Consult 4 Kids Lesson Plans

Component:	English Language Arts
Grade Level:	2nd Grade
Lesson Title:	Friend or Foe Chart
Focus:	Fluency, Vocabulary

Materials:	
Information about Water—Friend or Foe	Fact Cards
Vocabulary Notebook	Chart Paper

Opening

For the next several days we are going to learn more about the four elements of Earth, water, wind/air, and fire. These natural phenomena can be both friend and foe. We will learn more about each of them and also how they work together. We will focus on vocabulary development and also asking questions and summarizing.

Gain prior knowledge by asking students the following questions

What is the difference between the words friend and foe? (on your side, supporter, likes you and enemy, dangerous, harmful)

How is it possible that something like water can be both friend and foe?

Give examples of a friendly use of water.

Give examples of water as a foe.

Content (the "Meat")

Today's Lesson

Today we are going to consider how water is both friend and foe. We are going to learn some additional information about water and then we are going to look at some facts about water and decide whether the fact represents water as a friend or water as a foe. Small groups will create a chart labeled Friend – Foe and list the facts in the appropriate column and illustrate at least two of those facts.

*Activity → Teachable Moment(s) *throughout*

Fluency

Repeated Reading is a key strategy that research has found to be incredibly effective in building fluency. Repeated Reading means exactly that—students read and re-read the same passage, practicing not only the unique words but the sight words that make up of 65% of the written words. For reading passages see information in the side note.

Repeated Reading Process

1. Give student a passage to read at his/her appropriate reading level. It would be better to be a passage that is easily read than one that they are struggling with. Remember that they are practicing the sight words and phrases that make up about 65% of the text.
2. Have students read for 1 minute and count the number of words read in the minute.
3. Record the number of words read on a chart.
4. For 8 days practice the SAME passage, using a different practice activities listed in the lesson plan.
5. Have students read the passage for 1 minute and then count the words read. Record the number of words next to the first number recorded.
6. Celebrate success.
7. Students should stay on the same passage level for 4-6 weeks and then transition

Repeated Reading passages can be found at:

www.readinga-z.com (This is a subscription fee site).

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Select a book that is at the child's reading level and have them select 250-300 words to practice (even if they move on with the story).

students to the next level.

Fluency Activity of the Day

Speed Reading: Have students form a circle. Number them of, 1, 2, 1, 2, 1, 2 and so forth. Having the students stay in the circle, have the twos move to stand in front of the person who said "1" on his/her left. Give each student an opportunity to read aloud to his/her partner for 1 minute. Have one of the circles move and repeat the process. Have the other circle move and repeat for the third time.

Vocabulary

Word for Today: erosion

Description: Erosion is a word that refers to a process in which things are slowly, over time, and often with the power of water, destroyed or removed. For instance, if you were to create a channel or ditch in the ground and begin to run water down it, before long the ditch or channel would be wider as the flowing water soaked up some of the dirt on the edges. Another way to say erosion is "wearing away". If you have ever been standing on the beach in the sand, when the wave hits your feet, some of the sand is eroded or moved away from your feet.

Ask students if they have ever seen water working to erode something, usually dirt, away. Ask them why flowing water can be so powerful.

Review yesterday's word--ignite

Complete the Vocabulary Notebook for today. Students may work in pairs if this is helpful

It is important to review academic math vocabulary often throughout the day.

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation).

Vocabulary Notebooks can be made from ½ of a composition book.

Vocabulary Notebook Sample:

New Word	My Description
erosion	Process of water and wind wearing away at the Earth
Personal Connection	**Drawing**
The Grand Canyon was made by erosion of water and wind.	

Activity

Water—Friend or Foe Chart

Students will have an opportunity to work in pairs to determine whether certain facts/information about water would be classified as water as friendly or water as not friendly (foe) to people. They will use the information that they review today, the water facts cards, and the information they received in lessons #1 and #3.

Directions:

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

1. Review the material with students as a large group. 2. Have them read and discuss the material for today and days #1 and #3. 3. Divide students into pairs, giving each a piece of chart or poster paper. 4. Give each group a copy of the written material, or post the information on a chart for all to see. 5. Have students write the fact on one side of the chart or the other, depending on whether they think the fact is friend or foe. 6. Pairs should illustrate at least 2 of the facts. 7. Pairs should share their chart with at least one other group.	Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief Three Whats Ask the following three what questions: What was your key learning for the day? What opportunities might you have to apply this key learning in the "real world"? What advice would you give to a "new" student getting ready to do this activity?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today with the information about water, friend or foe.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Water—Friend and Foe

"We use water every day—for drinking, for watering our lawns and gardens, for recreation, and for many uses that we don't necessarily see but which are critical to our lives. Large quantities of water are used to generate power and to cool electricity-generating equipment. Water is used for irrigation, aquaculture, and for many industrial processes and commercial uses. Our nation's underground and surface waters are vitally important to our everyday life."[1]

Some of the most powerful forces of destruction also involve water. Tsunamis, huge ocean waves that are caused by earthquakes or other movement under the sea, are some of the most destructive. There are several types of earthquakes and generally only one type of earthquake will cause a tsunami. Think about a slinky. When you stretch a slinky out and let it go, all of the movement is "flat". This is one type of earthquake that can occur and you would not expect a tsunami. If you were to take that same slinky and keeping flat on a table make it move back and forth, this would represent a second type of earthquake where this is shaking and the feeling of moving back and forth. With this type of earthquake you would not expect a tsunami either. Now, if you take that same slinky, hold one end to the table and then flick the free end up and down you would demonstrate the third type of earthquake. This is what happens when the Earth's crust pushed up suddenly and the water rises as well. This rise in water creates the tsunami. The wave begins to grow taller and as it does, the water is pulled back from the coast to backfill the gap in the water as the wave grows higher. When the wave reaches land it can be hundreds of feet high and will crash down on the coast and the towns and cities that are on the coast. Tsunamis are most likely to occur in what is called the Ring of Fire which follows the rim of the Pacific Ocean from the tip of South America around to Australia.

Water is also powerful as it moves from place to place. This movement can be used to create hydro-electric power which is very helpful; but it can also cause flooding and a great deal of damage. Moving water is what created the Grand Canyon in a process called erosion. Moving water is a home to many fish and other life, and it also serves as a transportation highway for many products. Polluted water is harmful to humans, plants and animals.
Water can be both friend and foe. However, without water, life on Earth would end.

[1] Credit: USDA, Natural Resources Conservation Service

Consult 4 Kids Lesson Plans

Component:	English Language Arts
Grade Level:	2nd Grade
Lesson Title:	Wind and Air Twister in a Bottle
Focus:	Fluency, Vocabulary

Materials:

Information about Four Elements (attached to this lesson plan)

Fact Cards (attached to the lesson plan)

Vocabulary Notebook

IMPORTANT: At least one hour before the activity, prepare the bottles for the Twister Activity

Opening

State the objective

For the next several days we are going to learn more about the four elements of Earth, water, wind/air, and fire. These natural phenomena can be both friend and foe. We will learn more about each of them and also how they work together. We will focus on vocabulary development and also asking questions and summarizing.

Gain prior knowledge by asking students the following questions

After the lesson we had yesterday, what do you know about water that you didn't know before?

Can you name the seven continents?

What are some of the ways that water is helpful? Is not helpful?

If you could interview a person who works for the water department, what would you ask them?

Content (the "Meat")

Today's Lesson

Today we are going to review factual information about one of the four elements—wind/air. At the end of the time we are going to create a whirlpool in a bottle. This is much like a twister or tornado or a hurricane looks. A tornado is strong winds that occur over land and act like a funnel sucking up dirt and debris. A hurricane is made up of strong winds and rain and usually develops over warm water that is sucked up into the eye of the hurricane.

*Activity → Teachable Moment(s) *throughout*

Fluency

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Repeated Reading Process

1. Give student a passage to read at his/her appropriate reading level. It would be better to be a passage that is easily read than one that they are struggling with. Remember that they are practicing the sight words and phrases that make up about 65% of the text.
2. Have students read for 1 minute and count the number of words read in the minute.
3. Record the number of words read on a chart.
4. For 8 days practice the SAME passage, using a different practice activities listed in

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Check with the school day to see if the textbook has these passages (most do).

Select a book that is at the child's reading level and have them select 250-300 words to

the lesson plan.

5. Have students read the passage for 1 minute and then count the words read. Record the number of words next to the first number recorded.
6. Celebrate success.
7. Students should stay on the same passage level for 4-6 weeks and then transition students to the next level.

practice (even if they move on with the story).

Fluency Activity of the Day

All Read: During this activity, all of the students read aloud at the same time. Even if the students are not on the same passage, reading aloud will help them slow down and really practice each word. While students are reading, walk around. Touch a student on the shoulder to indicate that they should begin reading aloud so you can hear them.

Vocabulary

Word for Today: global

Description: Global is a word that refers to worldwide or all over the world. When the Earth is represented on a ball-shaped map, that map is called a globe. A globe is a sphere. Global is an adjective that means overall and relating to a whole system.

It is important to review academic math vocabulary often throughout the day

Brainstorm with students things that they believe are global (communication—cell phones, weather, things that people buy that are created in other countries, etc.)

Ask students to share their thoughts with another student. about what it means to be global or if they were to grow up and work with a company that was global what that would mean for them.

Review yesterday's word--evaporate

Complete the Vocabulary Notebook for today. Student may work in pairs if this is helpful

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation)

Vocabulary Notebook Sample:

New Word	My Description
global	Something that is world-wide, covering all parts of the world
Personal Connection	**Drawing**
The internet is global—no matter where you live you have access to it.	

Vocabulary Notebooks can be made from ½ of a composition book

Activity

Twister In A Bottle

Purpose: To create a vortex (a circular pattern of flow around a center of low pressure, for students to see so they can better understand a tornado and/or hurricane. When water drains in a sink it creates a vortex.

Materials:

- 2 clear plastic liter soda bottles for each group
- Water

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

• 1 " diameter metal or plastic flat washer with a ¼ " opening • Black electrical tape • White glue Directions: • Divide students into pairs or small groups • Fill one of the bottles a little over ½ full with water—be sure to dry the mouth of the bottle • Place a thin line of glue around the mouth of the bottle and place the washer on top of it, centering it over the opening. • Place a thin line of glue over the mouth of the second bottle and place it upside down on the washer • Using electrical tape, carefully wrap and seal the connection of the two bottles, wrapping the necks of the bottle to ensure that they are well connected. IMPORTANT: Wait at least one hour before beginning the activity. • Holding the bottle with water in it in your hand, slowly flip the bottle over. Observe what happens • Predict how you can get the water in the top bottle to flow faster into the bottom bottle • Record your responses (spinning the bottle will make the water flow faster) • Try the suggestions made by the students • Try spinning the bottle • Ask: Why does spinning make the water flow faster? • Ask: How does this compare to what happens in a tornado or a hurricane.	Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief Three Whats Ask the following three what questions: What was your key learning for the day? What opportunities might you have to apply this key learning in the "real world"? What advice would you give to a "new" student getting ready to do this activity?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today with the information about wind/air.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one

particular way which was new to them. (Tweak)

- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Modification:

You may want to make only two or three of the twister bottles and have children work in larger groups rather than having them work in pairs or groups of 3.

Wind/Air

Facts about wind/air

- Wind moves moisture and heat around the world.
- Wind moves as it warms up and cools down.
- There is a global wind pattern. This pattern determines how the wind blows.
- We measure the speed of the wind, usually in miles or kilometers per hour.
- Tornados are formed as part of thunderstorms and are large, spinning funnel-shaped clouds that touch the ground moving about 30 miles per hour.
- The funnel of a tornado creates an updraft and sucks up almost anything it comes into contact with. It works in much the same way as you drinking from a straw, sucking up the liquid that the straw comes into contact with.
- Most tornadoes occur in what has been called Tornado Alley which includes Texas, Oklahoma, Kansas, Nebraska, Iowa, and Colorado, mainly and is bordered by Minnesota, Wyoming, and South Dakota.
- About 750 tornados occur in the United States each year.
- Hurricanes are a combination of severe winds and rain that develop above the warm water in the summer. Instead of sucking up dirt like a tornado, a hurricane sucks up moisture.

Wind/Air Fact Cards

Wind moves moisture and heat around the world.	Wind moves as it warms up and as it cools down.
There is a global wind pattern which determines how the wind will blow.	We measure the speed of the wind in miles or kilometers per hour.
Tornados are formed as part of a thunderstorm	Tornados are large, spinning, funnel-shaped clouds that touch the ground moving at over 30 miles per hour.
The tornado forms a funnel that causes a huge updraft and suck up almost anything it comes into contact with.	A tornado works much like we do when sucking liquid up in a straw.
Most tornados happen in Tornado Alley which includes Texas, Oklahoma, Kansas, Nebraska, Iowa, and Colorado.	Minnesota, Wyoming, and South Dakota border Tornado Alley.

About 750 tornados a year occur in the United States.	Hurricanes are a combination of severe winds that develop above the warm water in the Atlantic in the summer.
Katrina was the United States worst hurricane, causing tremendous damage to New Orleans and other Southern cities.	

Consult 4 Kids Lesson Plans

Component:	English Language Arts
Grade Level:	2nd Grade
Lesson Title:	Wind In Action
Focus:	Fluency, Vocabulary

Materials:

Information about Wind-Air, Friend or Foe
Fact Cards
Vocabulary Cards
Straws, paint, and construction paper

Opening

State the objective

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Gain prior knowledge by asking students the following questions

Ask students what they learned yesterday about water and how it can be both friend and foe.

Ask students: When is a time that you were afraid of wind? What happened? When is a time that you were enjoying the wind? What was the wind like that you enjoyed?

We all know that air to breathe is very important. How is it that fish don't need air to live? (It is the oxygen that we need and so do fish. Fish get the oxygen from the water, we get it from the air.)

Content (the "Meat")

Today's Lesson

Today we are going look closely at wind/air and think about when this is friendly and when it is a foe. There is an old story about a contest between the wind and the sun. In this contest each was to get a man to take off his coat. The wind blew and blew, only causing the man to hold on to his jacket more tightly. The sun on the other hand simply shone warmly on the man who quickly took off his jacket. This story is an example of wind/air not being friendly. Share this with students so they can begin to think about wind/air.

*Activity → Teachable Moment(s) *throughout*

Fluency

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Repeated Reading Process

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2. Have students read for 1 minute and count the number of words read in the minute.
3. Record the number of words read on a chart.
4. For 8 days practice the SAME passage, using a different practice activities listed in the lesson plan.
5. Have students read the passage for 1 minute and then count the words read. Record the number of words next to the first number recorded.
6. Celebrate success.

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Select a book that is at the child's reading level and have them select 250-300 words to practice (even if they move on with the story).

7. Students should stay on the same passage level for 4-6 weeks and then transition students to the next level.

Fluency Activity of the Day

Slow Reading: Utilize this process when you want students to work on accuracy. By doing slow-motion reading, students really look at each and every word becoming certain of each word, pronouncing it correctly. This makes the words more recognizable when students are reading quickly.

Vocabulary

Word for Today: atmosphere

Description: Atmosphere is another word for air. This word describes the layer of air that surrounds the Earth. What happens in the atmosphere determines the weather that we have on earth. Atmosphere can hold pollen, dust, water, and many other small particles.

Ask students to think about a time when they have made a fan and fanned themselves to stir up the air. Ask them why they would use a fan. Ask them why stirring the air would tend to cool them off, even if the air is warm.

Review yesterday's word: erosion. It is important to review academic math vocabulary often throughout the day.

Complete the Vocabulary Notebook for today. Students may work in pairs if this is helpful

Vocabulary Notebook Sample:

New Word	My Description
atmosphere	The air around us is our atmosphere—it is what sustains life
Personal Connection	**Drawing**
The atmosphere is thick with fog and moisture.	

Complete the Vocabulary notebook for each word.

When possible, have students experience the word. (Ex. 4 students creating a right angle, multiple students acting out an equation.)

Vocabulary Notebooks can be made from ½ of a composition book.

Activity

Wind In Action

Purpose: Today students are going to use air/wind to create art. They are going to use a straw instead of a brush to move paint around.

Materials:

- Construction paper
- Straws (at least 1 per student)
- Liquid tempera paint in a variety of colors: red, green, blue, orange, yellow, purple

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-

Directions:	ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.
1. Give each student a piece of construction paper and have them write their name on the back. 2. Give a straw to each student. 3. Explain to students (you may want to demonstrate this) that they will place small drops of pain on the paper (same color could be dropped on a variety of different places on the paper). 4. Once the drop of paint is on the paper, student will take the straw and blow through the straw to move the paint around on the paper. 5. Process is repeated until other colors and paint slides have been created. 6. Paper should dry before going home with the student.	

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief Three Whats Ask the following three what questions: What was your key learning for the day? What opportunities might you have to apply this key learning in the "real world"? What advice would you give to a "new" student getting ready to do this activity?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today with the information about wind-air, friend or foe.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Wind-Air, Friend or Foe

Air surrounds us. You cannot see air but you can feel it. Take a deep breath—when you do that you are filling your lungs with air. Hold your hand up to your mouth placing the wrist-end of your palm close to your chin. Blow the air out. What do you feel? Does it feel warm? Does the air touch your hand differently the further away your fingers are from your mouth? Air is made up primarily of nitrogen and oxygen. Other than these gases there are other things in the air including other gases, dust, water, and pollen.

Air is also known as atmosphere. The air that surrounds the Earth like a blanket is called atmosphere. This atmosphere keeps us comfortable. It protects us from both too much heat and too much cold. Earth is the only planet in the solar system that has an atmosphere that supports life. Some planets have toxic atmosphere. Even some moons have an atmosphere. The Earth's atmosphere extends away from the planet for about 6,000 miles, however the first 16 miles are the most compressed. To understand compression imagine a stack of paper towels. Imagine putting books on top of that stack of paper towels. Although there is pressure on the top paper towels, the pressure on the bottom towels is even stronger because the pressure of the books adds to the pressure of all of the paper towels as well. This is why the Earth's atmosphere is more compressed in the 16 miles closest to the surface. This pressure has different effects on people and animals.

Weather, warm or cold, windy or calm, stormy or placid, is what happens in the atmosphere at the lower layers, those closest to Earth. Wind is one of those elements of weather. Wind can be both friend and foe. Wind is helpful. Wind energy is a clean source of energy. Around the world, wind powered turbines can be found, harnessing the wind and turning it into electricity. Gentle wind moves seeds from one place to another and also helps to pollinate plants. Wind can cool an area down or blow in more hot air.

As a foe, wind can whip up a fire, helping fires to be out of control. Many times a forest fire is more dangerous because of the winds that help the fire to jump fire breaks. Winds can also be dangerous if they pick up dust and sand and blow it around eliminating visibility. If you are driving in a dust storm it is best that you pull over and park your car. Put some sort of cloth or handkerchief over your mouth and nose so your lungs are not breathing in the dust and dirt. When winds pick up speed and combine with warm ocean waters hurricanes are created. When wind is over land it can create a funnel cloud that we call a tornado.

Consult 4 Kids Lesson Plans

Component:	English Language Arts
Grade Level:	2nd Grade
Lesson Title:	Water Cycle Experiment
Focus:	Fluency, Summarizing

Materials:

Information about Water

Vocabulary Notebook

Opening

State the objective

For the next several days we are going to learn more about the four elements of Earth, water, wind/air, and fire. These natural phenomena can be both friend and foe. We will learn more about each of them and also how they work together. We will focus on vocabulary development and also asking questions and summarizing.

Gain prior knowledge by asking students the following questions

After the lesson we had yesterday, what do you know about the element of Earth?

What are some key facts about Earth that you remember?

Ask students to name the continents. (Draw a triangle map and see if they can identify them.)

From the information you received yesterday, what did you find the most interesting fact.

Content (the "Meat")

Today's Lesson

Today we are going to learn more factual information about the on one of the four elements—water. At the end of the day we will do an experiment that will let us see the water cycle.

Fluency

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Repeated Reading Process

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2. Have students read for 1 minute and count the number of words read in the minute.
3. Record the number of words read on a chart.
4. For 8 days practice the SAME passage, using a different practice activities listed in the lesson plan.
5. Have students read the passage for 1 minute and then count the words read. Record the number of words next to the first number recorded.
6. Celebrate success.
7. Students should stay on the same passage level for 4-6 weeks and then transition

Activity → Teachable Moment(s) *throughout

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Select a book that is at the child's reading level and have them select 250-300 words to practice (even if they move on with the story).

students to the next level.

Fluency Activity of the Day

Paired Readings: Partner students together. One partner times the other partner reading a passage. At the end of one minute, the partner says "Stop" and circles the last word the reader has read. The partners switch rolls. Complete this process three times.

Vocabulary

Word for Today: evaporate

Description: Evaporate is a word that describes the element of water transforming into a gas. Evaporation occurs when the air "picks up" a molecule of water and absorbs that water into a cloud. Usually evaporation occurs because of heat.

Brainstorm with students times that they have seen water evaporate (when a bathing suit dries out, when a wet sidewalk become dry, when a puddle disappears.)

Ask them to share how they think evaporation works. Let them know that the experiment you do today will help them understand how evaporation is a key part of the water cycle.

Review yesterday's word—continent.

Complete the Vocabulary Notebook for today. Student may work in pairs if this is helpful

Vocabulary Notebook Sample:

New Word	**My Description**
evaporate	The process of water being dried up by the sun and going into the air
Personal Connection	**Drawing**
The water evaporated from the cement on the sunny day.	

It is important to review academic math vocabulary often throughout the day.

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation).

Vocabulary Notebooks can be made from ½ of a composition book.

Reciprocal Teaching

Summarizing

Summarizing is what you do to capture the major points of something you have read. If you retell you are providing many more details. Today you are going to share the information about water with the students. You can share the information in one of two formats—Fact Cards or a sheet of text. (You could also make a chart of the facts about water if you would like). After sharing the information and discussing it, divide the students into pairs and ask each pair to summarize what has been read and discussed.

Ask students to use no more than 25 words in the summary. When they have summarized the material have student share with the class.

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the

Activity

Water Cycle Experiment

Materials:

Clear 2 liter bottle (1 for each group of 4-5 students)

1 cup of warm to hot water (not hot enough to burn a student)

Ice Tape **Preparation:** Cut the top off of the bottle with scissors. Cut about 2/3 of the way from the bottom of the bottle. Screw the lid onto the bottle top tightly **Directions:** 1. Pour the cup of warm/hot water into the soda bottle bottom. 2. Put the top of the bottle with the lid on it upside down in the bottle with the water in it. 3. Take the tape and wrap it around the bottle where the two pieces connect. 4. Place the bottle in the direct sun (if there is not enough sun, use a hair dryer to increase the heat) for about 5 minutes. You should see that the inside of the bottle begins to "sweat" 5. Place ice in the top of the bottle so it will begin to cool the air inside the bottle You should start to see "rain" as the "atmosphere" inside the bottle begins to cool. This is an example of the water cycle: water, evaporation, rain. The water on our pilot has been recycled million of times in this manner.	student become the teacher.

Closing
Review
Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief
Three Whats Ask the following three what questions: What was your key learning for the day? What opportunities might you have to apply this key learning in the "real world"? What advice would you give to a "new" student getting ready to do this activity?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today with the information about the element water.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Water

Facts about water:

- Approximately 70% of a grown-up's body is made up of water.
- Drinking 8 cups of water each day is recommended.
- In the United States, millions and millions of gallons of water are used each day.
- The average person uses 80-100 gallons of water daily.
- Approximately 85% of the water that is used in the United States comes from a public water source.
- In the United States, 80% of the water is used for irrigation or generating electricity.
- If you drink too much water in a short period of time you can suffer from water intoxication. This usually happens when you are very physically active.
- Water dissolves more substances than any other liquid.
- Fresh water can be found above ground but most of it is under the ground.
- The same water that existed on Earth millions of years ago still exists on this Earth. Our Earth is a closed system and there is no place for the water to go.
- Water is made up of two elements: 2 parts hydrogen and 1 part oxygen. It is written this way: H_20. The hydrogen and oxygen bond together.
- Water comes in three states: ice (solid), water (liquid), water vapor or steam (gas).
- The longest river in the world is the Nile River followed by the Amazon River. In the United States the longest river is the Mississippi.
- Pure water has no smell or taste.
- Water has a variety of uses:
  - cooking
  - cleaning
  - electricity
  - fun
  - irrigation
  - drinking
  - extinguish fires
- The water cycle involves water evaporating (which turns into gas) and rises into the sky where it cools and condenses into tiny drops of water or ice that we see as clouds, and then the water falls back to the Earth as rain, snow or hail and the cycle begins all over again.
- Water freezes at 32° F or 0° C.

Water Fact Cards

About 70% of the earth's surface is covered by water.	Approximately 70% of a grown-up's body is made up of water.
Drinking 8 cups of water each day is recommended.	In the United States, millions and millions of gallons of water are used each day.
The average person uses 80-100 gallons of water daily.	Approximately 85% of the water that is used in the United States comes from a public water source.
In the United States, 80% of the water is used for irrigation or generating electricity.	If you drink too much water in a short period of time you can suffer from water intoxication. This usually happens when you are very physically active.
Water dissolves more substances than any other liquid.	Water is made up of two elements: 2 parts hydrogen and 1 part oxygen. It is written this way: H_20

The same water that existed on Earth millions of years ago still exists on this Earth. Our Earth is a closed system and there is no place for the water to go.	Fresh water can be found above ground but most of it is under the ground.
The hydrogen and oxygen bond together to form water.	Water is essential to life on Earth.
Water comes in three states: ice (solid), water (liquid), water vapor or steam (gas).	The largest bodies of salt water are the Pacific Ocean, the Atlantic Ocean, and the Indian Ocean.
The longest river in the world is the Nile River followed by the Amazon River. In the United States the longest river is the Mississippi.	Pure water has no smell or taste.
Water has a variety of uses: Cooking Cleaning Electricity Fun Extinguish fires Drinking Irrigation	Water freezes at 32° F or 0° C.

The water cycle involves water evaporating (which turns into gas) and rises into the sky where it cools and condenses into tiny drops of water or ice that we see as clouds, and then the water falls back to the Earth as rain, snow or hail and the cycle begins all over again.	A tsunami is a very dangerous wave in the ocean, usually caused by an earthquake
Another word for tsunami might be tidal wave.	A hurricane is a combination of extreme wind and water and usually develop over the ocean.

Consult 4 Kids Lesson Plans

Component:	English Language Arts
Grade Level:	2nd Grade
Lesson Title:	Scary Stories Fire
Focus:	Fluency, Vocabulary

Materials:	
Information about Fire	Fact Cards
Vocabulary Notebooks	Supplies for the activity

Opening

State the objective

For the next several days we are going to learn more about the four elements of Earth, water, wind/air, and fire. These natural phenomena can be both friend and foe. We will learn more about each of them and also how they work together. We will focus on vocabulary development and also asking questions and summarizing.

Gain prior knowledge by asking students the following questions

After the lesson we had yesterday, what do you know about wind/air?

Have you ever experienced or seen a vortex?

What are some things that you might need to do if you were in a tornado?

What do you know about fire?

Content (the "Meat")

Today's Lesson

Today we are going to learn some things about fire and how it is both friend and foe. We are going to experience a friendly part of fire—a campfire, and make S'mores and tell scary stories at the end of today.

Fluency

Repeated Reading is a key strategy that research has found to be incredibly effective in building fluency. Repeated Reading means exactly that—students read and re-read the same passage, practicing not only the unique words but the sight words that make up of 65% of the written words. For reading passages see information in the side note.

Repeated Reading Process

1. Give student a passage to read at his/her appropriate reading level. It would be better to be a passage that is easily read than one that they are struggling with. Remember that they are practicing the sight words and phrases that make up about 65% of the text.
2. Have students read for 1 minute and count the number of words read in the minute.
3. Record the number of words read on a chart.
4. For 8 days practice the SAME passage, using a different practice activities listed in the lesson plan.
5. Have students read the passage for 1 minute and then count the words read. Record the number of words next to the first number recorded.
6. Celebrate success.
7. Students should stay on the same passage level for 4-6 weeks and then transition

*Activity → Teachable Moment(s) *throughout*

Repeated Reading passages can be found at:

www.readinga-z.com (This is a subscription fee site).

Check with the school day to see if the textbook has these passages (most do).

Select a book that is at the child's reading level and have them select 250-300 words to practice (even if they move on with the story).

students to the next level.

Fluency Activity of the Day

Partner Share: Partner two students that are working on the same passage. Have them read aloud to each other, trading off each sentence. They can then provide feedback to one another on rate, phrasing, and expression.

Vocabulary

Word for Today: ignite

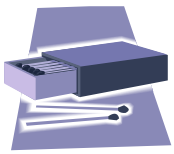
Description: Ignite is a word that describes what happens when a fire is started. It is that single moment in which friction happens (like striking a match), a spark strikes (like when lightening hits the ground) or a switch is flipped and creates the necessary action (starting a car or a rocket ship).

Brainstorm a time when you saw something ignite (match, barbecue, car, fireworks, stove, etc.) Ask students to think about what they saw at the moment that something ignited. Ask students to share their thoughts with another student.

Review yesterday's word—global.

Complete the Vocabulary Notebook for today. Students may work in pairs if this is helpful.

Vocabulary Notebook Sample:

New Word	My Description
ignite	Striking a match to start a fire
Personal Connection	**Drawing**
They will ignite the barbeque fire in time to grill the hamburgers.	

It is important to review academic math vocabulary often throughout the day.

Complete the Vocabulary notebook for each word.

When possible, have students experience the word. (Ex. 4 students creating a right angle, multiple students acting out an equation.)

Vocabulary Notebooks can be made from ½ of a composition book.

Activity

S'Mores and Scary Stories

One of the wonderful ways to spend time around fire is at a campfire. The fire is safely contained within the boundaries of the fire. Sometimes people will sing during campfires but they also tell Scary Stories and fix S'Mores. Today, that is what the class is going to do.

Scary Stories

1. Brainstorm words with students that indicate fear, being very afraid, spooky, and scary.
2. Brainstorm with students events that are scary to them.
3. Ask them if it is more scary to think about something that might really happen or about something like is only a fantasy.
4. Ask them to list everyday events that can take a scary twist.

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to

5. Discuss why the dark is always scarier than the daylight; why bad things usually happen on a rainy night; why it is scarier when there are only a few people around, etc. 6. Have students work in small group or with a partner. 7. Have students select a scary story starter from the list they created and complete the tale. Note: If students have their own idea about a scary story, have them run the plot line by you so you know it is appropriate. S'Mores Supplies: Graham Crackers, Marshmallow Cream, Hershey candy bar or chocolate chips, plastic knife, small paper plate Directions: 1. Give each student one whole graham cracker that they will then break in half (a S'More is like a graham cracker sandwich) 2. Spread marshmallow cream on one piece of the graham cracker 3. Add chocolate chips or piece of a Hershey candy bar 4. Put the other half of the graham cracker on as a top or lid 5. Eat and enjoy! Create a campfire by putting a flashlight under some red, yellow and orange tissue paper. Sit around the campfire (all other lights are off or you can do this outdoors) and tell the scary stories and eat the S'Mores Be prepared to tell a scary story of your own.	determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief Three Whats Ask the following three what questions: What was your key learning for the day? What opportunities might you have to apply this key learning in the "real world"? What advice would you give to a "new" student getting ready to do this activity?
Reflection (Confirm, Tweak, Aha!) • Ask students to think about what they did today with the information about fire. • Ask them to comment on what they did today was something they already knew how to do. (Confirmation) • Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak) • Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Fire

Fire Facts

- All fires need to have something that ignites them. This could be a match, an explosion, or the sun focused on a spot by glass.
- Fires must also have fuel, or something to burn. Some natural items like wood, cloth, and dry plants burn more easily than things like rocks, steel, and dirt.
- Fires must also have oxygen. Without oxygen the fire cannot burn. It takes heat, fuel, and oxygen to keep fire burning.
- Gases are the easiest to burn followed by liquids and then solids.
- During a fire, hot plumes of smoky air rise from the flames.
- The best safety strategy for fire is to prevent one from starting. There are thing that we can do regularly to keep fires from starting: store combustible liquids safely, use matches and other igniters safely and only with adult permission, and keep trash and debris picked up and out of the way.
- Fire can provide warmth to us when it is cold. It is fire that allows us to cook our food so we are not eating it raw.
- When you go camping, sitting around a safe campfire can be very memorable. One of the things people do at campfires is to make S'mores and tell scary stories.

Fire Fact Cards

All fires need to have heat, oxygen, and fuel.	Fires are usually ignited by something like a match, an explosion, or focusing a light beam on a fuel through a piece of glass or some other object.
Although with enough heat most everything can turn to a liquid, even rocks and steel.	Fuel for a fire includes wood, cloth, dry plants.
Fire extinguishers work to put out a fire by taking away the oxygen it need to burn.	Gases are the easiest to burn followed by liquids and then solids.
During a fire, hot plumes of smoky air rise from the flames.	Fire can provide us with warmth when we are cold.
Fire provides us with a way to cook and heat our food.	Fire can be a campfire that will help create positive memories for us.

The best safety strategy when it comes to fire is to prevent fires before the start.	Removing fuel and being cautious about igniting fires helps keep us all safe.
Forest fires can be “surface” fires which means that the burning is the undergrowth and the leaf litter.	Forest fires can be “crown” fires which means that the tops of trees are burning and that the fire is moving rapidly from tree top to tree top.
To the Greeks, Prometheus stole fire from the gods to give to man.	To the Chinese, Hui Lu started fires all over earth but these fires were put out by dew and mist.
To the Native Americans, a hero came and took fire back to the people.	To the Africans, when the ostrich was tricked away from the fire, people were able to use it.
In the Amazon, fire came to people because a young boy stole a coal from the jaguar.	

Consult 4 Kids Lesson Plans

Component:	English Language Arts
Grade Level:	2nd Grade
Lesson Title:	Fire Mosaic
Focus:	Fluency, Vocabulary

Materials:

Information about Fire—Friend or Foe
Fact Cards
Vocabulary Cards
Construction paper: red, yellow, orange, purple, and black,
Glue sticks
Scissors

Opening

State the objective

For the next several days we are going to learn more about the four elements of Earth, water, wind/air, and fire. These natural phenomena can be both friend and foe. We will learn more about each of them and also how they work together. We will focus on vocabulary development and also asking questions and summarizing.

Gain prior knowledge by asking students the following questions

Talk with another student about the four elements that we have been learning about: earth, wind/air, water, and fire. What are some interesting things that you have learned?

What do you think about when someone says "Be careful! Danger ahead!" when it comes to fire? water? wind?

What kind of things exist in a dangerous situation (unknown, unsafe conditions)?

Content (the "Meat")

Today's Lesson

Today we are going to learn more information about fire and how it is both friend and foe. Students will work in pairs to create a mosaic of fire (a mosaic is a picture made from small squares of paper or other material) that the fire that was given to people.

*Activity → Teachable Moment(s) *throughout*

Fluency

Repeated Reading is a key strategy that research has found to be incredibly effective in building fluency. Repeated Reading means exactly that—students read and re-read the same passage, practicing not only the unique words but the sight words that make up of 65% of the written words. For reading passages see information in the side note.

Repeated Reading Process

1. Give student a passage to read at his/her appropriate reading level. It would be better to be a passage that is easily read than one that they are struggling with. Remember that they are practicing the sight words and phrases that make up about 65% of the text.
2. Have students read for 1 minute and count the number of words read in the minute.
3. Record the number of words read on a chart.
4. For 8 days practice the SAME passage, using a different practice activities listed in the lesson plan.
5. Have students read the passage for 1 minute and then count the words read. Record the number of words next to the first number recorded.
6. Celebrate success.
7. Students should stay on the same passage level for 4-6 weeks and then transition students to the next level.

Repeated Reading passages can be found at:

www.readinga-z.com (This is a subscription fee site).

Check with the school day to see if the textbook has these passages (most do).

Select a book that is at the child's reading level and have them select 250-300 words to practice (even if they move on with the story).

Consult 4 Kids Lesson Plans

Fluency Activity of the Day

Chunk Reading: This process helps youth to read more quickly by seeing phrases or groups of words, instead of reading "word by word". For example, look at the following two sentences:
"Once upon a time there was a prince who wanted to marry a princess; but she would have to be a real princess. He travelled all over the world to find one, but nowhere could he get what he wanted."

Vocabulary

Word for Today: myths

Description: Myth is a word that describes a story that has been created and refined over tie that tries to explain something that people cannot explain. In ancient times when science was still very young, people would create myths about the sun, the moon, the stars, the wind, the rain, and anything else that could not be explained by observation.

Ask student if they know any myths about any of these natural phenomena. If they do, have them share them with the class.

Review the word from yesterday: atmosphere

Complete the Vocabulary Notebook for today. Students may work in pairs if this is helpful

Vocabulary Notebook Sample:

New Word	My Description
Myths	A story that is passed down through generations and explain natural phenomena such as movement of the Earth
Personal Connection	**Drawing**
The dragons in Harry Potter are mythological.	

It is important to review academic math vocabulary often throughout the day.

Complete the Vocabulary notebook for each word.

When possible, have students experience the word. (Ex. 4 students creating a right angle, multiple students acting out an equation).

Vocabulary Notebooks can be made from ½ of a composition book.

Activity

Fire Mosaic

Read with students the information about Fire, Friend or Foe that is attached to this lesson plan. Also review the information from Lesson 1 and Lesson 5. Review the fact cards as well.

Pay close attention to the first paragraph of today's information that shares some information about the mythology surrounding fire. In all of these stories, man was somehow able to get fire from whatever entity was protecting it. This fire was given to provide man with warmth and a way to cook his/her food.

A mosaic is a picture that is made from small pieces of paper, tile, glass or some other object. Today, students will work in pairs to create a mosaic of the fire that is discussed in the various mythologies.

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to

Supplies: • Construction paper: red, yellow, orange, purple, and black for a backing • Glue sticks • Scissors Directions: 1. Divide students into pairs. 2. Pairs are given red, yellow, orange and purple construction paper and invited to cut the paper into small squares (approximately ¼ " by ¼ " or ½" by ½"). If children do not want to cut the paper or have trouble with this, have them tear the paper into those small pieces. 3. Pairs should design the fire that they are going to create out of the small pieces of paper and draw it onto the black backing (they will be able to see the outlines). 4. Students then begin to glue the mosaic pieces onto the black background, using a variety of colors to create the look of fire. 5. If the pieces are too large for the space, they should trim them by cutting or tearing. 6. When students are finished, they should share with another pair.	determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief Three Whats Ask the following three what questions: What was your key learning for the day? What opportunities might you have to apply this key learning in the "real world"? What advice would you give to a "new" student getting ready to do this activity?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today with the information about fire—friend or foe.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Fire—Friend or Foe

Fire is an element that brings both pain and comfort. Fire brings light and warmth and enables people to prepare food. Fire can also race through nature and homes causing destruction and death in its wake. Fire has fascinated people for thousands of years. The ability to control fire sets people apart from animals. Fire can be used to forge tools, create glass, and pottery. There are many stories and myths about how man for acquired fire. In Greek mythology, Prometheus stole fire from the gods and gave it to man. In Chinese mythology stories of Hui Lu tell how fire was sent out to cause fires across the Earth, but that dew and mist could triumph over fire. Native Americans believe that a hero returned fire to the people, African stories talk about the ostrich who protected fire and was tricked to fly away, making fire, good and bad, available to people; and the Indians in the Amazon have stories about a young boy who stole a coal from a jaguar.

Forest fires can be both destructive and helpful. Forest fires can be either surface fires, ones that burn the undergrowth and leaf litter, and "crown fires" that move from tree top to tree top with amazing speed and destruction. Surface fires can clean up leaf litter, encourage the growth of new plants, and reduce the number of insects and pathogens that are dangerous to forests. In nature, many ecosystems are actually protected and strengthened by periodic surface fires.

When fighting fires, forest or otherwise, the firefighters try to eliminate one of the three essential elements of fire: oxygen, fuel, and heat. Sometimes firefighters will clear away the fuel by starting a controlled burn that will burn toward the wild fire. Sometimes firefighters use airplanes and helicopters to douse the fire with water and flame retardant chemicals. Such action takes away both the heat and the oxygen. With structure fires the usual course is to reduce the heat with water.

Consult 4 Kids Lesson Plans

Component:	English Language Arts
Grade Level:	2nd Grade
Lesson Title:	Earth Friend or Foe Poster
Focus:	Fluency, Vocabulary

Materials:

Information about Earth, Friend or Foe — Fact Cards

Vocabulary Notebooks

Opening

State the objective

For the next several days we are going to learn more about the four elements of Earth, water, wind/air, and fire. These natural phenomena can be both friend and foe. We will learn more about each of them and also how they work together. We will focus on vocabulary development and also asking questions and summarizing.

Gain prior knowledge by asking students the following questions

What do you know about the four elements now that you didn't know when we began these lessons?

In what way do you believe that these four elements are friend or foe? In what ways do you believe that these four elements work together as a powerful force?

Content (the "Meat")

Today's Lesson

Today we are going to learn more about the Earth as both Friend and Foe. We are going to work in pairs to create a poster that depicts Earth as Friend and Foe and share out with the rest of the class.

Fluency

Repeated Reading is a key strategy that research has found to be incredibly effective in building fluency. Repeated Reading means exactly that—students read and re-read the same passage, practicing not only the unique words but the sight words that make up of 65% of the written words. For reading passages see information in the side note.

Repeated Reading Process

1. Give student a passage to read at his/her appropriate reading level. It would be better to be a passage that is easily read than one that they are struggling with. Remember that they are practicing the sight words and phrases that make up about 65% of the text.
2. Have students read for 1 minute and count the number of words read in the minute.
3. Record the number of words read on a chart.
4. For 8 days practice the SAME passage, using a different practice activities listed in the lesson plan.
5. Have students read the passage for 1 minute and then count the words read. Record the number of words next to the first number recorded.
6. Celebrate success.
7. Students should stay on the same passage level for 4-6 weeks and then transition students to the next level.

*Activity → Teachable Moment(s) *throughout*

Repeated Reading passages can be found at:

www.readinga-z.com (This is a subscription fee site).

Check with the school day to see if the textbook has these passages (most do).

Select a book that is at the child's reading level and have them select 250-300 words to practice (even if they move on with the story).

Consult 4 Kids Lesson Plans

Fluency Activity of the Day

Independent Timed Reading: Have students work in pairs and use a three minute egg timer or look at the clock to keep time. As the first student begins to read the passage, the partner either turns over the egg timer or begins watching the clock. At the end of 2 minutes (if students are watching a clock, or three minutes is using the egg timer, the partner calls "Stop" and the number of words are counted. Process is repeated for the other students. Students record the number of words read on their reading chart

Vocabulary

Word for Today: earthquake

Description: Earthquake is a word that describes the shaking we feel when the plates under the surface of the Earth slip and move. An earthquake can also feel like a rolling motion or it can feel like jerks and pushes. Earthquakes happen more around the Pacific Ocean, but can happen anywhere in the world.

Ask students if they have ever felt an earthquake. If yes, ask them what it felt like. Ask them what they did to be safe. Ask them if they have ever practiced an Earthquake Drill in school. Ask them what they did and why? (Duck under a desk, turn face away from glass, cover back of the neck with linked hands to protect from flying objects.)

Review yesterday's word: myths

Vocabulary Notebook Sample:

New Word	My Description
earthquake	Shaking of the Earth because of movement underground or ocean
Personal Connection	**Drawing**
Have you ever felt an earthquake? I have. It was scary!	

It is important to review academic math vocabulary often throughout the day

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation)

Vocabulary Notebooks can be made from ½ of a composition book

Reciprocal Teaching

Earth—Friend or Foe

Predict: Ask students to predict some of the ways that the Earth acts as both friend and foe. Chart their responses.

Clarify: Ask students if the know what an epicenter is (the beginning point of the earthquake); the main shock (this is the hardest and most powerful jolt of the earthquake) and the aftershock (these are the smaller jolts that happen as the Earth tries to get back in equilibrium)

Question: Have students pair up and decide on one question that they would like to have answered about earthquakes. Students should share the questions with the class (answer if you can)

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to

Activity Earth—Friend or Foe Poster	determine what the rest of the group is thinking When possible, engage students in a "teach to learn" opportunity and have the student become the teacher
Supplies: • Chart paper or poster board • Pens, crayolas, colored pencils • Information about the Earth (fact cards and written information) Directions: 1. Divide students into pairs 2. After reading and reviewing the information about the Earth with the entire class, pairs should decide which 3-5 facts they will place as either demonstrating friendly or demonstrating foe. 3. Students will draw a picture to represent each of these facts and be prepared to share with the remainder of the class.	

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief Three Whats Ask the following three what questions: What was your key learning for the day? What opportunities might you have to apply this key learning in the "real world"? What advice would you give to a "new" student getting ready to do this activity?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today with the information about the Earth—Friend or Foe.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Earth—Friend or Foe

The Earth is our home. We refer to it as Mother Earth because it sustains our life. Earth is made up of many layers. The surface layer is be covered by water (oceans and other) and land masses known as continents and islands. The land can be covered with forests, deserts, mountains, valleys, and any number of other habitats. People have harnessed the power of the land to grow crops, build homes, establish cities, and yet, have not necessarily taken good care of the Earth as they pollute the land and water with trash and garbage, send harmful chemicals into the soil as well as the air, and misuse many of nature's gifts.

The Earth has four major layers: the crust (this is the surface), the mantle, the outer core and the inner core. The crust and the top part of the mantle make up the surface. This surface is not just one piece. Below the surface of the Earth there are tectonic plates. These plates continue to shift and move causing earthquakes. Earthquakes occur when two blocks of Earth slip past one another without warning. Where the Earth slips is called a fault on the surface. The earthquake starts below the surface of the Earth at the hypocenter which is directly under the surface location called an epicenter. Earthquakes can have foreshocks (these happen prior to the main earthquake) the main shock (this is the main slippage) and the aftershock (those mini quakes that happen after the main quake.). The number of aftershocks is determined by the force of the main quake.

The inner core of the Earth is solid and it is supported by the outer core which is made up of molten or liquid nickel and iron and other elements. The outer and inner core are very hot, ranging from 4400° C to 6100° C. The inner core of the Earth was discovered by Inge Lehmann in 1936.

Earth Fact Cards

Earth is the only planet whose name does not derive from Greek or Roman mythology.	Earth is the third planet from the sun.
71% of the Earth's surface is covered with water. 29% is covered by land.	The Earth's atmosphere is 21% oxygen and 77% nitrogen. The other 2% is a combination of elements.
One of the elements in the 2% is carbon dioxide.	Scientists believe that Earth is between 3 and 4.5 billion years old.
Temperatures at the Earth's core are hotter than the sun.	Earth seems to be the only planet in the Solar System to support life.
Earth has 7 continents—or large masses of land: Africa, Antarctica, Australia, Asia, Europe, North America, and South America.	The equator runs around the middle of the Earth from east to west.

The Earth has four major layers: the crust, the mantle, the outer core and the inner core.	The inner core is solid and was discovered by Inge Lehmann in 1936.
The outer core is liquid or molten nickel, iron and other elements.	The outer core is very hot ranging from 4400° C to 6100° C.
Earthquakes happen when the plates in the Earth's mantle slip against each other.	Earthquakes have an epicenter—the place where the slippage occurred first.
Earthquakes can cause tsunamis which a huge ocean waves that can flood and destroy coastal cities.	Without the earth, we would not be able to grow crops and have places to live.

Consult 4 Kids Lesson Plans

Component:	English Language Arts
Grade Level:	2nd Grade
Lesson Title:	Triangle Maps
Focus:	Fluency, Questioning

Materials:

Information about Earth

Vocabulary Notebook

Poster Paper and crayons or colored pencils

Opening

State the objective

For the next several days we are going to learn more about the four elements of Earth, water, wind/air, and fire. These natural phenomena can be both friend and foe. We will learn more about each of them and also how they work together. We will focus on vocabulary development and also asking questions and summarizing.

Gain prior knowledge by asking students the following questions

After the lesson we had yesterday, what do you know about the four elements? What are some key facts about the Earth? About fire? About water? About wind/air? What did you learn about asking "right there" questions? What did you learn about asking "interpretive" questions?

Content (the "Meat")

Today's Lesson

Today we are going to learn more factual information about one of the four classic elements: the Earth. At the end of today's lesson you and a partner will practice drawing a map of the Earth's continents.

*Activity → Teachable Moment(s) *throughout*

Repeated Reading is a key strategy that research has found to be incredibly effective in building fluency. Repeated Reading means exactly that—students read and re-read the same passage, practicing not only the unique words but the sight words that make up of 65% of the written words. For reading passages see information in the side note.

Repeated Reading Process

1. Give student a passage to read at his/her appropriate reading level. It would be better to be a passage that is easily read than one that they are struggling with. Remember that they are practicing the sight words and phrases that make up about 65% of the text.
2. Have students read for 1 minute and count the number of words read in the minute.
3. Record the number of words read on a chart.
4. For 8 days practice the SAME passage, using a different practice activities listed in the lesson plan.
5. Have students read the passage for 1 minute and then count the words read. Record the number of words next to the first number recorded.
6. Celebrate success.
7. Students should stay on the same passage level for 4-6 weeks and then transition students to the next level.

Repeated Reading passages can be found at: www.readinga-z.com (This is a subscription fee site).

Check with the school day to see if the textbook has these passages (most do).

Select a book that is at the child's reading level and have them select 250-300 words to practice (even if they move on with the story).

Fluency Activity of the Day

Modeled Reading: Read the Fluency Passage to the student so she or he can hear fluent reading. Have the student read the passage. If the student gets stuck on a word, read the

word and have her or him repeat it. Repeated one-on-one readings will increase speed, accuracy, smoothness and expression. (You can pair more proficient readers with less proficient ones).

Vocabulary

Word for Today: continent

Description: A continent is a large body of land on Earth. A continent is much larger than an island, it is big enough for millions of people to live on. There are 7 continents on Earth. Antarctica is the only one that does not have people living on it. The equator divides the earth in half. Some of the continents are north of the equator: Europe, Asia, North America, and some are south of the equator: Australia, Antarctica, Africa and South America.

Brainstorm with students something they have heard about the continents. Ask them which continent that they live on. (North America) Ask them what countries are in North America (Canada, Mexico and the United States are the largest.)

Ask students to think about which continent they would like to visit (other than North America).

Review yesterday's word--element.

Complete the Vocabulary Notebook for today. Student may work in pairs if this is helpful

Vocabulary Notebook Sample:

New Word	My Description
Continent	A very large mass of land on the Earth
Personal Connection We live on the continent of North America.	**Drawing** 

It is important to review academic math vocabulary often throughout the day.

Complete the Vocabulary notebook for each word.

When possible, have students experience the word.

Vocabulary Notebooks can be made from ½ of a composition book.

Reciprocal Teaching: Questioning

Review the 8 key facts about Earth with the students. (This information is attached to this lesson plan). After discussing each of the facts, ask the students to think about the questions that they would ask if they were playing Jeopardy. For example one of the facts is that Earth's atmosphere is 21% oxygen and 77% nitrogen. A Jeopardy question would be "What is the percentage of the Earth's atmosphere that is oxygen?" This will be challenging for the students so work with them through each of the facts. Remind students that these are all "right there" questions which can start with: Who is…, Where is…, What is…, How many…, When did…, or What kind of.

Have students read the rest of the information about the Earth including the 7 continents and the difference between globes and maps. Every 2-3 sentences stop and have the children ask one another questions about what was just read.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

Activity

Have students work in pairs to create a map of the world by using triangles.

During the lesson check in with students repeatedly.

Create a map of the world using triangles of different sizes and shapes. It is important that you model this (look at the picture provided) and remember that Antarctica would be across the bottom of the map (this is not on the picture provided). When creating the model take the time to label each triangle. You may also want to show students where the equator is so they can better understand north and south of the equator. Have students label the Pacific Ocean, the Atlantic Ocean, and the Indian Ocean as well as the continents. When students have finished the maps, have student pairs share with another pair.	You will need construction paper, crayolas or colored pencils. Be sure to talk with students about labeling the map correctly.

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief Three Whats Ask the following three what questions: • What was your key learning for the day? • What opportunities might you have to apply this key learning in the "real world"? • What advice would you give to a "new" student getting ready to do this activity?
Reflection (Confirm, Tweak, Aha!) • Ask students to think about what they did today when they were practicing English Language Arts with the information about the Earth. • Ask them to comment on what they did today was something they already knew how to do. (Confirmation) • Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak) • Ask them to comment on something (if anything) they have learned today that was brand new to them

Modification:

Instead of drawing the triangle you can have children cut out various triangles and glue them on the poster. North and South America and Africa are about the same size. Australia and Antarctica are wide triangles. Europe is smaller and Asia is the largest triangle.

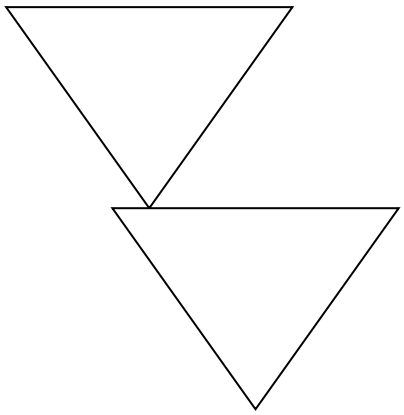
Earth

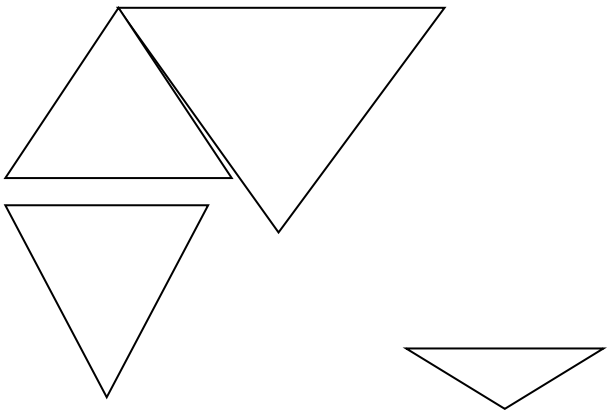
Facts about the Earth:

- Earth is the only planet whose name does not derive from Greek or Roman mythology.
- Earth is the third planet from the sun.
- 71% of the Earth's surface is covered with water.
- The Earth's atmosphere is 21% oxygen and 77% nitrogen. The other 2% is a combination of elements.
- One of those other elements is carbon dioxide, a very important although small part of our atmosphere.
- Scientists believe that Earth is between 4 and 4.5 billion years old.
- Temperatures at the Earth's core are hotter than the sun.
- Earth seems to be unique in our Solar System in its ability to support life.

Earth is made up of 7 Continents. They are Europe, Asia, Australia, Antarctica, Africa, North America and South America. We live on the continent of North America. The largest countries in North America are Canada, the United States, and Mexico. Central America is really part of North America as is Cuba and other islands in that Atlantic Ocean. The country we live in is the United States. In the United States there are 50 states and each of those states has hundreds of cities. Which state and country do you live in?

The other is round and when we look at a globe we can see how the Earth looks when you view it from space. Maps are flat and help us to look more closely at the different parts of the Earth's surface, but to really understand how close or far-away places are from one another, it is better to look at a globe. The continents are separated by oceans and seas, the largest of which are the Pacific Ocean (in between North and South America and Asia and Australia; the Atlantic Ocean (in between North and South America and Europe and Africa, and the Indian Ocean which separates Asia and Africa.
Although the continents are not triangle, this representation of the Earth's continents is reasonably accurate. Antarctica would run across the bottom of the Earth. Can you decide which triangle is which?





Consult 4 Kids Lesson Plans

Component:	English Language Arts
Grade Level:	2nd Grade
Lesson Title:	Review of Four Elements
Focus:	Review

Materials:

Information about the Four Elements

Fact Cards from other lessons

Materials needed for various project options.

Opening

State the objective

For the past several days we have learned about the four elements of Earth, water, wind/air, and fire. We have discovered that these natural phenomena can be both friend and foe. We have learned about each of them and also how they work together. The next two days we will spend our time trying to capture our key learnings through several projects.

Gain prior knowledge by asking students the following questions

Students have learned a great deal about the four elements of earth, wind/air, water, and fire. Ask students the following:

Is there anything about these four elements that has surprised you? If so, what?

What has been your most important learning?

Ask them to think of 1 or 2 words to describe the four elements and to share those with first a peer and then the whole group.

Content (the "Meat")

Activity

Here are four activities for you to choose from:

Mural (Grades 2-5)

- Divide the class into four groups and assign or have them draw lots to determine which of the four elements they will create a mural about. The mural should depict all aspects of the element—both friend and foe characteristics. At the end, the four murals will be joined together

Letter to Mother Nature (Grades 2-5)

- Students write letters to Mother Nature about the effect of the four elements. Students share the information they have learned and ask the unanswered questions that they may have about each element.

Fact Book (Grade 2-5)

- Considering all or the facts that you have learned about the four elements, capture those that are most relevant to you in a Fact Book that is illustrated

Myth (Grades 2-5)

Preview all of the activities for youth and have them self-select the project they would like to work on. They will have 2 days, so it is possible to participate in more than one activity in the 2 days.

Make the Fact Cards and Fact Sheets available to them so they can complete the projects effectively.

• We briefly looked at several myths that explained how man was able to capture fire. Students should work in pairs or small groups to create a myth about wind/air, water, fire, or Earth itself. Groups should share with one another.	

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief Three Whats Ask the following three what questions: What was your key learning for the day? What opportunities might you have to apply this key learning in the "real world"? What advice would you give to a "new" student getting ready to do this activity?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today with the information about the four elements.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Consult 4 Kids Lesson Plans

Component:	English Language Arts
Grade Level:	2nd Grade
Lesson Title:	Murals and Other Choices
Focus:	Review

Materials:

Information about the Four Elements

Fact Cards from other lessons

Materials needed for various project options.

Opening

State the objective

For the past several days we have learned about the four elements of Earth, water, wind/air, and fire. We have discovered that these natural phenomena can be both friend and foe. We have learned about each of them and also how they work together. The next two days we will spend our time trying to capture our key learnings through several projects.

Gain prior knowledge by asking students the following questions

Students have learned a great deal about the four elements of earth, wind/air, water, and fire. Ask students the following:

Is there anything about these four elements that has surprised you? If so, what?

What has been your most important learning?

Ask them to think of 1 or 2 words to describe the four elements and to share those with first a peer and then the whole group.

Content (the "Meat")

Activity

Here are four activities for you to choose from:

Mural (Grades 2-5)

- Divide the class into four groups and assign or have them draw lots to determine which of the four elements they will create a mural about. The mural should depict all aspects of the element—both friend and foe characteristics. At the end, the four murals will be joined together

Letter to Mother Nature (Grades 2-5)

- Students write letters to Mother Nature about the effect of the four elements. Students share the information they have learned and ask the unanswered questions that they may have about each element.

Fact Book (Grade 2-5)

- Considering all or the facts that you have learned about the four elements, capture those that are most relevant to you in a Fact Book that is illustrated

Myth (Grades 2-5)

Preview all of the activities for youth and have them self-select the project they would like to work on. They will have 2 days, so it is possible to participate in more than one activity in the 2 days.

Make the Fact Cards and Fact Sheets available to them so they can complete the projects effectively.

• We briefly looked at several myths that explained how man was able to capture fire. Students should work in pairs or small groups to create a myth about wind/air, water, fire, or Earth itself. Groups should share with one another.	

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief Three Whats Ask the following three what questions: What was your key learning for the day? What opportunities might you have to apply this key learning in the "real world"? What advice would you give to a "new" student getting ready to do this activity?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today with the information about the four elements.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)

Consult 4 Kids Lesson Plans

Component:	English Language Arts
Grade Level:	2nd Grade
Lesson Title:	Create A Crest or Shield
Focus:	Fluency and Questioning

Materials:

Information about the Four Elements (attached to this lesson plan)

Vocabulary Notebook

Construction paper or poster board

Crayolas, marking pens, colored pencils, etc. for drawing

Opening

State the objective

For the next several days we are going to learn more about the four elements of Earth, water, wind/air, and fire. These natural phenomena can be both friend and foe. We will learn more about each of them and also how they work together. We will focus on vocabulary development and also asking questions and summarizing.

Gain prior knowledge by asking students the following questions

When you hear the word: Earth, water, wind/air and fire, what do you think about? What are some of the ways that you use any of these elements? Have you ever had an experience with one of these elements that has been scary? Share that information with the class or a friend.

Content (the "Meat")

Today's Lesson

Today we are going to learn about the four classic elements and then work in pairs to create a poster that capture each of them.

Fluency

Repeated Reading is a key strategy that research has found to be incredibly effective in building fluency. Repeated Reading means exactly that—students read and re-read the same passage, practicing not only the unique words but the sight words that make up of 65% of the written words.

Repeated Reading Process

1. Give student a passage to read at his/her appropriate reading level. It would be better to be a passage that is easily read than one that they are struggling with. Remember that they are practicing the sight words and phrases that make up about 65% of the text.
2. Have students read for 1 minute and count the number of words read in the minute.
3. Record the number of words read on a chart.
4. For 8 days practice the SAME passage, using a different practice activities listed in the lesson plan.
5. Have students read the passage for 1 minute and then count the words read. Record the number of words next to the first number recorded.
6. Celebrate success.

*Activity → Teachable Moment(s) *throughout*

Repeated Reading passages can be found at:

www.readinga-z.com (This is a subscription fee site).

Check with the school day to see if the textbook has these passages (most do).

Select a book that is at the child's reading level and have them select 250-300 words to practice (even if they move on with the story).

7. Students should stay on the same passage level for 4-6 weeks and then transition students to the next level.

Fluency Activity of the Day

Fluency Test—Read 1 minute count number of words read. Record the total on a personal chart. A suggestion would be to have a stamp or chart on the front of the student's vocabulary notebook and have them write the total words read on the chart.

Vocabulary

Word for Today: element

Description: An element is some piece or aspect of nature. It is another word for "building blocks". When you look at the four classic elements, Earth, fire, water, and wind/air, you are looking at four things that are essential for life on Earth and also act as building blocks for life.

Brainstorm with students the experiences they have had, both positive and negative with water. (Positive: cool drink, swimming, taking a shower, washing hands; Negative: floods, heavy storms, hurricanes). Talk about how they felt and what they did.

Ask them to name some symbols or sounds for each of these elements. Ask students why these symbols and sounds are important.

Students complete the Vocabulary Notebooks. Student may work in pairs if this is helpful

Vocabulary Notebook Sample:

New Word	My Description
element	An element is a piece or a part of nature
Personal Connection	**Drawing**
Oxygen is an element of water. So is hydrogen.	

It is important to review academic math vocabulary often throughout the day

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation).

Vocabulary Notebooks can be made from ½ of a composition book.

Reciprocal Teaching

Questioning

Divide the class into groups of 2-3 students. Explain that as a small group the students will read about one of the elements and develop 3 questions about the information in the paragraph. The questions can be one of two types: right there (asking for information that can be found in the text) or interpretive questions that will require you to both think and search for an answer.

Read the information about the classic elements as a class and then model the activity of forming at least 3 questions. (Information attached to this lesson plan).

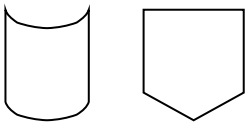
Brainstorm some of the "right there" questions that you might ask. Think about starting the questions with words like: Who is…, Where is…, List…, What is…, How many…, When did…, Name…, or What kind of

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

Brainstorm some of the interpretive questions that you might ask. Think about starting the questions with words like: Summarize…, What caused…, Contrast..., Retell…, How did…, Explain…, Find two examples…, For what reason…, Compare Write the questions that the students develop on a chart so students will be able to use them as an example when they are developing their own questions. Assign the elements to the groups. Once the questions have been written, pair the groups up so they can ask each other the questions. Rotate so that all students hear about all sections.	When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.
Activity Create a Crest or Shield  A crest or shield can take on one of several shapes. You and your partner will create a crest or a shield that will have each of the four classic elements represented on it. You might want to divide the shield or crest into fourths by drawing one, vertical and one horizontal line, or create bands, one for each element. Before making your crest or shield, decide what symbol or picture you will use to represent each of the elements. Decide on the colors, size, and so on. Plan to share your shield or crest with the class.	

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief Three Whats Ask the following three what questions: What was your key learning for the day? What opportunities might you have to apply this key learning in the "real world"? What advice would you give to a "new" student getting ready to do this activity?
Reflection (Confirm, Tweak, Aha!) • Ask students to think about what they did today with the information about the four elements. • Ask them to comment on what they did today was something they already knew how to do. (Confirmation) • Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak) • Ask them to comment on something (if anything) they have learned today that was brand new to them. (Aha!)
Modification: If your group struggles with reading, read all of the content aloud together. Also, you may want to create the questions as a group if your students are not able to do this on their own.

The Four Classic Elements: Earth, Wind, Water, and Fire

If you look at the classics you will discover that there are four classic elements: Earth, wind, water, and fire. These four elements can work independently or can combine to create a natural force that is both friend and foe. The Fantastic Four is a popular animated show that looks at these elements as the "magical" powers of the main characters. As we look at each of these elements we will consider each from both a positive influence and a destructive influence. We will take a look at each alone and also as they combine with one another.

Earth

Earth, the planet that we live on, is the playground of wind, water, and fire. It is on the surface of the Earth as well as deep within it, that these forces of nature work and create an environment that is fit for human and other life. When we look at all of the planets in our Solar System, it appears that only Earth is able to sustain life as we know it. Earth is a nurturing environment. Seasons come and go and there is an annual rebirth every Spring. All aspects of life happen on the planet Earth and we are able to participate in it.

Water

Water is found in abundance on Earth, and it covers over 70% of the Earth's surface. Water is foundational to life. You can survive longer without food that you can without water. Water is used for healing, for cleaning, and purification. Without water, life on Earth ceases to exist. Water comes in three distinct forms—ice (solid), running water (liquid), and gas (steam). Water can be both gentle and very powerful. Erosion is one of the ways that water changes the face of the Earth.

Wind or Air

You cannot see air or wind but you can see the effects of it. Air is associated with the very breath we take which keeps us alive. The wind carries thoughts and ideas around the world and also carries physical things as well. There is a saying that "when someone sneezes in China, someone in the United States will get a cold". Air reminds us of how connected we are.

Fire

Fire is an element that can destroy or provide warmth and comfort. Fire has a strong energy and can be used by man but cannot be controlled by him. We get used to "controlling" fire because of the way we live and use it in our daily lives however, we only need to look at the power of a house fire or a forest fire to know that fire can easily be out of human control. Fire men work hard to protect people from its destruction, but that is not always the case. Sometimes Earth experiences horrible forest fires which seem to be so devastating, but what we know is that fire can clear out the dead brush and that the forest is reborn, stronger and better after the fire than it was before.