

THE SASSAFRAS GUIDE TO EARTH SCIENCE



WRITTEN BY PAIGE HUDSON

THE SASSAFRAS GUIDE TO EARTH SCIENCE

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Email: info@elementalscience.com

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For more copies write to :

Elemental Science

610 N. Main St. #207

Blacksburg, VA 24060

info@elementalscience.com

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THE SASSAFRAS GUIDE TO EARTH SCIENCE

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THE SASSAFRAS GUIDE TO EARTH SCIENCE

INTRODUCTION

Our Living Books' method of science instruction was first proposed in *Success in Science: A Manual for Excellence in Science Education*. This approach is centered on living books that are augmented by notebooking and scientific demonstrations. The students read (or are read to) from a science-oriented living book, such as *The Sassafras Science Adventures Volume 4: Earth Science*. Then, they write about what they have learned and complete a related scientific demonstration or hands-on project. If the time and interest allow, the teacher can add in non-fiction books that coordinate with the topic, or the students can do an additional activity and memorize related information.

The books of the *Sassafras Science Adventures* series are designed to give you the tools you need to employ the Living Books' method of science instruction with your elementary students. For this reason, we have written an activity guide and logbook to correspond with each novel. This particular activity guide contains eighteen chapters of activities, reading assignments, scientific demonstrations, and so much more for studying earth science.

Each of the chapters in this guide corresponds directly with the chapters in *The Sassafras Science Adventures Volume 4: Earth Science*. They are meant to give you the information you need to turn the adventure novel into a full science course for your elementary students. The chapters will provide you with a buffet of options that you can use to teach your students about weather, oceans, and more. So pick and choose what you know you and your students will enjoy!

WHAT EACH CHAPTER CONTAINS

Each chapter begins with a summary of the corresponding chapter in *The Sassafras Science Adventures Volume 4: Earth Science*. Then, there will be an overview of the supplies you will need for the demonstration, projects, and activities for the chapter. After that, you will find the optional schedules – one for two days a week and one for five days a week. These schedules are included to give you an idea of how your week could be organized, so please feel free to alter them to suit your needs.

After the week-at-a-glance information, you will find the information for the reading, notebooking, and activities for the particular chapter. This information is divided into the following sections:

SCIENCE-ORIENTED BOOKS

① **CHAPTER SUMMARY** – This section contains a paragraph summary of the corresponding chapter in *The Sassafras Science Adventures Volume 4: Earth Science*.

📖 **ENCYCLOPEDIA READINGS** – This section contains possible reading assignments from:

📖 *Basher Science Planet Earth* (best for 1st through 2nd grades as a read aloud)

📖 *Usborne Children's Encyclopedia* (best for 2nd through 4th grades)

📖 *Discover Science Weather* (best for 2nd through 4th grades)

📖 *Usborne Encyclopedia of Planet Earth* (best for grades 4th through 6th grades)

You can choose to read the assignments to the students or have the students read them on their own.

📖 **ADDITIONAL LIVING BOOKS** – This section contains a list of books that coordinate with what is being studied in the chapter. You can check these books out of your local library.

NOTEBOOKING

⇒ **SCIDAT LOGBOOK INFORMATION** – This section has the information that the students could include in their SCIDAT logbook. It contains possible earth science information the student could

include on their earth science record sheets. The students may or may not have all the same information on their notebooking sheets, which is fine. You want their SCIDAT logbook to be a record of what they have learned. The information included is meant for you to use as a guide as you check their work. For more information about notebooking, please read the following articles:

🔗 What is notebooking? – <http://sassafrasscience.com/what-is-notebooking/>

🔗 How to use notebooking with different ages – <http://sassafrasscience.com/notebooking-with-different-ages/>

- 🔗 **VOCABULARY** – This section includes vocabulary words that coordinate with each chapter. If your students are older, I recommend that you have them create a glossary of terms using a blank sheet of lined paper or the glossary sheets provided in *The Official Sassafras Student SCIDAT Logbook: Earth Science Edition*. You can also have them memorize these words and their definitions.

SCIENTIFIC DEMONSTRATIONS OR OBSERVATIONS

- ☑ **SCIENTIFIC DEMONSTRATION** – This section includes a list of materials, the instructions, and an explanation for a scientific demonstration that coordinates with the chapter. A blank lab report sheet is provided for you in the Appendix on pp. 96-96 if you wish your students to write up the demonstration. If your students are in fourth grade or higher, I recommend that they complete at least one of these lab reports for this course.

MULTI-WEEK PROJECTS OR ACTIVITIES

- ✂ **ADDITIONAL ACTIVITIES** – This section contains additional activities that go along with the chapter. There are multi-week projects, which will be done over several chapters, and activities that coordinate with that specific chapter. Pick and choose the activities that interest you and your students.

MEMORIZATION

- 🔗 **COPYWORK AND DICTATION** – This section contains a short copywork passage and a longer dictation passage for you to use. Some students may use the shorter passages for dictation or the longer passages for copywork. Feel free to tailor the selections to your students' abilities. You can also use the selections as memory work assignments for the students.

ADDITIONAL MATERIALS

In the back of this guide, there are a few additional materials for your convenience. The first is a glossary of terms, which you can use with your students as they define the words for each chapter. After that, you will find a set of eight simple quizzes that you can use with your students to verify if you students are retaining the material.

A WORD ABOUT THE SCIDAT LOGBOOK

The SCIDAT logbook is meant to be a record of your students' journey through their study of earth science. It is explained in more detail in Chapter 1 of this guide. You can choose to make your own or purchase a pre-made logbook from Elemental Science. *The Official Sassafras SCIDAT Logbook: Earth Science Edition* has all the pages the students will need to create their own logbooks. Each one has been attractively illustrated for you so that you don't have to track down pictures for the students to use. This way, the students are able to focus on the information they are learning.

FINAL THOUGHTS

As the author and publisher of this curriculum, I encourage you to contact me at info@elementalscience.com with any questions or problems that you might have concerning *The Sassafras Guide to Earth Science*. I will be more than happy to answer them as soon as I am able. I hope that you and your students enjoy your journey through the world of Earth Science with the Sassafras twins.

BOOK LIST

MAIN TEXT

The following book is required reading for the activities suggested in this guide.

- ① *The Sassafras Science Adventures Volume 4: Earth Science*

ENCYCLOPEDIA READINGS

The following encyclopedias have suggested pages scheduled in this guide. I recommend that you choose the one that best suits the age and ability of your students.

- 🔍 *Basher Science Planet Earth* (best for 1st through 2nd grades as a read aloud)
- 🔍 *Usborne Children's Encyclopedia* (best for 2nd through 4th grades)
- 🔍 *Discover Science Weather* (best for 2nd through 4th grades)
(NOTE – *The Discover Science Weather* book has been known to go in and out of print. However, it is still one of the best options for elementary students, which is why we included it as an option.)
- 🔍 *Usborne Encyclopedia of Planet Earth* (best for grades 4th through 6th grades)

RECOMMENDED RESOURCES

The following book will be very beneficial to have when completing this course. It contains all the pages and pictures your students will need to record their journey through Earth Science.

- 🔖 *The Official Sassafras Student SCIDAT Logbook: Earth Science Edition*

View all the links mentioned in this guide in one place and get a digital copy of the templates, glossary, and quizzes by visiting the following page:

- 🔗 <http://sassafrasscience.com/volume-4-links/>

ADDITIONAL LIVING BOOKS LISTED BY CHAPTER

CHAPTER 1

- 📖 *On the Same Day in March: A Tour of the World's Weather* by Marilyn Singer and Frane Lessac
- 📖 *Weather and Climate: Geography Facts and Experiments* (Young Discoverers Series) by Barbara Taylor

CHAPTER 2

- 📖 *Wind* by Marion Dane Bauer and John Wallace
- 📖 *Feel the Wind* (Let's-Read-and-Find... Science 2) by Arthur Dorros
- 📖 *The Wind Blew* by Pat Hutchins
- 📖 *Like a Windy Day* by Frank Asch

CHAPTER 3

- 📖 *Tornadoes!* by Gail Gibbons
- 📖 *Tornadoes* by Seymour Simon
- 📖 *Tornado Alert* (Let's-Read-and-Find-Out Science 2) by Franklyn M. Branley and Giulio Maestro
- 📖 *A Grassland Habitat* (Introducing Habitats) by Kelley Macaulay and Bobbie Kalman
- 📖 *Grasslands* (About Habitats) by Cathryn P. Sill

DEMONSTRATION SUPPLIES LISTED BY CHAPTER

CHAPTER 1: OBSERVING THE WEATHER

No supplies needed.

CHAPTER 2: ANEMOMETER

5 Paper cups

4 Straws

6" to 8" Thin wooden dowel (about the diameter of a pencil)

Tape

Hole Punch

Pencil

CHAPTER 3: TORNADO IN A BOTTLE

2 Soda bottles

Duct tape

Water

CHAPTER 4: RAIN GAUGE

Plastic water bottle

Duct tape

Permanent marker

Small marbles or rocks

Ruler

CHAPTER 5: STORM IN A GLASS

Clear glass jar

Jar lid or bowl

Ice cubes

Warm water

CHAPTER 6: SNOWFLAKES

Glass Jar

2 Pipe cleaners

Pencil

Borax (NOTE – This can be found in the laundry detergent aisle of the grocery store.)

Water

CHAPTER 7: EXPANDING ICE

Small paper cup

Water

CHAPTER 8: DAY OR NIGHT

A globe (or large ball)

A desk lamp

A Post-it tab (or another type of removable marker)

CHAPTER 9: DROUGHT CRUST

Dark construction paper (black or brown)

Water

Salt

CHAPTER 10: BAROMETER

Clear plastic cup

Soda bottle

Blue food coloring

Water

Marker

CHAPTER 11: CLOUD IN A BOTTLE

Hot water

Glass jar with lid

Crushed ice

Match

CHAPTER 12: WATER CYCLE IN A BAG

Plastic baggie

Warm water

Tape

CHAPTER 13: SOIL TEST

Soil sample

Coffee filter

Rubber band

2 Cups

Distilled water

Aquarium test strip (one that tests the pH and nitrate levels)

CHAPTER 14: MOVING CURRENTS

Water

Cup

Ice

Bowl

Blue food coloring

CHAPTER 15: OCEAN FLOAT

2 Eggs

2 Tall Cups

Water

Salt

CHAPTER 16: GROUNDWATER FILTER

Plastic bottle

Cotton balls

Gravel
Sand
Soil
Duct tape
Water

CHAPTER 17: RIVER EROSION

Flour
Aluminum pan
Eye dropper
Water

CHAPTER 18: RECYCLING PLAN

Recycling bins

PROJECT AND ACTIVITY SUPPLIES LISTED BY CHAPTER

The projects and activities listed in this guide are optional, so you may not need all of these supplies. However, this list has been provided for your convenience. If you do decide to do these projects, in addition to the items listed each week you will need clear tape, glue, scissors, a variety of paint colors, and a set of markers.

CHAPTER 1

No additional supplies needed.

CHAPTER 2

*Kite
Straw
Paper
Paint
Microscope slides
Vaseline*

CHAPTER 3

*Straw
Dirt or dust
Shallow pan*

CHAPTER 4

*Clear glass
Shaving cream
Blue food coloring
Water
Paper
Microscope slides*

CHAPTER 5

*Brown paper bag
Balloon
Fluorescent light bulb*

CHAPTER 6

*Box of cornstarch
Can of shaving cream
Epsom salts
Water
Food coloring
Paper
Microscope slides*

CHAPTER 7

*Air dry clay
Brown pipe cleaners
Felt (green, red, orange, and/or yellow)
Clear glass
Crushed ice*

Salt

CHAPTER 8

*Flour
Vegetable oil
Sand
Microscope slides*

CHAPTER 9

Materials will vary based on how the students choose to represent an oasis.

CHAPTER 10

*White paint
Cotton balls
Blue construction paper*

CHAPTER 11

*Cotton balls
Blue construction paper*

CHAPTER 12

*Dry ice
A shallow container
Water*

CHAPTER 13

No additional supplies needed.

CHAPTER 14

*Plastic bottle
Water
Blue food coloring
Oil
Duct tape
Coral sample*

CHAPTER 15

*Corn syrup
Dish soap
Water
Oil
Rubbing alcohol
Black, purple, and blue food coloring
Plastic water bottle*

CHAPTER 15 (continued)

Opaque liquid soap that contains glycol stearate (such as the Softsoap brand)

Duct tape

CHAPTER 16

Sponge

Bar of soap, like Ivory

CHAPTER 17

Materials will vary based on how the students choose to represent the three stages of a river.

CHAPTER 18

No additional supplies needed.

CHAPTER 2: O-O-O-O-KLAHOMA

CHAPTER SUMMARY

The chapter opens with Cecil and Tracey making it back to the market, where they pay for the groceries. Tracey takes off on the zip lines to their first earth science location, hoping that she will find Blaine there. Instead, Tracey finds her old local expert, Doc Hibbel, and meets her new expert, Sylvia Thunderstone, as she learns about wind and Lucille the storm-chasing vehicle. We then flash over to Blaine, who is waking up in the Man with No Eyebrows's basement. The MWNE puts him in the Forget-O-Nator, planning to erase his memory. Blaine thinks quickly and uses his phone to tase the inside of the machine. Meanwhile, Tracey learns the meaning behind Sylvia's last name and a bit more about global wind patterns. The chapter ends as the tornado sirens sound in the Cowboy Hall of Fame.

SUPPLIES NEEDED

Demonstration	Projects and Activities
<ul style="list-style-type: none"> • 5 Paper cups, 4 Straws, 6" to 8" Thin wooden dowel, Tape, Hole punch, Pencil 	<ul style="list-style-type: none"> • Kite, Straw, Paper, Paint • Microscope slides, Vaseline

OPTIONAL SCHEDULE FOR TWO-DAYS-A-WEEK

Day 1	Day 2
<ul style="list-style-type: none"> <input type="checkbox"/> Read the section entitled "Where the wind..." of Chapter 2 in <i>SSA Volume 4: Earth Science</i>. <input type="checkbox"/> Fill out an Earth Science Record Sheet on SL pg. 9 on wind. <input type="checkbox"/> Add weather to the Weather Information Sheet on SL pg. 8. <input type="checkbox"/> Go over the vocabulary words and enter them into the Earth Science Glossary on SL pg. 95. <input type="checkbox"/> Do the copywork or dictation assignment and add it to the Earth Science Notes on SL pg. 13. 	<ul style="list-style-type: none"> <input type="checkbox"/> Read the section entitled "Easterlies, Westerlies..." of Chapter 2 in <i>SSA Volume 4: Earth Science</i>. <input type="checkbox"/> Fill out an Earth Science Record Sheet on SL pg. 10 on global wind patterns. <input type="checkbox"/> Add facts to the Climate Information on SL pg. 7; Add weather to the Weather Information Sheet on SL pg. 8. <input type="checkbox"/> Do the demo entitled "Anemometer"; write information learned on SL pg. 13. <input type="checkbox"/> Work on one or all of the multi-week activities.

OPTIONAL SCHEDULE FOR FIVE-DAYS-A-WEEK

Day 1	Day 2	Day 3	Day 4	Day 5
<ul style="list-style-type: none"> <input type="checkbox"/> Read the section entitled "Where the wind..." of Chapter 2 in <i>SSA Volume 4: Earth Science</i>. <input type="checkbox"/> Fill out an Earth Science Record Sheet on SL pg. 9 on wind. <input type="checkbox"/> Add weather to the Weather Information Sheet on SL pg. 8. 	<ul style="list-style-type: none"> <input type="checkbox"/> Read the section entitled "Easterlies, Westerlies..." of Chapter 2 in <i>SSA Volume 4: Earth Science</i>. <input type="checkbox"/> Fill out an Earth Science Record Sheet on SL pg. 10 on global wind patterns. <input type="checkbox"/> Add facts to the Climate Information on SL pg. 7. 	<ul style="list-style-type: none"> <input type="checkbox"/> Read one or all of the assigned pages from the encyclopedia of your choice; write narration on the Earth Science Notes Sheet on SL pg. 13. <input type="checkbox"/> Do the demo entitled "Anemometer"; write information learned on SL pg. 13. 	<ul style="list-style-type: none"> <input type="checkbox"/> Read one of the additional library books. <input type="checkbox"/> Go over the vocabulary words and enter them into the Earth Science Glossary on SL pg. 95. <input type="checkbox"/> Choose one of the activities for the week to do; fill out the project record sheet on pg. 15. 	<ul style="list-style-type: none"> <input type="checkbox"/> Do the copywork or dictation assignment and add it to the Earth Science Notes sheet on SL pg. 13. <input type="checkbox"/> Add weather to the Weather Information Sheet on SL pg. 8. <input type="checkbox"/> Work on one or all of the multi-week activities.

SCIENCE-ORIENTED BOOKS

LIVING BOOK SPINE

- 📖 Chapter 2 of *The Sassafras Science Adventures Volume 4: Earth Science*

OPTIONAL ENCYCLOPEDIA READINGS

- 📖 *Basler Science Planet Earth* pp. 86-87 (*Wind*)
- 📖 *Usborne Children's Encyclopedia* pg. 15 (*Section on Windy Weather*)
- 📖 *Discover Science Weather* pp. 16-17 (*Blowing Around*)
- 📖 *Usborne Encyclopedia of Planet Earth* pg. 84 (*Windstorms – Intro and Coriolis effect*)



ADDITIONAL LIVING BOOKS

- 📖 *Wind* by Marion Dane Bauer and John Wallace
- 📖 *Feel the Wind* (Let's-Read-and-Find... Science 2) by Arthur Dorros
- 📖 *The Wind Blew* by Pat Hutchins
- 📖 *Like a Windy Day* by Frank Asch

NOTEBOOKING (SCIDAT LOGBOOK INFORMATION)

This week, you can have the students begin to fill out the Climate Sheet for the Oklahoman Prairie. They can also fill out the first part of their weather record sheets and the logbook sheets for wind and global wind patterns. Here is the information they could include:

CLIMATE SHEETS

AREA MAP – Have the students color the region where the Great Plains prairie is found. Have the students put a star on Oklahoma City. (*See map for answers.*)

CLIMATE INFORMATION – This week, the students could include the following:

- ⇒ *The average temperature on the prairie can be as low as -20°F in the winter and as high as 100°F in the summer, but the average is around 20°F in January and around 70°F in July.*
- ⇒ *The average rainfall is between ten and thirty inches, but most of that occurs in the summer months.*



INTERESTING FACTS – Answers will vary.

OTHER TYPES – This week, the students could include the following:

- ⇒ *There are two types of grasslands: temperate and tropical.*
- ⇒ *The savannah, which is a tropical grassland, for instance, has a hot wet season that lasts for a few months and a slightly cooler dry season that lasts for about eight months.*
- ⇒ *The temperate prairie has cold winters and warm summers, just like the steppes of Europe and the pampas of South America.*

WEATHER RECORD SHEETS

Have the students record the weather from your area or from Oklahoma City over the week.

EARTH SCIENCE RECORD SHEETS

WIND

INFORMATION LEARNED

- ⇒ *Wind is the movement of atmospheric gases on a large scale.*

- ⇒ *Wind is the movement of air.*
- ⇒ *We describe wind using two factors – speed and direction.*
- ⇒ *Wind is caused by the uneven heating of the surface of the Earth. The surface is a mixture of land and water that each absorb heat from the sun's rays in differing amounts.*
- ⇒ *During the day, the sun heats up the surface of the Earth and the air around it. The air over land heats up faster than the air over the water. Also, the air over places that receive direct sunlight heats up faster than the air over land that receives indirect sunlight. Since the warm air weighs less, it rises, a change in air pressure occurs, and the cool air moves in to replace the space where the warm air was. This movement of warm and cool air causes wind.*
- ⇒ *At night, the air over land cools more quickly than the air over water, so wind is created once more.*
- ⇒ *When there is lots of wind, we can harness the power of the wind and turn it into energy that we can use. This is known as wind power. Today, we use wind power to generate electricity, but in the past, it was used to pump water on the prairies.*



GLOBAL WIND PATTERNS INFORMATION LEARNED

- ⇒ *The movement of air around the globe is known as the global wind patterns. On a large scale, the winds that circle the Earth are created because the land at the equator is heated more than the land at the poles.*
- ⇒ *Another factor that affects the winds around the globe is the spinning motion of the earth. This is known as the Coriolis Effect.*
- ⇒ *There are three main types of global winds – the easterlies, westerlies, and trade winds*
 1. *Trade winds – These winds are found near the equator. They flow north or south towards the equator and curve west due to the spin of the Earth.*
 2. *Prevailing westerlies – These winds are found in between the equator and the poles. They blow slightly towards the poles, from the west to the east.*
 3. *Polar easterlies – These winds are found near the north and south poles. They blow up to the poles and curve from east to west.*
- ⇒ *A jet stream is a river of fast-moving air about five to nine miles above the Earth's surface. They form at the boundaries where the polar and temperate or tropical air meet. Because of the effect of the rotation of the Earth, the jet streams flow from west to east in a wave-like manner.*



VOCABULARY

Have the older students look up the following terms in the glossary in the Appendix on pp. 109-110 or in a science encyclopedia. Then, have them copy each definition onto a blank index card or into their SCIDAT logbook.

- 📖 **WIND** – The movement of air in the atmosphere created by temperature differences.
- 📖 **GUST** – A short burst of wind moving at a high speed.

SCIENTIFIC DEMONSTRATION: ANEMOMETER

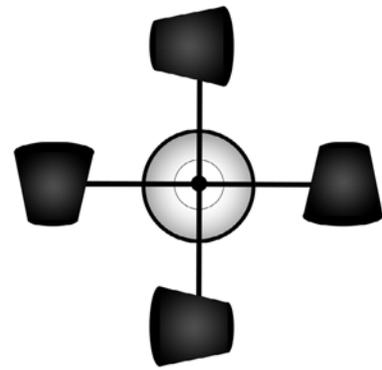
MATERIALS

- ☑ 5 Paper cups
- ☑ 4 Straws
- ☑ 6" to 8" Thin wooden dowel (about the diameter of a pencil)
- ☑ Tape

- ☑ Hole punch
- ☑ Pencil

PROCEDURE

1. Have the students punch a single hole in the side of each of four cups, about halfway down from the rim. Then, on the fifth cup, have them punch two sets of holes directly across from each, other about half an inch down from the rim. The holes on the fifth cup should line up to create a cross through the middle of the cup. Finally, use a pencil to poke a hole in center of the bottom of the fifth cup.
2. Next, insert a straw into the four cups with the single hole and secure it in place. Then, insert the four straws in the holes on the side of the fifth cup so that the cups are tilted sideways and the four straws meet in the center of the fifth cup. Use the tape to secure the four straws in an “x”. (See the diagram for a visual reference.)
3. Now, push the dowel rod into hole in the bottom of the fifth cup. The students have now created a rudimentary anemometer.
4. Head outside to test their creation. Once outside, place the anemometer in dirt or hold it in your hand. Their device should stand upright, but still be free to turn in the wind.



EXPLANATION

The students should see that when the wind blows, their anemometer turns. They should also observe that the faster the wind blows, the quicker the device turns. An anemometer is designed to measure wind speed and it a common instrument found at a weather station.

TAKE IT FURTHER

Have the students make a simple wind vane, which is a device to measure wind direction. A light ribbon or streamer will work for this. Simply have them hold one end of the ribbon in one hand and hold that hand above their heads. They can observe which way the ribbon moves in the breeze to determine which direction the wind is blowing.

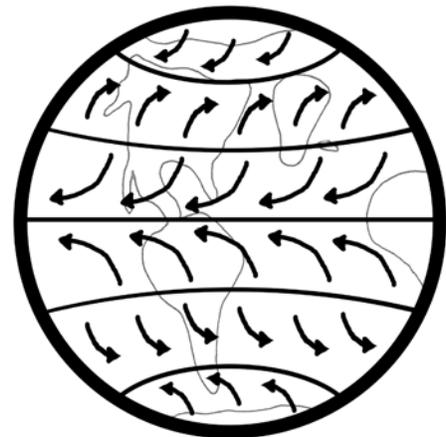
MULTI-WEEK PROJECTS AND ACTIVITIES

MULTI-WEEK PROJECTS

- ✂ WEATHER POSTER – Have the students add to their weather poster this week. (*Weather template pictures can be found in the Appendix on pg. 8.*)

ACTIVITIES FOR THIS WEEK

- ✂ FLY A KITE – If you have an exceptionally windy day, have the students head outside to fly a kite.
- ✂ WIND PATTERNS – Have the students draw and label the three main wind patterns on the globe. You can use the map template found in the Appendix on pg. 106. See the accompanying image for the answers.
- ✂ WIND PAINTING – You will need a straw, paper, and paint for each student. Have the students place a drop of paint at one end of their paper. Then, have them use the straw to blow the paint into a design!
- ✂ MICROSCOPE WORK – Have the students look at what is found in the wind under the microscope. They can do this by covering a slide with a thin layer of Vaseline before setting the slide out on a windy day. Prop the slide up on



a chair, so that it will be in the path of the wind. Wait about ten minutes before bringing the slide inside to view it under the microscope. Have the students complete one of the microscope worksheets found on pp. 97-98 of the Appendix.

MEMORIZATION

COPYWORK/DICTATION

☞ COPYWORK SENTENCE

Wind is the movement of air. We describe wind using two factors – speed and direction.

☞ DICTATION SELECTION

Wind is the movement of atmospheric gases on a large scale. It is caused by the uneven heating of the surface of the Earth. We describe wind using two factors – speed and direction. The movement of air around the globe is known as the global wind patterns.

NOTES

QUIZZES

EARTH SCIENCE QUIZ ANSWERS

QUIZ #1

1. Warm, cold
2. B, C, A
3. D
4. B
5. F0, F5
6. C

QUIZ #2

1. Tropical, temperate
2. Equator
3. Air, condenses, water vapor, micro-droplets, bigger, gravity
4. C
5. B
6. D

QUIZ #3

1. Winter
2. A
3. C
4. below, refreezes
5. D
6. Fall, winter, spring, summer

QUIZ #4

1. D
2. Center of the Earth (or equator), north, south
3. Answers can include: hot, dry, dusty, or no rain
4. C
5. B
6. A

QUIZ #5

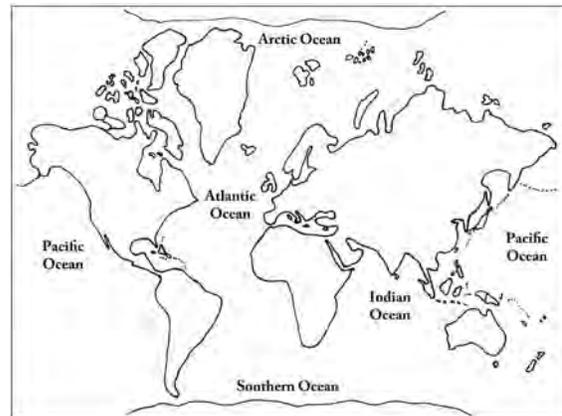
1. A
2. higher, less
3. C
4. D
5. B, D, C, A

QUIZ #6

1. 5, 2, 4, 1, 3
2. D
3. True
4. No a true

QUIZ #7

1. D
2. C
3. D
- 4.
5. Answers are on the map below.



QUIZ #8

1. Warm, cool
2. D
3. B
4. C
5. 3, 1, 2
6. A

EARTH SCIENCE QUIZ # 1

CHAPTERS 2 AND 3

1. Temperate grasslands, like the prairies of Oklahoma have (warm / cold) summers and (warm / cold) winters.

2. Match the global wind pattern with its description.

Trade winds _____

A. These winds are found near the north and south poles. They blow up to the poles and curve from east to west.

Prevailing westerlies _____

B. These winds are found near the equator. They flow north or south towards the equator and curve west due to the spin of the Earth.

Polar easterlies _____

C. These winds are found in between the equator and the poles. They blow slightly towards the poles from the west to the east.

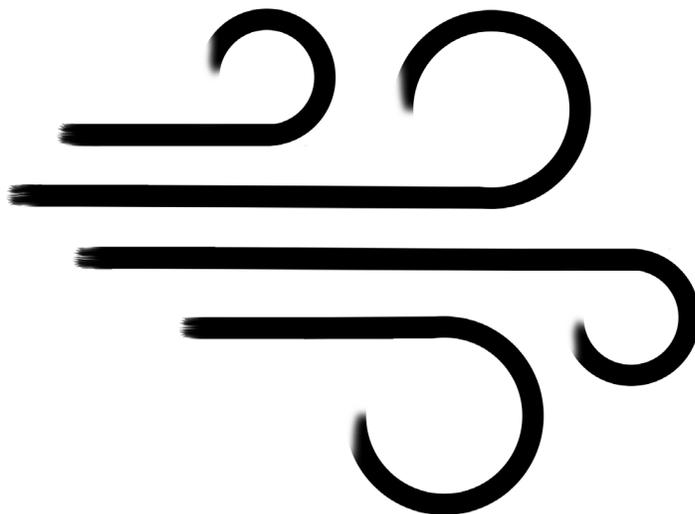
3. Wind is _____.

A. The movement of atmospheric gases on a large scale

B. Described by using two factors – speed and direction

C. Caused by the uneven heating of the surface of the Earth

D. All of the above



4. Tornadoes form _____.

- A. Normally in the winter months
- B. As two currents spiral and spin around each other
- C. From weak storms with light rain
- D. All of the above

5. The Fujitsu scale is used to describe the strength of a tornado. It ranges from F0 to F5, with _____ being the weakest tornado and _____ being the strongest tornado.

6. A downburst is _____ often associated with a thunderstorm.

- A. A weak downward current of air
- B. A strong upward current of air
- C. A strong downward current of air
- D. A weak upward current of air