaciers can form hills or other ways they can change a landscape—the way the land is (flat, hilly, etc.).

M
1. Read the next 10 pages of Madam How and Lady Why. Stop at the bottom of page 78.
   (audio book)
2. Read about glaciers. Read through the pages.

Day 14
L
1. Now read about another way the landscape is transformed, by rivers.
2. Read about how rivers cause erosion. Read through the pages and watch the videos. Stop on the 15th page (you can see it in the web address.) It talks about how lakes can turn into dry land!
3. Tell someone how rivers can change a landscape.

M
1. Finish the chapter on volcanoes, Madam How and Lady Why. (audio book)
2. Read about the life of a glacier.
3. Read about what happens as glaciers melt.

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Day 15

L
1. Learn about how caves are formed. Read this one page.
2. Go on the natural wonders tour. You’ve been reading about how our world has been formed and how it has been changed, but don’t forget the magnificent Creator who is really behind the amazing world we live in.
3. Would you add something else to the list?
4. What do you think is the most wonderful wonder?

M
1. Learn about how caves are formed. Read this one page.
2. Go on the natural wonders tour. You’ve been reading about how our world has been formed and how it has been changed, but don’t forget the magnificent Creator who is really behind the amazing world we live in.
3. Would you add something else to the list?
4. What do you think is the most wonderful wonder?

Day 16-20 (Materials for L and M: They are going to be building a model in a couple of days. When your child has chosen his topic, you can talk about how he might make the model: clay, box, construction paper. It should just be something simple.)

L
1. Choose caves, mountains, rivers, glaciers, or volcanoes to learn more.
2. Research them.
3. Find out the superlatives, meaning the biggest, the longest, the oldest, etc.
4. Write a few sentences about your topic. (Day 17)
5. Build a model. (Day 18)
6. Make a diagram of how it is formed. (Day 19)
7. On Day 20 present your model and explain it. (If you need more time for your model or diagram, you can work on it on this day too.)
8. Today choose a topic and research it. Here are some sites to help you get started:
   • Information You Can Trust
   • Ivy’s Search
   • Fact Hound
   • Encyclopedias
   • Kiddle safe Google search
   • Kids Britannica
   • Online Encyclopedia (search several encyclopedias for free)
   • Rudiments of Wisdom Encyclopedia — all cartoons on the various subjects

M
1. Choose caves, mountains, rivers, glaciers, or volcanoes to learn more.
2. Research them.
3. Find out the superlatives, meaning the biggest, the longest, the oldest, etc.
4. Take notes and write down your sources.
5. Write a good paragraph about your topic. Add lots of details. It can be a long paragraph. (Day 17)
6. Build a model. (Day 18)
7. Make a diagram of how it is formed. (Day 19)
8. On Day 20 present your model and explain it. (If you need more time for your model or diagram, you can work on it on this day too.)
9. Today choose a topic and research it. Here are some sites to help you get started:
   • Information You Can Trust
   • Ivy’s Search
   • Fact Hound
   • Encyclopedias
   • Kiddle safe Google search
   • Kids Britannica
   • Online Encyclopedia (search several encyclopedias for free)
   • Rudiments of Wisdom Encyclopedia — all cartoons on the various subjects

Day 21
L
1. Review what you’ve learned about the earth.
2. Listen to the layers of the earth song.

M
1. Read the first 10 pages of the next chapter of Madam How and Lady Why. (audio book)
2. Review what you’ve learned about the earth.
3. Label the layers of the earth.

Rocks
Day 22 (Materials for L and M: Start a rock collection. Hunt around for different looking rocks. We’ll study them soon.)
L
1. We’ve learned about ways major landforms are formed. What about just one rock? Things like rivers and volcanoes create rocks too.
2. Read about what makes up the earth’s crust. (Here is an alternate link if that link isn’t working)
3. Read this page on the rock cycle, how rocks are formed and transformed. Stop when you get to the picture of a rock. (Here is an alternate link if that link is not working)
4. Copy down the names of the three types of rocks.

M
1. Read the next ten pages of Madam How and Lady Why. (audio book)
2. Learn about the rock cycle and the three types of rocks. (Sorry, this mentions millions of years. You don’t have to take that as fact.)

Day 23
L
1. Follow the directions to observe the rock cycle.
2. Now watch the animations of how each of the three types of rocks are formed.
   • igneous
3. Describe each kind of rock. What makes each unique?

M

1. Read the next ten pages of Madam How and Lady Why. (audio book)
2. Read about the rock cycle. Read to the end, pages 6-10.
3. Scroll down to “What is pumice?” Read the description and look at the picture. What type of rock is it?
4. Read the Rocky’s Roots story.

Day 24

L

1. Let’s look at igneous rocks first.
2. Here’s a reminder of how igneous rocks are formed and what they look like.
3. Read about igneous rocks. There are three pages to read. (Here is an alternate link if that one isn’t working for you)
4. You can listen to the song too.
5. Or here’s another song you might enjoy.
6. If your parents will let you, shake up soda and let it explode. (If not, here’s a video. Not the most fun example, but all I could find.) Why does it explode and what does that have to do with igneous rocks?

M

1. Read the next ten pages of Madam How and Lady Why. (audio book)
2. Let’s look at igneous rocks first.
3. Here’s a reminder of how igneous rocks are formed and what they look like.
4. Read about igneous rocks and watch the animations.
5. Read some more!
6. What makes igneous rocks unique? How can you identify one?

Day 25 (Materials for L: clear jar or bottle or glass, dirt)

L

1. Let’s look at sedimentary rocks next.
2. Here’s a reminder of how sedimentary rocks are formed and what they look like.
3. Read about sedimentary rocks. There are four pages to read. (Here is an alternate link if that one isn’t working for you)
4. You can listen to the song again if you like. Or here’s the other song.
5. Gather up some dirt, rocky dirt if you can, into a jar or clear bottle or glass. Add water. Stir. Let sit. Watch the sediment fall into layers.

M

1. Read the next ten pages of Madam How and Lady Why. (audio book)
2. Let’s look at sedimentary rocks next.
3. Here’s a reminder of how sedimentary rocks are formed and what they look like.
4. Read about sedimentary rocks and watch the animations.
5. Read pages 2 and 3 about rocks and sedimentary rocks.

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6. What makes sedimentary rocks unique? How can you identify one?

Day 26 (Materials for L: clear jar or bottle or glass, dirt)

L

1. Let’s look at metamorphic rocks next.
2. Here’s a reminder of how metamorphic rocks are formed and what they look like.
3. Read about metamorphic rocks. There are three pages to read. (Here is an alternate link if that one isn’t working for you)
4. You can listen to the song again if you like. Or here’s the other song.
5. How do you think you might identify a metamorphic rock?

M

1. Read the next ten pages of Madam How and Lady Why. (audio book)
2. Let’s look at metamorphic rocks next.
3. Here’s a reminder of how metamorphic rocks are formed and what they look like.
4. Read about metamorphic rocks and view the animations.
5. Take the quiz.
6. How do you think you might identify a metamorphic rock?

Day 27

L

1. Review the rock cycle.
2. Make a rock cycle diagram. (Here are pictures of some. You can use the shapes given or make your own. If you find this complicated, you can draw pictures to show how each type of rock is formed as in the one picture.)

M

1. Read the next ten pages of Madam How and Lady Why. (audio book)
2. Review the rock cycle.
3. Make a rock cycle diagram. (example)

Day 28 (Materials for L and M: Your goal is to have three different kinds of rocks.)

L

1. View the slideshow on sedimentary rock.
2. Look at examples of sedimentary rocks. Make observations.
3. What do you think are the defining characteristics of sedimentary rocks? Draw a picture of what you think an sedimentary rock would look like. (You can invent a rock.) Do you think you have any sedimentary rocks in your rock collection?

M

1. Read the next ten pages of Madam How and Lady Why. (audio book)
2. View the slideshow on sedimentary rock.
3. Look at examples of sedimentary rocks. Make observations.
4. Look at sedimentary rocks under the microscope.
5. What do you think are the defining characteristics of sedimentary rocks? Write a description of what a sedimentary rock looks like. Do you think you have
any sedimentary rocks in your rock collection?

Day 29

L

1. View the slideshow on igneous rock.
2. Look at examples of igneous rocks. Make observations.
3. What do you think are the defining characteristics of igneous rocks? Draw a picture of what you think an igneous rock would look like. (You can invent a rock.) Do you think you have any igneous rocks in your rock collection?

M

1. Read to the end of the chapter Madam How and Lady Why. (audio book)
2. View the slideshow on igneous rock.
3. Look at examples of igneous rocks. Make observations.
4. Look at igneous rocks under the microscope.
5. What do you think are the defining characteristics of igneous rocks? Write a description of what an igneous rock looks like. Do you think you have any igneous rocks in your rock collection?

Day 30

L

1. View the slideshow on metamorphic rock.
2. Look at examples of metamorphic rocks. Make observations.
3. What do you think are the defining characteristics of metamorphic rocks? Draw a picture of what you think a metamorphic rock would look like. (You can invent a rock.) Do you think you have any metamorphic rocks in your rock collection?

M

1. View the slideshow on metamorphic rock. (alternative link to avoid image of the Venus de Milo, parents may want to preview the main link)
2. Look at examples of metamorphic rocks. Make observations.
3. Look at metamorphic rocks under the microscope.
4. What do you think are the defining characteristics of metamorphic rocks? Write a description of what a metamorphic rock looks like. Do you think you have any metamorphic rocks in your rock collection?

Day 31

(Materials for L: nail; Materials for M: nail, vinegar)

L*(*)

1. *Print out three copies of the first or second rock form (pages 2 or 3). The first is for younger students. You are going to use these starting the next day. I just want you to see what you will need to do.
2. Here is a list of ways you can identify rocks and a Moh’s hardness scale. This is for helping you decide your rock’s hardness number.
3. Here are some descriptions of common rocks and how to identify them.
4. (*) Here’s a list of common rocks and their properties.
5. Use these links to try identify these rocks. Next you’ll be identifying the rocks in your collection. (Here is an alternate link if that one isn’t working for you)

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M*

1. Read pages 172 and 173 of Madam How and Lady Why. (audio book)
2.* Print out three copies of the second or last rock form (pages 3 or 4 depending on whether your student wants to draw a picture). You are going to use these starting the next day. I just want you to see what you will need to do.
3. Read about different ways to identify rocks and look at the Moh’s hardness scale.
4. Here are some tables of common rocks to help you.
5. Use these links to try identify these rocks. Next you’ll be identifying the rocks in your collection.

Day 32

L

1. You are going to fill out a chart for another one of your rocks. You are trying to identify what kind of rock it is.
2. Here is a list of ways you can identify rocks and a Moh’s hardness scale. This is for helping you decide your rock’s hardness number.
3. Here are some descriptions of common rocks and how to identify them.
4. (*) Here’s a list of common rocks and their properties.
5. When you are done, write in the box under or above your drawing what type of rock you think it is.

M

1. Read from the end of page 173 to the last paragraph on 175 of Madam How and Lady Why. (audio book)
2. You are going to fill out a chart for another one of your rocks. You are trying to identify what kind of rock it is.
3. Read about different ways to identify rocks and look at the Moh’s hardness scale.
4. Here are some tables of common rocks to help you.
5. I know this is a lot of links for a day, but I think it will be easier to understand the properties if you just start trying to identify them in your rock.
6. When you are done, write what type of rock you think it is.
7. Hint: A sedimentary rock should fizz when put in vinegar.

Day 33

L

1. You are going to fill out a chart for another one of your rocks. You are trying to identify what kind of rock it is.
2. Here is a list of ways you can identify rocks and a Moh’s hardness scale. This is for helping you decide your rock’s hardness number.
3. Here are some descriptions of common rocks and how to identify them.
4. (*) Here’s a list of common rocks and their properties.
5. When you are done, write in the box under or above your drawing what type of rock you think it is.

M

1. Read from the end of page 175 to the last paragraph on 177 of Madam How and Lady Why. (audio book)

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2. You are going to fill out a chart for another one of your rocks. You are trying to identify what kind of rock it is.
3. Read about different ways to identify rocks and look at the Moh’s hardness scale.
4. Here are some tables of common rocks to help you.
5. I know this is a lot of links for a day, but I think it will be easier to understand the properties if you just start trying to identify them in your rock.
6. When you are done, write what type of rock you think it is.
7. Hint: A sedimentary rock should fizz when put in vinegar.

Day 34
L

1. You are going to fill out a chart for another one of your rocks. You are trying to identify what kind of rock it is.
2. Here is a list of ways you can identify rocks and a Moh’s hardness scale. This is for helping you decide your rock’s hardness number.
3. Here are some descriptions of common rocks and how to identify them.
4. (*) Here’s a list of common rocks and their properties.
5. When you are done, write in the box under or above your drawing what type of rock you think it is.

M

1. Read from the end of page 177 to the middle of 180 of Madam How and Lady Why. (audio book)
2. You are going to fill out a chart for another one of your rocks. You are trying to identify what kind of rock it is.
3. Read about different ways to identify rocks and look at the Moh’s hardness scale.
4. Here are some tables of common rocks to help you.
5. I know this is a lot of links for a day, but I think it will be easier to understand the properties if you just start trying to identify them in your rock.
6. When you are done, write what type of rock you think it is.
7. Hint: A sedimentary rock should fizz when put in vinegar.

Day 35
L

1. Learn about the uses of various kinds of rocks.
2. Take a piece of paper. Fold it in half in both directions to divide the paper into four boxes. In each box draw a picture of a rock (maybe in the top outer corner) and then draw a picture of how it is used. You can write its name in the box or on the back. You choose which four you want to do.

M*

1. Read from 180 to the middle of 183 of Madam How and Lady Why. (audio book)
2. *Print out and fill in this worksheet on the uses of common rocks.
3. Here is a site to help you, but you may need to do some research to complete the page.

Day 36
L

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1. Read the story and then the lesson on geodes. (This lesson mentions millions of years. You do not have to take that as a fact.)
2. Draw a picture of a geode.

M*
1. Read from the middle of 183 to the bottom of 185 of Madam How and Lady Why. (audio book)
2. *Cut and assemble the shapes of mineral crystals.

Environmental Issues
Day 37
L
1. God created the earth and all that was in it and then gave man charge over it. It’s up to us to take care of it.
2. Learn about recycling.
3. Then take the recycling challenge.

M
1. What can we do to stop disasters? Play this game to find out.

Day 38
L
1. Run to the different pictures and answer the questions about conserving water.

M
1. Read about water conservation.
2. Wasting water is weird. Watch the commercials.
3. You can read about water projects around the world providing clean, safe drinking water. WaterAid
4. Here’s one more water project. This is my favorite ministry to give through because you can choose what project (such as the water project) to give to and all of your money goes right to the project. The organization doesn’t take anything.

Day 39
L
1. Learn about planting trees.
2. You can also finish your game from Day 38

M
1. Lack of safe water is an issue in many places of the world.
2. Many people also deal with a lack of adequate food as well.
3. Play this game to learn about these issues facing our world. You have to figure out which ones match. They don’t match exactly. Pay attention to your answers because if you get it wrong, you’ll be asked again.
4. The food fund

Day 40 (Optional Experiment Materials: plastic bottle, 2 clear jars, sand, gravel, cotton wool

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(or cotton ball to substitute), paper towels, soil)

L(*)

1. Let’s read one more time about water. Actually, we’re going to continue with water. Next, we are going to learn about the water cycle (you know, rain!).
2. Watch the video about clean water.
3. Then either do the water cleaning experiment or play the *water treatment game.

M(*)

1. Let’s read one more time about water. Actually, we’re going to continue with water. Next, we are going to learn about the water cycle (you know, rain!).
2. Read about clean water and watch the video at the bottom of the page. (The video at the top of the page doesn’t work. That’s okay. You don’t need that one.)
3. Then either do the water cleaning experiment or play the *water treatment game.

The Water Cycle

Day 41

L

1. Learn the water cycle. What are the four parts? (Here is an alternate link if that one isn’t working)
2. Answer these questions about the water cycle. (You can just tell someone the answers.) Watch the water cycle animation again if you need help with any of the answers. There are two answers that aren’t in the animation, but they are things you’ve learned about this year already. They start with G and R.
3. You are going to be reading about 3 pages a day from the book, The First Book of Water.

M

1. Click on the water cycle video.
2. Read about the water cycle.
3. Click on the video on dead trees and dirty water.
4. Write a paragraph or explain to someone the water cycle and some of the ways it can be affected.

Day 42 (Materials for L: paper towel or coffee filter with markers with a jar and clothespins OR sugar cubes and food coloring with a shallow dish—If you don’t have a jar and clothespins, you can do without. Materials for M: clear jar/glass/cup, gravel/sand/rocks/dirt)

L

1. Read the next three pages of The First Book of Water.
2. We’re going to explore and experiment with each part of the water cycle. We’re going to start with infiltration, where water goes into the soil.
3. Gravity pulls water down into the soil, but water can also be pulled in other directions through the soil. Observe this. It’s called capillary action. Below are a couple of different ways to observe this.

   • With paper towel or coffee filter
     1. Cut the paper towel or coffee filter into a few strips.
     2. Put a dot with marker toward the end of each strip. If you can, use

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different colors.
3. Put a little water in the bottom of the jar.
4. Clip the strips onto the jar so that it just touches the water.
5. Observe the water and color climb the strip.
6. Here’s a picture.

• With sugar cubes
  1. Make a short stack of sugar cubes in a shallow dish.
  2. Pour in some water colored with food coloring.
  3. Observe the water climb through the cubes.
4. You could take a picture of this to include in your portfolio.

M

1. We’re going to explore and experiment with each part of the water cycle. We’re going to start with infiltration, where water goes into the soil and into water storage.
2. Follow the directions on this page to make an aquifer in a cup. Then explain, using your experiment, the following terms:
   • surface water
   • water table
   • saturation zone
   • unsaturated zone
3. “Background Information on the Importance of Groundwater Resources: Water is an essential resource for all living things. Half of the drinking water for United States comes from groundwater sources, water stored underground in cracks and spaces in soil and rocks. An aquifer is a geologic formation made of a layer of permeable rock that has large pockets of water. Water can enter an aquifer through faults, fractures, sinkholes, or percolation through the soil in a process called recharge. How we live on our watershed, the area of land that drains into a body of water, can impact water quantity and quality. It is important to maintain the quantity and quality of groundwater in aquifers in order to be able to continue to use this resource.” (from)
4. Design an experiment to test what affects surface runoff and groundwater recharge?
   (Draw or write)
5. Give this to a parent to include in your portfolio.

Day 43 (Materials for L: materials that you can get wet, some ideas are paper towel, wash cloth and twig; Materials for M: jar, plastic wrap, rubber band, plant materials such as leaves and stems)

L

1. Read the next three pages of The First Book of Water.
2. Next in the water cycle is evaporation and transpiration.
3. Experiment: Wet different materials and set them out in the sun. Observe how long they take to dry. Where did the water go? (You can do this indoors if you need to.) Ideas for materials: paper towel, washcloth, twig

M

1. Next in the water cycle is evaporation and transpiration.
2. Observe transpiration.
   1. Put plant materials in a jar. You can break up larger plants.

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2. Cover with plastic wrap. Hold it on with a rubber band to keep it on tight.
3. Place the jar in a warm area, on a warm surface and place in the sun or under a lamp.
4. Watch for water to form on the plastic. This will not happen quickly. Do something else in the meantime.

Day 44 (Materials for L: glass or jar, dish, ice, warm water — see directions, you might want to plan ahead on this one; Materials for M: 2 liter bottle and matches OR glass jar with lid, boiling water and aerosol can)

L

1. Read the next three pages of *The First Book of Water*.
2. The next phase of the water cycle is condensation, where water vapor cools into water droplets and forms clouds.
3. Make a cloud in a glass. (If you can’t do it, there’s a video on this page.)
   1. Choose a clear glass and a small dish that fits over top of it.
   2. Place the dish in the freezer. (You want it to be cold.)
   3. Pour a small amount of warm water into the glass.
   4. Cover it with the cold dish.
   5. Observe the cloud that forms near the dish.
   6. Why does the cool dish make a cloud appear? (Answer)

M

1. The next phase of the water cycle is condensation, where water vapor cools into water droplets and forms clouds.
2. Make a cloud in a glass. There are two methods below.
   1. 2 liter bottle and matches
   2. glass jar with lid, boiling water, aerosol can
3. What did you observe?
4. Why did it happen?

Day 45 (Materials for L: glass jar, dish, hot water, ice; Materials for M: cup, plastic wrap or baggie, tape or rubber band)

L

1. Read the next three pages of *The First Book of Water*.
2. What happens when you heat ice? What happens when you heat liquid? What happens when you cool steam? What happens when you cool liquid?
3. The last stage of the water cycle is precipitation. You are most familiar with this. It means when the water falls from the sky as rain, snow or even hail.
4. What happens before it rains? Clouds form. You are going to make it rain by doing a version of the same experiment from Day 44.
5. What did you observe?
6. Why did it happen?

M

1. What happens when you heat ice? (Click on Game 2; it’s the dot right in the middle.) What happens when you heat liquid? What happens when you cool steam? What
happens when you cool liquid?
2. The water cycle is a cycle right? All the parts are related. You are going to do an experiment that’s sort of a continuation of your transpiration experiment.
3. Make it rain. (This again will take some time.)
4. What did you observe?
5. Why did it happen?

Day 46
L(*)
1. Read the next three pages of *The First Book of Water*.
2. Review the rock cycle by singing karaoke.
3. Review the water cycle.
4. Make a water cycle diagram or *color this one*.

M
1. Review the rock cycle.
2. Review the water cycle. Click on “test yourself.”
3. Draw a water cycle diagram. Label it with evaporation/transpiration, condensation, infiltration and precipitation.

Weather
Day 47 (Materials for M: piece of cardboard, tape, two tube thermometers—to measure air temperature, cotton ball; rubber band — you can substitute for the cotton ball and rubber band if necessary. You don’t have to tape the thermometers to the cardboard. If you only have one thermometer, then you can just do the wet thermometer and compare it to the starting temperature. You are going to repeat the experiment on Day 48 and 51.)

L
1. Read the next three pages of *The First Book of Water*.
2. Read about moisture in the atmosphere, in the air around us. (just this one page)
3. What makes us have chapped lips?
4. What makes it feel sticky?
5. Read about humidity. (Here is an alternate link if that one isn’t working for you)
6. What’s the humidity today where you live? Type your city into the search box. Click on “EXPAND WEATHER DETAILS” immediately below the Current Conditions.

M
1. Read about humidity and relative humidity.
2. What is humidity?
3. Measure the relative humidity where you are.
   • Question: What is the current relative humidity?
   • Procedure:
     1. Tape two thermometers to a piece of cardboard.
     2. Record their identical temperatures.
     3. Attach something like a warm, wet cotton ball to the bulb of the thermometer. You could use a rubber band.
     4. Record the temperatures in 5 minutes.

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5. Enter the information onto this page on humidity. Enter the dry and wet bulb temperatures and click on compute. The info will be at the bottom of the box.

• Conclusion: What was the relative humidity?

4. Compare your results to what the news says. Type your city into the search box. Click on “EXPAND WEATHER DETAILS” immediately below the Current Conditions. Remember that yours was not as precise, but it was up to the minute. You are also not at the same location where they are measuring.

Day 48 (Materials for L: glass or metal cup, tube thermometer to measure the water temperature, ice)

L

1. Read the next three pages of The First Book of Water.
2. Read about condensation. (Here is an alternate link if that one isn’t working for you.) Saturated means full, completely full, full to the brim, full like a sponge that is so full, if you added any more water it wouldn’t get soaked into the sponge.
3. Read about dew point. (Here is an alternate link if that one isn’t working for you.)
4. Experiment:
   1. The dew point is defined as the temperature at which water vapor begins to condense.
   2. Question: What is the dew point right now? (At what temperature does water vapor begin to condense.)
   3. Procedure:
      • Take a metal or glass cup and add room temperature water. (It’s okay if it’s a little warm.)
      • Measure the water temperature.
      • Add ice a bit at a time and watch the outside of the cup.
      • As soon as you see condensation, water appear on the outside of the cup, record the temperature of the water.
   4. Conclusion: That’s the dew point, the temperature at which water vapor in the air begins to condense into liquid.

M

1. Read about dew point.
2. What does the graph show?
3. What is dew point temperature?
4. Read more about humidity and dew point.
5. Repeat the experiment from Day 47.
6. Enter the numbers again and this time pay attention to the relative humidity and the dew point temperature. The info is at the bottom of the box.
7. If you have younger siblings, you can compare your dew point results with theirs. If you don’t and you want to find the dew point temperature on your own, here’s an experiment.

Day 49 (Materials for M: brass fastener)

L*

1. Read the next three pages of The First Book of Water.

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2. Read the three pages about clouds.
3. *Cut out four of the cloud pictures.* (I could just cut out the boxes with the clouds and words and leave the rest.)
4. Glue them onto a piece of paper or cardboard or poster board so you don’t lose them. On Day 50 you can finish cutting them out.
5. What kind of clouds are outside now?

**M**

1. Read about clouds.
2. *Put together the cloud finder.*
3. What kind of clouds are outside now?

**Day 50**

**L**

1. Read the next three pages of *The First Book of Water.*
2. Finish cutting out the clouds. (From Day 49)
3. You can glue them on with the others.
4. Every time you see one of the types of clouds, put a tally mark under that cloud picture.

**M**

1. *Start filling in your cloud and weather chart.* Fill in the first line, but leave blank the last spot. You can fill that in later in the day. Observe the clouds and predict the weather. Use your cloud finder to help you. Check later to record what really happened with the weather.
2. Try these cloud matching quizzes.
   - one  *(This one requires you to turn off your adblocker.)*
   - two
   - three

**Day 51**

**L**

1. Read the next three pages of *The First Book of Water.* *(The third page is a cartoon. You can look at the whole page.)*
2. Every time you see one of the types of clouds, put a tally mark under that cloud picture.
3. Make a picture of each of three main types of clouds: cumulus, stratus and cirrus. You can just draw or paint. Or, if you have the materials, you can try a puffy paint project. Here are two ways to do it.
   - with a microwave, flour and baking powder *(or self-rising flour)* We did this on construction paper not cardboard.
   - with flour, white glue and shaving cream

**M**

1. Fill in the next line on your cloud and weather chart.
2. Repeat the experiment from Day 47.
3. Enter the information into the cloud altitude calculator.
4. You can read about this calculator and its accuracy at the bottom of this page.
5. Observe what type of clouds are in the sky.

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6. On this page about clouds, you can read on the chart the heights of various types of clouds.
7. Does your calculated estimate fit in the normal range for the type of cloud?

Day 52

L

1. Read the next three pages of The First Book of Water.
2. Every time you see one of the types of clouds, put a tally mark under that cloud picture.
3. Read about snow, sleet, rain and hail.
4. What does the graph show?
5. Draw pictures of different types of snow.

M

1. Fill in the next line on your cloud and weather chart.
2. Read about precipitation. Keeping moving onto next until you finish reading about hail.
3. How many water droplets are in a raindrop? (answer: millions!)
4. Do most raindrops start as water or ice? (hint: bottom of page)

Day 53 (Materials for L: glass jar)

L(*)

2. Every time you see one of the types of clouds, put a tally mark under that cloud picture.
3. Learn about measuring precipitation. Just read this one page.
4. Make a rain gauge. If you are getting snow, allow the snow to melt to measure the precipitation amount. (*) If you want, you can tape a paper ruler to the jar. Cover the ruler with tape completely to protect it from the rain.
5. Look at today's precipitation in America. Where is it precipitating the most?
6. If you are in America, you might like to see an average precipitation map for your state.

M*

1. Fill in the next line on your cloud and weather chart.
2. Read about annual precipitation. (just this one page)
3. Make a map that shows the places in the world with the most and least amount of precipitation.
   • Use this average precipitation map for data.
   • Color in this map. Make sure to include a key.
4. Look up the average rainfall where you live. Type the place name in the box to search for it. You may need to choose a close location from options. Scroll down to average precipitation.
5. Make a bar or line graph of average rainfall for where you live.

Day 54 (Materials for M: clear small plastic bottle, rubbing alcohol, clear plastic straw, clay/play dough, food coloring)

L

1. Every time you see one of the types of clouds, put a tally mark under that cloud picture.
2. Read about temperature. Keep clicking on next. You can stop on the page after the Allinonehomeschool.com
thermometer.
3. Drag the slider up and down the thermometer to see what average temperatures are for various things, both in Fahrenheit and in Celsius.
4. What’s the current temperature where you are?
5. Find your current temperature on the other scale, either Fahrenheit or Celsius.
6. Sometimes the temperature feels different than it is. When you are out in the sun it feels hotter than in the shade. Wet your hands and wave them around to act like wind is blowing on them. Do they feel colder? We call that wind chill. When it’s windy, it feels cooler.

M
1. Fill in the next line on your cloud and weather chart.
2. Read this page on temperature.
   • Enter different amounts into the calculators to see how they come out.
   • You can use your temperature and dew point measurements from the other days to find the heat index.
3. Make a thermometer. (Different version of the same experiment. They use a jar instead.)

Day 55 (Materials for L: small coffee can—can substitute something else, plastic wrap, straw, index card—can substitute, rubber band, Materials for M: peeled hard-boiled egg, bottle or jar with opening slightly smaller than the diameter of the egg, paper/lighter or matches or very hot water or very cold liquid)

L
1. Every time you see one of the types of clouds, put a tally mark under that cloud picture.
2. Now we’ll learn about what causes the wind in the wind chill.
3. Read the pages about air pressure and how to measure it. Stop when you get to wind.
4. Make a barometer.

M
1. Fill in the next line on your cloud and weather chart.
2. Read the pages about air pressure and how to measure it. Stop when you get to wind.
3. Read about this experiment and then try it. You are changing the air pressure to suck an egg down inside a bottle. Here’s another explanation of the experiment. If you can’t do it, here’s a video of it to watch.

Day 56 (Materials for L: index card, paper clip, straw, straight pin, pencil with eraser, clay/play dough)

L
1. Every time you see one of the types of clouds, put a tally mark under that cloud picture.
2. Read about the wind and how to measure it. (Weather vanes are the last page.)
3. Make a weather vane.
   • Cut a triangle out of the end of an index card.
   • Attach a paper clip to the end of the triangle.
   • Tape them onto both ends of a straw.
   • Use a straight pin to attach the straw to a pencil eraser.
   • Stand the pencil up using some kind of clay.

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• Put it outside.
• When the wind blows, which way is it blowing?

M*
1. Fill in the next line on your cloud and weather chart.
2. Read about wind. There is a LOT on this page. You don't have to know the names of every type of wind.
3. Tell someone what the following are: the jet stream, sea breeze, trade winds and monsoon.
4. Knots are how wind speed is measured. It is abbreviated, kts. On this site, look for the wind speed in your location and in another location far away from you. What are the speeds and where are they on the Beaufort Scale?
5. *Print out this map of the world. (You can print in black and white.) Draw on the global wind patterns from your reading today. Use the latitude lines to guide you. Where does your country fall in the pattern?

Day 57
L(*)
1. Read about a blizzard.
2. Try cloud matching.
3. Read the story of visiting the National Weather Service. (*)If you like, print a page or all of it for coloring.

M
1. Make an anemometer.
2. Measure the wind speed. Use the directions on the page to figure out the speed.
3. If you can’t make the anemometer, use the internet to find the current wind speed in your area. Use the direction on the anemometer page to figure out how many times your anemometer would have spun around (and how big it would be) to measure that wind speed.

Day 58
L
1. Choose one of these tricky games.
   • Help a water droplet through the water cycle.
   • Color the world’s cloud patterns. (Color all the 1s the same color, all the 2s the same color, etc.)

M
1. Read about fronts and masses. There are several pages.
2. Explain what air masses are, what the different fronts are and what they mean to our weather.
3. What can you see happening on this weather map? H is a high pressure area. L means low pressure. Fronts are marked with blue and red lines, blue for cold, and red for warm.

Day 59 (Materials for M: clear jar, vinegar, clear liquid soap, optional food coloring)
L

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1. Watch the story.
2. Read about tornadoes. There are several pages. Use the simulation link on the first page.
3. What kind of weather warnings do you see on this map? (changes daily)

M

1. Read about tornadoes. (just this one page)
2. Read more.
3. Create a tornado in a jar.

Day 60

L*

1. Read about tornadoes.
2. *Answer the questions on the quiz on page 8 of the pdf.
3. Check your answers on the last page.

M

1. Watch the tornado chasers. Listen for the conditions in the atmosphere and cloud formations.

Day 61

L

1. Read about lightning.
2. Here is another version of the type of map on the second page. This is a lightning density map. It shows how many flashes there are in any given area in a year. Which state sees the most lightning? What part of the country sees the least? If you are in America, what is it like in your state?

M

1. Read about lightning. Don’t use the links on the page.
2. Explain to someone what lightning is.
3. Here’s one of the links from the page you read. It shows if there has been any recent lightning activity in America. Look for little lightning bolts on the map. Several on top of each other can kind of just look like a blob. The color shows how long ago it happened. Refer to the key on the page. Has there been any lightning activity? Where? When? How much?
4. Make some blue water ice cubes. Add food coloring to some water, doesn’t matter the color, but blue will represent cold fronts the best. Freeze into an ice cube tray. You just need a few.

Day 62 (Materials for M: plastic container shoe box sized, food coloring — the blue ice cubes you made on Day 61)

L*

1. Read the booklet on lightning and take the quiz on page 6 (print the quiz).
2. Check your answers on the last page when you are done.

M

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1. Read this page on powerful storms. (Just read this one page for now.)
2. Show how cold and warm fronts interact to cause thunderstorms.
3. Do the experiment and explain it.

Day 63 (Materials for L: balloon, florescent light bulb, brown paper lunch bag or you can just use the balloon)

L
1. Make lightning.
2. Make thunder.

M
1. Watch this video on lightning.
2. Watch this lightning video on upward lightning. How can that happen?
3. You can watch videos on this page as well, but DON'T download any. Just click on ones that say, “Watch this video.”

Day 64

L
1. Read about hurricanes.
2. What do you see on the videos?
3. What do you notice about the names of hurricanes? There are two patterns to notice. (answer: They choose names in alphabetical order, first an A name, then a B name, etc. They also alternate between boy and girl names. Can you think of a reason to alternate between boy and girl names? hint: Hurricanes are not nice things.)

M
1. Read about hurricanes.
2. You can use the links on the page to see maps and learn more.

Day 65

L*
1. Read about hurricanes and take the *quiz on page 6. Print the quiz if you like.

M
1. Watch the video on hurricanes. (Alternate link)

Day 66

L(*)
1. Read this story about hurricanes and answer the questions. (*)Print page 2 to write out the answers. Otherwise, answer orally.
2. Aim a hurricane. Drag and drop the high and low pressure symbols and then release the hurricane.
3. How do the high and low pressure areas affect the path of the storm?

M
1. Read about the eye of the hurricane.
2. Create a hurricane.
Day 67
L*
1. Read about winter storms and answer the questions on *page 10.

M
1. Read about ice and snow, just this one page.
2. Now be a storm chaser.

Day 68
L*
1. *Print out the thermometers.
2. Each day (for five days) you will write on the date and time under one thermometer.
3. See online the current temperature at your location, or read a thermometer you have at home.
4. Color in the thermometer to match the temperature.
5. (*) On the back, you can write, draw or glue on a picture to show what it is like outside.
6. Tell someone what you predict the weather will be like tomorrow. This is called forecasting the weather.

M*
1. *Print out this weather chart.
2. For the next five days you will fill it in according to the day’s forecast. Find your local forecast.
3. Each day you will also make a prediction of what the next day’s forecast will be. Write down your prediction. Judge each day how accurate your prediction is. DO NOT look at the five-day forecast before you predict.
4. Read these tips for forecasting.

Day 69
L
1. Write the date and time on one thermometer from the page you printed on Day 68.
2. See online the current temperature at your location, or read a thermometer you have at home.
3. Color in the thermometer to match the temperature.
4. On the back, you can write, draw or glue on a picture to show what it is like outside.
5. Tell someone what you predict the weather will be like tomorrow. This is called forecasting the weather.

M
1. Fill in your chart according to the day’s forecast. Find your local forecast.
2. Each day you will also make a prediction of what the next day’s forecast will be. Write down your prediction. Judge each day how accurate your prediction is. DO NOT look at the five-day forecast before you predict.
3. See if you can find any patterns. Try to use what you have observed and learned about clouds, humidity, pressure, etc. as well.
4. Save all of your weather data.
5. Read about **forecasting** (one page).

### Day 70

L

1. Write the date and time on one thermometer from the page you printed on Day 68.
2. See online the **current temperature** at your location, or read a thermometer you have at home.
3. Color in the thermometer to match the temperature.
4. On the back, you can write, draw or **glue on a picture** to show what it is like outside.
5. Tell someone what you predict the weather will be like tomorrow. This is called forecasting the weather.
6. Does knowing one day’s temperature and conditions help you know what the next day will be like?

M

1. Fill in your chart according to the **day’s forecast**. Find your local forecast.
2. Each day you will also make a prediction of what the next day’s forecast will be. Write down your prediction. Judge each day how accurate your prediction is. DO NOT look at the five-day forecast before you predict.
3. See if you can find any patterns. Try to use what you have observed and learned about clouds, humidity, pressure, etc. as well.
4. Read about meteorologists’ tools in **forecasting weather**.

### Day 71

L

1. Write the date and time on one thermometer from the page you printed on Day 68.
2. See online the **current temperature** at your location, or read a thermometer you have at home.
3. Color in the thermometer to match the temperature.
4. On the back, you can write, draw or **glue on a picture** to show what it is like outside.
5. Tell someone what you predict the weather will be like tomorrow. This is called forecasting the weather.

M

1. Fill in your chart according to the **day’s forecast**. Find your local forecast.
2. Each day you will also make a prediction of what the next day’s forecast will be. Write down your prediction. Judge each day how accurate your prediction is. DO NOT look at the five-day forecast before you predict.
3. See if you can find any patterns. Try to use what you have observed and learned about clouds, humidity, pressure, etc. as well.
4. Read about **forecasting**.

### Day 72

L

1. Write the date and time on one thermometer from the page you printed on Day 68.
2. See online the **current temperature** at your location, or read a thermometer you have at home.

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3. Color in the thermometer to match the temperature.
4. On the back, you can write, draw or glue on a picture to show what it is like outside.
5. How did you do in forecasting the weather? We’re going to learn more about forecasting.

M

1. Fill in your chart according to the day’s forecast. Find your local forecast.
2. How did you do in your predictions? We’re going to be learning more about forecasting and hopefully you’ll get more accurate.
3. Save all of your weather data.
4. Do levels 2 and 3 of “Report the Weather.” Login with easypeasy and allin1homeschool. This login is just for Easy Peasy students to do their assignments. Read the forecast information and put the correct weather symbols in the correct location on the weather map.

Day 73
L

1. Choose Report the Weather. Login with easypeasy and allin1homeschool. This login is just for Easy Peasy students to do their assignments.
2. Choose level 1. You will read the weather conditions and locations. Click on the weather symbol you need. It will appear on the map. Then you will drag it to the right city.

M

1. Do level 1 of “Predict the Weather.” Login with easypeasy and allin1homeschool. This login is just for Easy Peasy students doing their assignments.

Day 74
L

1. Choose Report the Weather. Login with easypeasy and allin1homeschool. This login is just for Easy Peasy students doing their assignments.
2. Choose level 2. You will read the weather conditions and locations. Click on the weather symbol you need. It will appear on the map. Then you will drag it to the right city.

M

1. Do level 2 of “Predict the Weather.” Login with easypeasy and allin1homeschool. This login is just for Easy Peasy students doing their assignments.

Day 75
L

1. *Print out your state or location with the surrounding area. Make a weather map like the ones you made online. Put on the temperature and a picture of what it is like. (You can print a map of any country from that site.)
2. You can use this site to see your current temperature and conditions.
3. Then you can use this global current temperatures map to fill in some of the areas around your location. Scroll down and choose your location from the list.

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M

1. Do level 3 of “Predict the Weather.” Login with easypeasy and allin1homeschool. This login is just for Easy Peasy students to do their assignments.

Day 76

L*

1. *Make a weather map that shows your forecast for tomorrow.

M*

1. You are going to present a five-day forecast on Day 80.
2. Record the daily temperature, conditions, winds and whatever information you think is helpful.
3. Observe the clouds.
4. You can look at this site to see temperatures, precipitation, and winds in the areas surrounding you.
5. *Track everything on maps. Make a weather map each day that shows how conditions are changing (like when you “reported the weather”). You can print out your country and label temperatures, conditions and how they are moving. (Print 4 maps.)
6. By Day 80 you will make a poster that shows your five-day forecast.

Day 77

L

1. *Print out your state or location with the surrounding area. Make a weather map like the ones you made online. Put on the temperature and a picture of what it is like. (You can print a map of any country from that site.)
2. You can use this site to see your current temperature and conditions.
3. Compare it to your map from Day 76.
4. You could include this in your portfolio.

M

1. You are going to present a five-day forecast on Day 80.
2. Record the daily temperature, conditions, winds and whatever information you think is helpful.
3. You can look at this site to see temperatures, precipitation, and winds in the areas surrounding you.
4. Track everything on maps. Make a weather map that shows how conditions are changing.

Day 78

L

1. Review the cloud poster you made or review the clouds on this site.
2. Can you identify the clouds?
3. Read the weather comic strip.
4. Make your own if you like.

M

Allinonehomeschool.com
1. You are going to present a five-day forecast on Day 80.
2. Record the daily temperature, conditions, winds and whatever information you think is help.
3. You can look at this site to see temperatures, precipitation, and winds in the areas surrounding you.
4. Track everything on maps. Make a weather map that shows how conditions are changing.

Day 79
L*
1. *Try the word search.

M
1. Prepare your five-day forecast and poster to present it.

Day 80
L
1. Read the weather jokes.
2. Tell your favorite two to someone and explain them.

M
1. Present your five-day forecast.
2. Take a picture for your portfolio.

Review
Day 81
L
1. Try to unscramble these weather words.

M
1. Read about becoming a meteorologist.

Day 82
L
1. Listen to the rock cycle song.
2. Explain the rock cycle to someone.

M
1. Make observations. What do you notice about these weather stats on Antarctica?

Day 83
L
1. Listen to a song about the earth’s layers.
2. Tell someone what the layers are and what you remember about them.

M(*)

Allinonehomeschool.com
1. Read about **clouds**. (*) Print page 3 to write out the answers or just answer orally.

**Day 84**

**L**

1. Listen to a song about rain and the **water cycle**.
2. Tell someone about the water cycle. How does the rain get up in the sky and why does it fall back down?

**M**

1. Explain the **rock** and **water** cycles.

**Day 85**

**L**

1. Listen to the song about **lightning** and read along with this explanation of **lightning storms**.
2. What makes lightning? What makes storms?

**M**


**Science Fair**

Days 86 – 90 (Materials for L and M: Students get to choose and/or create an experiment.)

**L**

1. Choose a question to answer.
2. Design an experiment to answer the question. You can use an existing experiment if you like. (You should finish this step today.)
3. Do the experiment.
4. Record the experiment.
5. Present your experiment on Day 90. You could make a video, a poster, a book or use this **experiment book** to write and draw in for your project.
6. Upload your experiment. Take pictures of your project and put them on your computer. Email your pictures and description to me and I’ll add them to our Hall of Fame page. Write to me through the contact page and I’ll send you my email address. (By sending me pictures you are giving me permission to make a video out of your pictures and post it online.)
7. Here are some **experiment ideas** based on what we’ve just been learning...and more ideas.

**M**

1. Choose a question to answer.
2. Design an experiment to answer the question. You can use an existing experiment, but think of a way to expand it and try it with new things or in a new way. (Finish through this step today, Day 86.)
3. Do the experiment.
4. Record the experiment.
5. Present your experiment on Day 90. Make a video, poster, book...show others what you did. Include your question, your hypothesis, best guess as to what the answer will be, and

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a complete list of materials. Include as many detailed steps as possible for how you did it. Include as many observations as possible. Make a chart of any data you collected, measurements you took. Write a great paragraph explaining your conclusion.

6. Upload your experiment. Take pictures of your project and put them on your computer. Email your pictures and description to me and I’ll add them to our Hall of Fame page. Write to me at my gmail address, allinonehomeschool. (pictured below)

(By sending me pictures you are giving me permission to make a video out of your pictures and post it online.)

7. Here are some experiment ideas based on what we’ve just been learning...and more ideas.

Hydrosphere

Day 91

L

1. We are going to now focus on water on the planet earth. 70% of the earth is covered in water. Here’s a picture of 70%. The blue part shows how much of the earth is covered in water. The rest is the land. There is more than twice as much water than land!
2. Some of this is review.
3. Today read the first four topics under freshwater systems. You will read about watersheds, streams becoming rivers and rivers traveling into the ocean. Click on the links to the left. (Stop where there is a break, before river zones.)

M

1. Read the introduction to the hydrosphere.
2. After you read, take the quiz.
3. Look at the panoramas. At least look at each of the water pictures. List as many types of bodies water that you can think of (ie. lake,...).

Day 92

L

1. Click on river zones on the menu on the left side of the screen. Study the picture.
2. Follow the directions and answer the questions on the page with your thoughts on the matter.

M

1. Read about freshwater.
2. Read about the anatomy of a river.

Day 93

L*

1. *Print out a map of the world.
2. Read about hydroelectric plants.
3. Read the chart about the longest rivers.
4. Draw the rivers onto your map as best as you can. You could draw each with a pencil.

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and number them on the map and write their names with their numbers at the top of the map.
5. You can use this atlas to help you. Search the river names if you don’t know where they go.
6. Hold onto this map.

M

1. *Print out a map of the world.
2. Draw at least six rivers onto your map. Draw at least one in the country where you live. You must also draw at least one on six different continents.
3. Label the rivers. Either make a key by color or number the rivers and make a key that way.
4. You can use this atlas to help you.
5. Hold onto this map.

Day 94

L

1. Clean the watershed.
2. If you were successful, play a watershed game.

M

1. Clean the watershed.
2. If you were successful, play a watershed game.

Day 95

L

1. Read all about ponds and lakes. Click on that second link in the sidebar. Tell someone the differences between a pond and a lake.
2. Read about pond succession. Click on that link on the left side of the page. What is pond succession?
3. Fold a piece of paper in half in both directions. It now has four boxes. Number them 1 – 4. Draw four pictures showing what happens to ponds. The fourth should be a swamp. The third should be a marsh. What happens before those?

M

1. Read about groundwater and groundwater use.
2. Take the quiz.

Day 96

L

1. Read about oxbow lakes. Click on it from the list over on the left.
2. Here are some pictures: photograph, diagram.
3. How are these lakes created?
4. Look at the chart of the largest lakes in the world.
5. Draw these lakes onto your map. Color in the area and number each. Make a lake key on your map. Write their names with their numbers.
6. You can use this atlas to help you. Search the lake names if you don’t know where they go.
Day 97
L
1. Click on the link about the **Great Lakes**.
2. Use the link on the page to see how they look from space. See if you can identify the lakes in the pictures. Maybe this image will help you.
3. How many of the Great Lakes are on the largest lakes of the world list? (answer: 2)
4. Read about **lake effect snow**. (Use the arrows to read about it.) What causes it?

Day 98
L
1. Explore what lives in a pond.

Day 99
L
1. Read the introduction and the first three links about **wetlands**. Click on the link “deltas” when you see it to look at the pictures.
2. What is a delta? (answer: A delta is a land formation, triangular in shape, made up of sand and sediment. It forms at where a river flows into a body of water such as a lake or ocean.)
3. What are the wetlands? Why are they important? What dangers do they face?

M
1. Read about the **wetland biomes**.
2. Name the different types of wetland biomes.
3. Are there more types of bodies or water than you thought of originally?
4. Read the first two paragraphs on this page about **freshwater biomes and estuaries**.
5. What is an estuary?

Day 100

L
1. Watch the wetlands show. (30 minutes)

M
1. Read “What is a wetland?” (the first section)
2. Where are the wetlands?
3. Put the Everglades on your map.

Day 101

L
1. Read about estuaries, salt marshes, mud flats, mangrove forests.
2. What are each of these things? What is unique about each one? How are mangrove forests helpful? How are they endangered?

M
1. Learn about currents.
2. Click on the arrow to turn the page through the presentation.
3. Then use the three activity links below it. You don’t have to write out answers. You can read the questions and answers.

Day 102

L
1. Read about currents and waves. (Density is related to heavy something is.)
2. Read more about waves and currents.
3. Draw currents onto your map. Use lines and arrows to show how water moves around the world. You don’t have to draw as many arrows as they have. Where they have three all going around the same way, you can just draw one to show the direction. Then your map won’t be so cluttered.

M
1. Learn about waves.
2. Click on the arrow to turn the page through the presentation.
3. Then use the three activity links below it. You don’t have to write out answers. You can read the questions and answers.

Day 103

L
1. Read about tides. (You aren’t going to do the tide activity.)
2. Watch the tide come in. Be patient. Click towards the top of the picture and drag your mouse down across the picture to bring in the tide. Click toward the top and do it again and again until the water is all in.

M
1. Read about tides; click on tides on the left. (We’ll save the Tide Activity for Day 104.)

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2. Watch this tide simulator. What’s happening?
   • Explain it to someone or write an explanation.

Day 104
L
1. Read The Wave to the very end of page 4.
2. Here’s Bondi Beach which the story will talk about. It’s in New South Wales, Australia (look in the bottom right).

M
1. Then click on the tide activity and follow the directions. The links there may not be working. This is a good site to use, Tide Times. Click on two of the dots to get your data. Choose two that are far apart. Here’s an example of a location. You can use the calendar on the side to see different days.
2. Write down the data, times and depths, from two locations for five days.
3. Then put it on a graph. The bottom could be hours starting at 0, which could be midnight the first day. 1 would be 1 AM. The side could be the depths. You could use a line graph which would show the ups and downs of the tide over the five days.
4. You might want to print the graph for your portfolio.

Day 105
L
1. Finish reading The Wave to the very end. Start on page 5.
2. Here’s Bondi Beach which the story will talk about. It’s in New South Wales, Australia (look in the bottom right).

M
1. Read about the oceans. Keep clicking next until you finish with the Arctic Ocean. (Here is an alternate link if that one isn’t working for you)
2. On your map label the oceans, three seas, three bays and three lakes. See if you can place them on seven continents
3. You can use this atlas to help you.

Day 106
L
1. Read about the oceans. Keep clicking next until you finish with the Artic Ocean.
2. On your map shade each ocean a different color. Use crayon or colored pencil. Tell someone each ocean’s name and point to it on your map.

M*
1. You are going to be making this lapbook on oceans.
2. *Print out the lapbook. You don’t need to print all of the pages.
3. Read the Frequently Asked Questions. Find the link to read it over on the left.
4. Today you can do the waves piece and the piece about the ocean being blue and salty.

Day 107
L

Allinonehomeschool.com
1. Read about the earth’s water. Read the introduction on the page and then click on Frequently Asked Questions from the list on the left.
2. What fifth ocean does this site talk about? (answer: Southern Ocean)
3. Shade it in on your map.
4. Mark the three largest seas on your map. Color them, outline them or label them. You can use the atlas to help you find them.
5. You could put your map in your portfolio. Give it to a parent to hold onto.

M

1. Click on the Atlantic and Pacific oceans page.
2. Do the circle piece on them as well as the Venn diagram piece.

Day 108

L

1. Read about ocean light zones.
2. You can watch this episode of Wild Kratts. They go down to the floor of the ocean where there is no light. If this link disappears, you can search for the Seasquatch episode.

M

1. Read about zonation and light zones.
2. Complete the piece on the ocean zones.

Day 109

L

1. Look at the depths of the oceans. Click on “data.” The oceans aren’t flat. These average depths and then the deepest points.
2. Look at what the ocean floor can look like.
3. Click on the Atlantic and Pacific Ocean link.
4. What facts did you learn from these pages?
5. Take a look at these pictures of underwater volcanoes.

M

1. Read the data page.
2. Make the lapbook piece which is a graph about the depths of the various oceans.

Day 110

L

1. Read about how the ocean refreshes itself.
2. Draw a diagram of what happens. Explain your diagram to someone.
3. You could save your diagram for your portfolio.

M

1. Read about how the ocean refreshes itself.
2. Complete the piece about this.

Day 111

L

Allinonehomeschool.com
1. Read about the forests of the ocean.
2. Take a look at these kelp forest photographs!

M

1. Read about the forests of the ocean.
2. Complete the kelp piece.

Day 112
L/M

1. Make a map of the ocean floor by taking soundings. Boats use radar to send down signals which bounce off the ocean floor. They can then “see” how deep it is there. You’ve seen that the ocean floor isn’t like the floor in your house. It’s not flat! Not at all. Ask a parent to make an ocean floor or make ocean floors for each other if you have siblings to work with. (Directions are below.)
2. Get some sort of box and put things of different sizes inside. Make valleys and mountains. Cover it with aluminum foil.
3. Put holes in the foil spread out across the top, not too close together.
4. You are going to take soundings. Drop a thread with a paper clip attached to it down holes in the cover. Measure how long the thread was when it hit bottom.
5. Mark on your graph the depths of your “ocean” at each location across the box. The first hole is the first location. Above it on the graph put a dot at the right depth.
6. Here are pictures of when our family did this. (Scroll down.)
7. Maybe you’d like to keep this for your portfolio. Give it to a parent to save.

Day 113
L/M

1. Solve the Secrets at Sea mysteries. (Copy down the code when you get there.)
2. Do chapter 1 today. Search around for clues and info on where to go. Click on things to put them back (to close).

Day 114
L/M

1. Solve the Secrets at Sea mysteries. Do chapter 2.

Day 115
L/M

1. Solve the Secrets at Sea mysteries. Do chapter 3.

Day 116
L/M


Day 117
L

1. Watch the first half of the video of the story, Paddle to the Sea. (until around 14 minutes)

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2. If you can find it, read chapters 1 and 2 of Paddle to the Sea. The version we used to have linked is gone now.

M

1. Read the first three sections of Ducks in the Flow and answer the questions as you go.

Day 118

L

1. Watch the second half of the video of the story, Paddle to the Sea. (from about 14 minutes)
2. If you can find it, read chapters 3 and 4 of Paddle to the Sea. The version we used to have linked is gone now.

M

1. Read the last two sections of Ducks in the Flow and answer the questions as you go.
2. Choose something that floats. Fill the bathtub or basin with water. Make your floater travel by using currents. Can you get it to go where you want it to go? Move it from one end to the other. Is it easier or harder than you thought?

Day 119 (Materials for M: pencil with eraser works well for this, food coloring, Manila folder/cardstock cut into ~8 inch diameter, approximately — This paper needs to be stiff and absorb water.)

L

1. Use a map of your area (maybe you’d like to use this atlas) to answer the following questions as best you can.
2. If we put a Paddle Person in a local stream, where would it go?
3. What waterways would carry our Paddle Person toward the ocean?
4. Is there anything along this route that could keep our Paddle Person from eventually reaching the ocean (a dam, for example)?
5. Would it be possible for our Paddle Person to travel by more than one route? If so, where would the different routes carry our Paddle Person?
6. What ocean would our Paddle Person reach?

(Questions from Ohio Sea Grant)

M(*)

1. (*) Study the Coriolis effect. You could print the last two pages or just answer the questions orally. Some need to be done BEFORE you make it and try it (and look at the pictures).
2. Follow the directions and observe the pattern. Then go back to the worksheets to finish answering the questions.

Day 120

L

1. The little boat meets Niagara Falls. Read about this landmark.

M

1. Pretend you place something in a local stream. Where would it go? Would it end up in
the ocean? Once in the ocean, where would it go? You can print a new map or use the map you have. You can look at an atlas and also look at the currents map.

2. This map can go into your portfolio. Give it to a parent to hold onto.

Space

Day 121 (Materials for L: clear 2 liter bottle—can probably get away with smaller, flashlight, milk—and water)

L

1. Read this page on rainbows and other sky lights. They exist because of the unique conditions in the atmosphere. The atmosphere is the layer of gases that surround the earth. The air you are breathing right now is part of earth’s atmosphere.
2. Try this experiment showing why the sky is blue.

M

1. We started on the earth, dove down into the ocean, now we’re going to soar up into space.
2. On our way up from the earth to space, we pass through the earth’s atmosphere.
3. Read about our atmosphere. There are several pages here. Click Next until you read about the Ozone.
4. What are the two main gases found in our atmosphere? Which is most prevalent? (answer: nitrogen, oxygen; nitrogen)

Day 122

L

1. Read about the atmosphere.
2. Try labeling the atmosphere layers. Don’t worry. It will help you get them in the right places.

M

1. Read about the layers of the atmosphere.
2. Take this general atmospheric quiz. If you get one wrong, learn from your mistake and read the explanation.

Day 123

L

1. Do assignment one of the online astronomy course and learn about astronomers. You don’t have to write three paragraphs. Learn about three astronomers using the site given. Here’s another site that is useful for learning about astronomers. Tell someone or write a sentence about each.

M

1. Do the first assignment in the online astronomy course. Read about the different types of astronomers. You don’t have to write a paragraph on each kind. Be able to explain each type.
2. Now read about Galileo in assignment two. Write a paragraph about ONE astronomer. Here’s another site that is useful for learning about astronomers.

Allinonehomeschool.com
Day 124

L

1. Read the second lesson in the online astronomy course. Learn about light years. You check the answers by clicking on the question mark.
2. This lesson was about big numbers. That’s because the universe is big. Don’t forget that God is bigger! Way bigger! He created it all and in perfect balance so that it all works together.
3. Here’s a neat way to look at just how big some things in our universe are.

M

1. Read assignment three of the online astronomy course on the measurement of light years. To check you answers you click on the question mark. If you like math, answer the problems on assignment 4.
2. You were dealing with some pretty big numbers. That’s because the universe it that big! View the size of the universe. It just goes to show how big God is to create this enormous universe. We don’t even know how big it is!
3. If you have questions about space from a creation point of view, here’s a website to visit, 4th Day Alliance.

Day 125 (Optional materials for M: thin cardboard, aluminum foil)

L*(*)

1. Read the next lesson on constellations, assignment three.
2. *Print out a sky map. (If you are in the southern hemisphere, make sure you print out the map for the southern hemisphere.)
3. (*) Maybe you’d like to make a star finder game.
4. If you can’t see the constellation for whatever reason, here’s a night sky picture to use to find it. (My internet safety blocker warns about this site because it holds pictures. If a warning comes on, please allow your children to access the sky picture pages.)

M*(*)

1. Read the next lesson on constellations, assignment five.
2. *Print out a sky map. (If you are in the southern hemisphere, make sure you print out the map for the southern hemisphere.)
3. (*) Maybe you’d like to make a big dipper mobile or a planisphere.
4. If you can’t see the constellation for whatever reason, here’s a night sky picture to use to find it. You may also just want to find it here first before you try outside. (My internet safety blocker warns about this site because it holds pictures. If a warning comes on, please allow your children to access the sky picture pages.)

Day 126

L

1. “Do you know where you live? You might live in a house or an apartment, a trailer or a log cabin. Your home is part of a larger community such as a country. Some of you live in the United States, some live in South America as well as many other places around the world. These different nations are all part of the same world. All of us live on the planet Earth. But guess what? It goes even further. The Earth is part of a larger community.

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This community is called the Solar System. There are eight planets in our Solar System all together. Their names are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune. On some sites you’ll see a ninth planet, Pluto. We used to count it as a major planet. Now we call it a dwarf planet.

Here is a sentence to help you memorize the order of the planets. The first letter of each word is the same letter as the first letter of each planet.

My Very Eager Mother Just Sent Us Nine Pizzas // Mercury Venus Earth Mars Jupiter Saturn Uranus Neptune Pluto

All of the planets except for Mercury and Venus have a system of moons. Think about that, eight planets circle the Sun. Most of those planets have moons which circle them. That’s a lot of worlds. There are over 60 known worlds in the Solar System. The only difference between a planet and a moon is that a planet circles the Sun while a moon circles a planet. Everything else about them is similar. Seven of the moons in our Solar System are even bigger than some of the planets. There are planets with atmospheres, volcanoes and even oceans. (adapted from Astronomy Academy)

1. Just an English note… I had to look this up. You do capitalize words like Sun and Moon when you are referring to our specific sun and moon because that is their name in astronomical context. When you are just talking about them regular, as in, “The sun and moon were out at the same time today,” then you don’t. You can read about the rules here.
2. Let’s start with learning about the moon.
3. Learn about the moon. When it gives you the choice, click on the moon and follow the directions.
4. Learn about the moon’s cycle.
5. What phase of the lunar cycle are you in now? (If you are in the southern hemisphere, please choose that from the drop down menu.)

M*

1. “Do you know where you live? You might live in a house or an apartment, a trailer or a log cabin. Your home is part of a larger community such as a country. Some of you live in the United States, some live in South America as well as many other places around the world. These different nations are all part of the same world. All of us live on the planet Earth. But guess what? It goes even further. The Earth is part of a larger community. This community is called the Solar System. There are eight planets in our Solar System all together. Their names are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune. On some sites you’ll see a ninth planet, Pluto. We used to count it as a major planet. Now we call it a dwarf planet.

Here is a sentence to help you memorize the order of the planets. The first letter of each word is the same letter as the first letter of each planet.

My Very Eager Mother Just Sent Us Nine Pizzas // Mercury Venus Earth Mars Jupiter Saturn Uranus Neptune Pluto

All of the planets except for Mercury and Venus have a system of moons. Think about that, eight planets circle the Sun. Most of those planets have moons which circle them. That’s a lot of worlds. There are over 60 known worlds in the Solar System. The only difference between a planet and a moon is that a planet circles the Sun while a moon circles a planet. Everything else

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about them is similar. Seven of the moons in our Solar System are even bigger than some of the planets. There are planets with atmospheres, volcanoes and even oceans. (adapted from Astronomy Academy)

1. Just an English note...I had to look this up. You do capitalize words like Sun and Moon when you are referring to our specific sun and moon because that is their name in astronomical context. When you are just talking about them regular, as in, “The sun and moon were out at the same time today,” then you don’t. You can read about the rules here.
2. Let’s start with learning about the moon.
3. Watch an animation of the moon’s orbit and what it looks like from earth.
4. (*Answer the questions in this worksheet set on the lunar cycle.
5. Check your answers.

Day 127
L
1. Learn about Mercury.
2. Compare the moon and Mercury. Read assignment two and then answer the questions.
3. Check your answers by clicking on the question mark in the corner of the box on the page.
4. Find your weight and age on Mercury.

M
1. Read NASA’s overview of Mercury.
2. Read about the differences between the moon and Mercury in assignment four. Then learn more about Mercury by using the link on the page.
3. Make sure to answer the questions then check your answers.
4. Would you weigh more or less on Mercury? Would you be older or younger? Can you figure it out? Check your thoughts on this by finding your weight and age on Mercury.
5. Write a short paragraph on Mercury or make a facts list. Make it short and what you think is most important/unique about Mercury. You are going to add this to a project later.

Day 128
L
1. Find another constellation. Do assignment four in your lessons.
2. If you can’t get out to see the constellation (though if at all possible try), you can find it in this night sky picture. Or, it might be a good idea to use the pictures I provide to practice finding the constellations before you try outside.

M
1. Learn about finding angles in the sky and the zodiac.
2. There are constellations that are in an elliptic as described. The sun “travels” through them. People may ask you some day what your “sign” is. This is what they are talking about. People read something called horoscopes which are predictions about what will happen to you based on your sign. This is fortune telling. No one knows the future, but God and you should never allow someone to tell you what to think about what’s going to happen.

Allinonehomeschool.com
3. **Find the Little Dipper** and Polaris as described in assignment 6.

4. If you can't get out to see the constellation (though if at all possible try), you can find it in this [night sky picture](#). Or, maybe you'd like to find it here first before you try outside.

**Day 129**

**L**

1. What is an [ecosphere](#)? Learn in assignment 1.
2. Learn about [Earth](#) as a great big planet. When it gives you the choice, pick earth.

**M**

1. What is an [ecosphere](#)? Learn in assignment 1.
2. Learn about [Earth](#) as a great big planet.
3. Use the “read more” tab to learn how earth got its name.
4. Use the “facts and figures” page to read how fast Earth travels in orbit.
5. Write a short paragraph on Earth or make a facts list. Make it short and what you think is most important/unique about Earth. You are going to add this to a project later.

**Day 130**

**L**

1. Read about [Venus](#) in assignment three and answer the question with your thoughts on the subject.
2. Learn about [Venus](#). This mentions billions of years. You don’t have to take that as fact.
3. Did you realize that planets travel at tens of thousands of miles/kilometers per hour? Where you see the word “velocity” it’s talking about speed!
4. Tell someone something interesting about Venus.
5. Find your weight and age.

**M**

1. Learn about [Venus](#).
2. Write a short paragraph on Venus or make a facts list. Make it short and what you think is most important/unique about Venus. You are going to add this to a project later.
3. You can find your weight and age.

**Day 131**

**L**

1. Learn about [Mars](#).
2. Tell someone something interesting about Mars.
3. You can find your weight and age.

**M**

1. Learn about [Mars](#).
2. Write a short paragraph on Mars or make a facts list. Make it short and what you think is most important/unique about Mars. You are going to add this to a project later.
3. You can find your weight and age.

**Day 132**

**L**

Allinonehomeschool.com
1. From what you have learned about Venus, Earth and Mars, what would you say they have in common? List as many things as you can.
2. Now read assignment two about how they compare and answer the questions.

M

1. Read assignments 3 and 4. You do not have to answer the questions.
2. Read assignment two and write a paragraph comparing and contrasting Venus, Earth and Mars.

Day 133  (Materials for L and M: If you have them or can borrow them, binoculars. I wouldn’t buy these unless your child is super into this. You can see what you can see with the naked eye, and I will be posting pictures as well.)

L

1. You are going to do some more observations of the heavens. Read assignment four.
2. If you can’t see them for real, here are some night sky pictures to try to use.
   • Try to find the constellation, Cassiopeia.
   • You can click on any of the pictures of Jupiter on this page.
   • I think you can see the double star on this photograph.

M

1. You are going to do some more observations of the heavens. Read assignments five and six.
2. If you can’t see them for real, here are some night sky pictures to try to use.
   • Try to find the constellation, Cassiopeia.
   • You can click on any of the pictures of Jupiter on this page.
   • I think you can see the double star on this photograph.

Day 134

L

1. Learn about Jupiter.
2. Tell someone something interesting about Jupiter.
3. You can find your weight and age.

M

1. Learn about Jupiter.
2. Write a short paragraph on Jupiter or make a facts list. Make it short and what you think is most important/unique about Jupiter. You are going to add this to a project later.
3. You can find your weight and age.

Day 135

L

1. Learn about Saturn.
2. Tell someone something interesting about Saturn.
3. You can find your weight and age.

M

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1. Learn about Saturn.
2. Write a short paragraph on Saturn or make a facts list. Make it short and what you think is most important/unique about Saturn. You are going to add this to a project later.
3. You can find your weight and age.

Day 136
L
1. What are ways that Saturn and Jupiter are similar and in what ways are they different? How many can you think of?
2. Read assignment one about how Saturn and Jupiter are similar.
3. Answer the questions on the page.

M
1. Read assignment one about how Saturn and Jupiter are similar.
2. Answer the first two questions.
3. How do these two planets compare and contrast with the others?

Day 137
L
1. Read assignment two about Galileo, Newton and Copernicus.
2. Tell someone about these scientists.

M
1. Read assignments two, three and four about Copernicus, Newton and Galileo and some of the “laws” of the universe.
2. Write a paragraph as described in assignment four.

Day 138
L
1. Read assignment three about telescopes.
2. Take a look at this one page about how telescopes work.
3. If you are really interested, you could consider downloading this virtual telescope.

M
1. Read assignment five about telescopes.
2. Read about how telescopes work.
3. If you are really interested, you could consider downloading this virtual telescope.

Day 139
L
1. Read assignment four about telescopes and the constellation, Orion (my favorite because I think it’s the easiest to find).
2. Here’s a night sky picture to find it in if you can’t find it in your night sky. (Some of you non city dwellers may not realize that in some cities there is so much light pollution—meaning too many lights are one—that you can’t see hardly any stars.)

M

Allinonehomeschool.com
1. Read assignment six about telescopes and the constellation, **Orion** (my favorite because I think it’s the easiest to find).
2. Here’s a **night sky picture** to find it in if you can’t find it in your night sky. (Some of you non city dwellers may not realize that in some cities there is so much light pollution—meaning too many lights are one—that you can hardly see any stars.)

**Day 140**

**L**

1. Learn about **Uranus**.
2. Tell someone something interesting about Uranus.
3. You can find your weight and age.

**M**

1. Learn about **Uranus**.
2. Write a short paragraph on Uranus or make a facts list. Make it short and what you think is most important/unique about Uranus. You are going to add this to a project later.
3. You can find your weight and age.

**Day 141**

**L**

1. Learn about **Neptune**.
2. Tell someone something interesting about Neptune.
3. You can find your weight and age.

**M**

1. Learn about **Neptune**.
2. Write a short paragraph on Neptune or make a facts list. Make it short and what you think is most important/unique about Neptune. You are going to add this to a project later.
3. You can find your weight and age.

**Day 142**

**L**

1. What are ways that Uranus and Neptune are similar and in what ways are they different? How many can you think of?
2. Read assignment one about **how Uranus and Neptune are similar**.
3. Answer the question.

**M**

1. Read assignment one about **how Uranus and Neptune are similar**.
2. Answer the question.
3. How do these two planets compare and contrast with the others?

**Day 143**

**L**

1. Read assignment two about **Pluto**. We now call Pluto neither a comet or a planet. We
call it a dwarf planet, dwarf meaning that it’s small.
2. Learn about Pluto.

M

1. Read assignment two about Pluto. We now call Pluto neither a comet or a planet; we call it a dwarf planet.
2. Learn more about dwarf planets.

Day 144

L

1. Read assignments three and four. Can you tell how a telescope works?
2. If you would like to find it in a photograph, here’s one to use to find Scorpius. (This is maybe my least favorite constellation. We have had scorpions in our apartment. Ick!) I know the site spells it Scorpios, but I’m pretty sure Scorpius is correct.

M

1. Read assignments four, five and six. Tell how a telescope works and the advantages and disadvantages of using lenses and mirrors in telescopes.
2. If you would like to find it in a photograph, here’s one to use to find Scorpius. (This is maybe my least favorite constellation. We have had scorpions in our apartment. Ick!) I know the site spells it Scorpios, but I’m pretty sure Scorpius is correct.

Day 145

L

1. You are going to make a solar system. You can do this any number of ways. You can do it big; you can do it small. Here are some pictures for inspiration.
   • play dough with descriptions
   • candy
   • poster
   • outside
   • ideas
2. You will continue to work on this on Day 146. You will present it on Day 147.
3. When you present your project, you will tell the audience the name of each planet and something about it.

M

1. You are going to make a solar system. You can do this any number of ways. You can do it big; you can do it small. Here are some pictures for inspiration. Somewhere, somehow, on your project include the paragraphs/facts that you wrote about your planets. You could just put them all together and put it with your project.
   • play dough with descriptions
   • candy
   • poster
   • outside
   • ideas
2. You will continue to work on this on Day 146. You will present it on Day 147.

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3. When you present your project, you will tell the audience the name of each planet and share your information about each planet.

Day 146

L

1. Continue to make a solar system. You can do this any number of ways. You can do it big; you can do it small. Here are some pictures for inspiration.
   • play dough with descriptions
   • candy
   • poster
   • outside
   • ideas

2. If you are finished, you can make your own planet.
3. You will present it on Day 147.
4. When you present your project, you will tell the audience the name of each planet and something about it.

M

1. Continue to make a solar system. You can do this any number of ways. You can do it big; you can do it small. Here are some pictures for inspiration. Somewhere, somehow, on your project include the paragraphs/facts that you wrote about your planets. You could just put them all together and put it with your project.
   • play dough with descriptions
   • candy
   • poster
   • outside
   • ideas

2. If you are finished, you can make your own planet.
3. You will present it on Day 147.
4. When you present your project, you will tell the audience the name of each planet and share your information about each planet.

Day 147

L

1. Finish your solar system.
2. If you like, you can create a solar system.
3. Present your solar system.
4. When you present your project, you will tell the audience the name of each planet and something about it.
5. Take a picture for your portfolio.

M

1. Finish your solar system.
2. If you like, you can create a solar system.
3. Present your solar system.
4. When you present your project, you will tell the audience the name of each planet and

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share your information about each planet.
5. Take a picture for your portfolio.

Day 148
L
1. Read assignment one about belts!
2. Answer the question.
3. Here’s an image of where the Kuiper Belt is and one of the Asteroid Belt and another of the Oort Cloud.
4. Explain to someone about astronomical belts.

M
1. Read assignments one and two about belts!
2. Answer the questions using the link provided on asteroids. Answer the questions on the second assignment as well.
3. Here’s an image of where the Kuiper Belt is and one of the Asteroid Belt and another of the Oort Cloud.
4. (You’ll read that it is believed that the Solar System was formed billions of years ago. They have to have faith that that’s what happened. They don’t know. It takes just as much faith to believe in that as it does to believe that God created the world. I think it takes more faith because everything makes more sense if it was created. Our universe is remarkable with everything in just the right balance.)

Day 149
L
1. Learn about comets.
2. What is a comet’s tail made of? (answer: dust)
3. Interstellar dust falls to earth all the time. You can collect dust from the heavens by leaving a piece of white paper outside in the sun. After several hours collect the paper. What landed on your paper? You could use a magnet to remove anything magnetic. Any pitted spheres in what you collected are teeny, tiny meteorites!

M
1. Read about comets.
2. Learn about comets and look at the pictures.

Day 150
L
1. Read assignment two about the other worlds in our solar system.
2. Use the link provided to answer the questions.

M
1. Read assignment four about the other worlds in our solar system and the end of our solar system.
2. Use the link provided to answer the questions.

Day 151

Allinonehomeschool.com
1. Find Sagittarius and Betelgeuse. Read assignment four.
2. If you want to find them in pictures (first, or only), here’s a picture of Sagittarius.
3. Here’s Orion for finding Betelgeuse.
4. If you are scanning the night sky, look for all of the constellations you’ve learned.

Day 152

L

1. Learn about the sun. When it gives you the choice, click on the sun and follow the directions.
2. What is the sun? (answer: a star)

M

1. Learn about the sun.
2. Get a high five and/or hug if you can figure out how to say how much it weighs. (hint: look under facts and figures)

Day 153

L

1. Learn more about the sun.
2. You may want/need to prepare clay or some sort of dough to use on Day 154 for your model.

M

1. Learn more about the sun.
2. Take a look at tomorrow’s assignment and choose what you will do. If you are going to attempt the more difficult paper one, print it out today and maybe start on it.

Day 154 (Materials: L toothpicks and playdough or some sort of clay in two to four colors, M: toothpicks and playdough/clay OR the print out provided)

L

1. Make a model of the sun.
2. Here’s an explanation of the layers.

M(*)

1. Make a model of the sun.
2. Here’s an explanation of the layers.

Day 155

L

Allinonehomeschool.com
1. Learn about stars.
2. Choose a couple to learn about.
3. Tell someone about what you learned.
4. Maybe your family would be interested in an article about how light we see could have traveled for supposedly millions of years if the earth is only thousands of years old.

M
1. Learn about stars.
2. Use the links to learn about each type of star.
3. Tell someone about what you learned.
4. Maybe your family would be interested in an article about how light we see could have traveled for supposedly millions of years if the earth is only thousands of years old.

Day 156
L
1. Read assignment four and find the constellation Taurus and the Great Nebula.
2. Here are some pictures:
   - Taurus
   - Nebula (He calls this the Orion Nebula. I think this is what the author is talking about since it is part of the Orion constellation.)

M
1. Read assignment five and answer the question and then read assignment six and find the constellation Taurus and the Great Nebula.
2. Here are some pictures:
   - Taurus
   - Nebula (He calls this the Orion Nebula. I think this is what the author is talking about since it is part of the Orion constellation.)

Day 157
L
1. Read assignments one and two on galaxies.
2. What you just read mentions the big bang. This is the idea that somehow some big event happened that started life in the universe and then it somehow evolved and formed the entire orderly universe with everything in perfect balance as well as all life as we know it in all its perfectly unique and creative forms. (I don’t believe in this idea.) Look at the chart in the article that shows that the idea of the big bang does not agree with what the Bible teaches, the Bible and the big bang.
3. Your family may be interested in watching this nearly hour-long presentation on How Big is God.

M
1. Read assignments one and two on galaxies.
2. What you just read mentions the big bang. This is the idea that somehow some big event happened that started life in the universe and then it somehow evolved and formed the entire orderly universe with everything in perfect balance as well as all life as we know it in all its perfectly unique and creative forms. (I don’t believe in this idea.) Read

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this article about the Bible and the big bang.

3. Your family may be interested in watching this nearly hour-long presentation on How Big is God.

Day 158

L

1. Read assignment three about Andromeda.
2. Here is a picture of the Andromeda galaxy and one of the constellation.

M

1. Read assignment four about Andromeda.
2. Here is a picture of the Andromeda galaxy and one of the constellation.

Day 159

L

1. The Hubble Space Telescope is a telescope that is out in space, orbiting the earth. It is a powerful telescope that we can use to see further out in space than ever before.
2. How many objects can the Hubble Space Telescope see? Learn about what we’ve learned from using the Hubble Space Telescope.

M

1. The Hubble Space Telescope is a telescope that is out in space, orbiting the earth. (It says, “Scientists think the universe is about 13 or 14 billion years old.” It should read some scientists. It is misleading to say that this is what “scientists” believe. There are still many scientists who don’t believe that. They are scientists and what they think should be acknowledged. Scientists disagree on many points. Your ears should perk up anytime someone says that all scientists say something. It is probably propaganda.)
2. Explore black holes.

Day 160

L

1. We’re now going to travel into space. First, listen to the Apollo 8 crew read the beginning of the story of creation.
2. Learn about weightlessness.

M

1. Read about satellites.

Day 161

L

1. Learn about missions to Mars.

M

1. Read about space craft to Mars.

Day 162

L

Allinonehomeschool.com
1. Learn about the **space shuttle**.
2. Read about becoming an **astronaut** and about their **space wardrobe**.

**M**

1. Use the rest of the links to read about missions to **Mercury, Venus and outer planets**.

**Day 163**

**L**

1. Learn about space shuttle missions.
   - **history**
   - **the space shuttle**
   - **Apollo 11**

2. Tell someone about what you learned.

**M**

1. Read about the **history of the space shuttle**.
2. Instead of using the movies on the page, you can watch **President Kennedy**’s speech here that challenged the country to shoot for the moon. (He makes it just after 3:00.)
3. You can also read this real newspaper about the **Apollo 11** landing on the moon.

**Day 164**

**L**

1. Learn about **space stations**.
2. Try this **word search maze**. (If a word you found disappears, it means it wasn’t leading you on the right path.)

**M**

1. Read about **Skylab and space stations**.

**Day 165**

**L**

1. Design a **space station**.

**M**

1. Plan a moon **rescue mission**.

**Day 166**

**L/M**

1. You are going to be doing an end-of-the-year project.
2. You are going to pick something from this year to learn more about. You will be doing research, making a project and doing an experiment on the topic as well.
3. For example you could choose earthquakes. You could **research them** and maybe build a seismograph to use for an experiment. You will present your research visually (poster, on the computer, etc.) and orally. You will demonstrate your experiment in front of an audience, or if that’s not possible, then you will explain what you did and what the results were.

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4. You can pick from what you learned about space, earth, oceans. Or maybe it’s something we didn’t really learn about and you wonder about.

5. Start thinking about a topic.

Day 167
L/M

1. Here are some sites that might help you: project ideas, research/ideas/projects/experiments for weather, space ideas, space links, ocean ideas.
2. You don’t have to use these links. Choose something you are really interested in!

Day 168
L/M(*)

1. Do research on your topic. I suggest taking notes. Always write down where you got the information. Here are Research Note Taker sheets.

Day 169
L/M

1. Continue your research.

Day 170
L/M

1. Start thinking about what experiment you might do that would be related. If you need materials, make sure you get them.
2. Finish your research and start organizing it. Decide how you are going to visually present your information. Are you going to put it on a poster? a power point? Write an essay? Online? Start

Day 171

1. Work on your project.
   • You need to show people what you learned in writing (poster, computer, essay, etc.).
   • You need to have an experiment.
   • You need to explain it all to an audience!

Day 172

1. Work on your project.

Day 173

1. Work on your project.

Day 174

1. Work on your project.

Day 175

1. Work on your project.

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Day 176
1. Work on your project. Try your experiment.

Day 177
1. Work on your project. You should be finishing up.

Day 178
1. Finish your project. Prepare to present.

Day 179
1. Write a bibliography. Prepare to present.

Day 180
1. Present!
   2. Take a picture for your portfolio. You can also send me a link to a video or pictures if you would like to be included on the Hall of Fame page.
   3. I’ll leave you with a site to read about 15 evidences that the earth is young.

Congratulations, You’re done!