

# NATURE

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## - Notes -

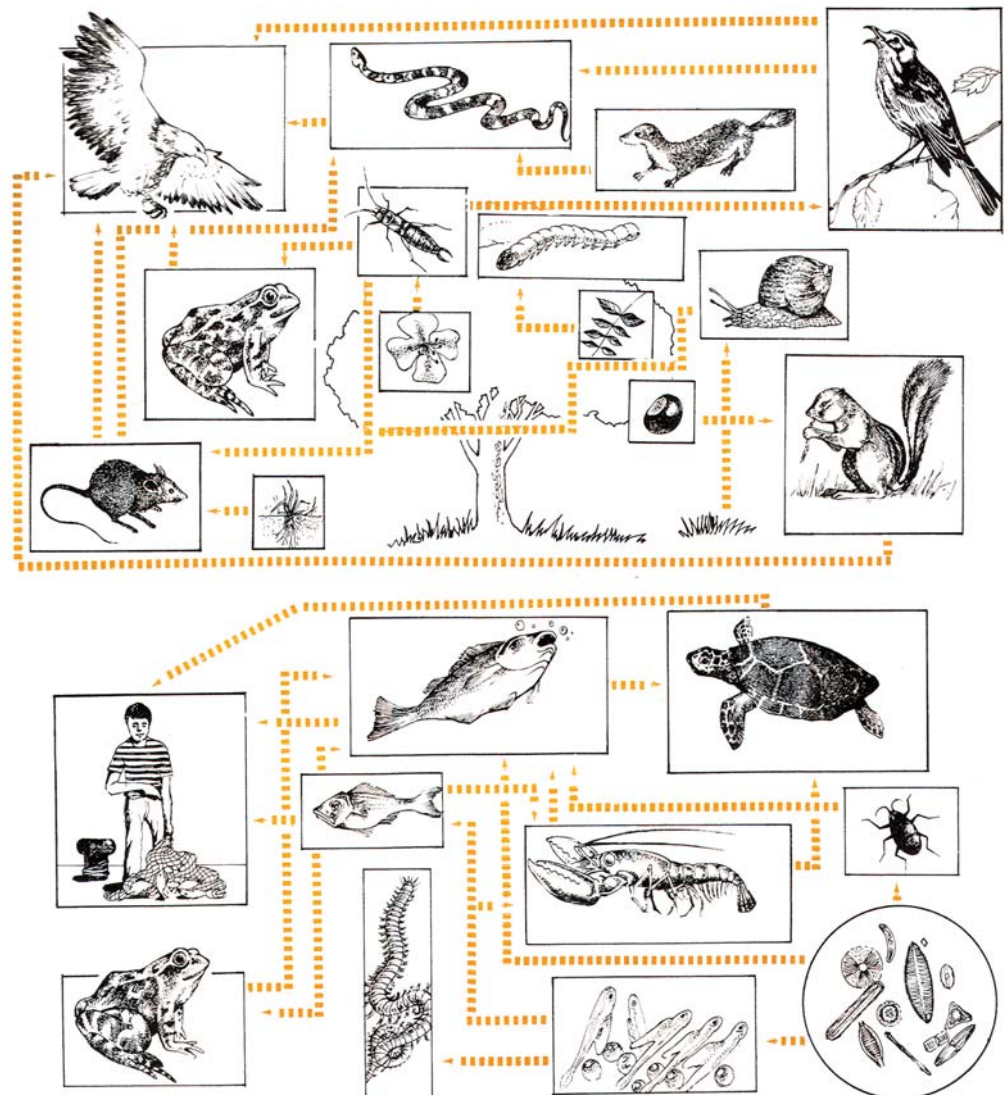
*"For God speaks time and again, but a person may not notice it." (Job 33:14)*

*"Then God said, 'Let the water swarm with living creatures, and let birds fly above the earth across the expanse of the sky.' So God created the large sea-creatures and every living creature that moves and swarms in the water, according to their kinds. He also created every winged bird according to its kind. And God saw that it was good. So God blessed them, 'Be fruitful, multiply, and fill the waters of the seas, and let the birds multiply on the earth.'"* (Genesis 1:20-22)

## The Cycles of Nature

Plant life is the base of any food chain. Animals depend on plant life; the plant-eaters provide food for the meat-eaters. This is a typical food chain in a hardwood forest: Squirrels eat acorns; land snails and earthworms live on decayed vegetation. Beetles and mice eat plants. Toads, shrews, snakes, and birds eat insects, and with the squirrels, provide food for the red-tailed hawk.

Life in the water is based upon the water's ability to support microscopic plants. In this food chain of interdependence, plankton and algae form the base, then come fish eggs and aquatic insects, crayfish, and minnows. Frogs eat minnows, insects and crayfish and all are food for the largemouth bass and snapping turtle. Man depends on the chain for food and recreation.



# Plants Poisonous If Eaten

- Notes -

Type of Plant	Toxic Part
<i>House Plants</i>	
Hyacinth, Narcissus, Daffodil .....	Bulbs
Oleander .....	Leaves, branches
Poinsettia .....	Leaves
Dieffenbachia .....	All parts
Elephant Ear .....	All parts
Rosary Pea .....	Seeds
Castor Bean .....	All parts
Mistletoe .....	Berries
<i>Flower Garden Plants</i>	
Larkspur .....	Young plant, seeds
Monkshood .....	Fleshy roots
Autumn Crocus .....	Bulbs
Star of Bethlehem .....	All parts
Lily-of-the-Valley .....	Leaves, flowers
Iris .....	Underground stems
Foxglove .....	Leaves
Bleeding Heart .....	Foliage, roots
<i>Vegetable Garden Plants</i>	
Rhubarb .....	Leaf Blade
<i>Ornamental Plants</i>	
Daphne .....	Berries
Wisteria .....	Seeds, pods
Golden Chain .....	Bean-like capsules in which the seeds are suspended
Laurels, Rhododendron, Azaleas .....	All parts
Jasmine .....	Berries
Lantana Camara (Red Sage) .....	Green berries
Yew .....	Berries, foliage
<i>Trees and Shrubs</i>	
Wild and cultivated cherries .....	Twigs, foliage
Oaks .....	Foliage, acorns
Elderberry .....	All parts, especially roots
Black Locust .....	Bark, sprouts, foliage
<i>Plants in Wooded Areas</i>	
Jack-in-the-Pulpit .....	All parts, especially roots
Moonseed .....	Berries
Mayapple .....	Apple, foliage, roots
<i>Plants in Swamp or Moist Areas</i>	
Water Hemlock .....	All parts
<i>Plants in Fields</i>	
Buttercups .....	All parts
Nightshade .....	All parts, especially the unripened berry
Poison Hemlock .....	All parts
Jimson Weed (Thorn Apple) .....	All parts



## Plants Poisonous If Touched

The following plants produce an oil (urushiol) that will cause an allergic reaction in most people. Contact with any portion of the plants can transmit the oil to skin, clothing or gear. The oil can stay active on any surface for up to 5 years. The oil on one's hands can easily be transmitted to other parts of the body. Oil on clothing can even cause a reaction to a person not directly in contact with the plant. Clothing that might have been contaminated should be handled with care and possibly washed alone. Never burn any of the plants because the oil can become airborne and cause severe respiratory reactions.



**Poison Ivy** is found in almost every part of the United States. Its leaves are divided into three shiny leaflets. It may be a climbing vine or a standing bush. Sometimes its leaves resemble oak leaves. It may have white berries in clusters and often red stems.



**Poison Oak** is a western form of poison ivy. Its leaves are oak leaf shaped. It usually grows as a shrub and may have white berries.



**Poison Sumac** is usually found in the eastern part of the country. It grows in swampy areas. Its leaves are divided into 7 or 13 leaflets. It may have white berries.



## Poisonous Snakes

- Notes -

**Rattlesnakes** have tail rattles and usually give warning with them. There are many varieties in all parts of the country.



*"Now the serpent was the most cunning of all the wild animals that the LORD God had made."  
(Genesis 3:1)*



The **Copperhead** is found mostly in rocky, wooded areas. It is found in many parts of the country.

*We should exercise caution in the outdoors to avoid being bitten by a snake. Jesus commanded us to be wise as serpents and gentle as a dove in Matthew 10:16.*

The **Cottonmouth or Water Moccasin** is found in the south and gets its name from white inside of its mouth.



The **Coral Snake** is found in gulf coast states. It has alternating wide bands of black and red separated by narrow bands of yellow. "Red and Yellow - Kill a Fellow" "Red and Black - Friend of Jack (or Venom Lack)."



## Harmful Insects

### Spiders

Most spiders are helpful insects and only a few are dangerous.



The **Black Widow** is easily identified by her shiny black body and she usually has a reddish hourglass shape on the underside of her stomach. The Black Widow spins webs that lack shape and form and are erratic in appearance. The Black Widow is usually found under ledges, rocks, plants and debris piles. This spider is shy and nocturnal. She usually stays hidden, hanging upside down in her web. Although she is not aggressive, she may rush out and bite when her web is disturbed or if she becomes trapped in clothing.

Photos not to scale.

The **Brown Recluse** spider is commonly found around homes and farm buildings in the southern and central states. The mature Brown Recluse spider, also called the “brown spider” or “fiddleback spider,” has a body about 3/8-inch long and 3/16-inch wide. Its leg span is about the size of a half dollar. The color of the Brown Recluse spider varies from gray brown to deep red brown and the most noticeable mark is a dark, fiddle-shaped area on the front half of its back. This spider is not aggressive and prefers to hide in dark quiet places. It will bite if handled or when it is trapped in clothing.



The bites from both the Black Widow and Brown Recluse spiders are serious enough to require immediate medical attention. The bite of these spiders is especially dangerous to children, to the elderly, and to those in poor physical condition. However, fatalities from the bite of these spiders are very rare. Normal reactions usually include intense local pain, a blister, inflammation of the affected area, and an ulcerating sore. *Hint! Shake out clothing and shoes before getting dressed.*

## Fire Ants

Fire ants and their dangers have become more prevalent in recent years. They are from 1/8" - 1/4" in size and yellowish to reddish black in color. Fire ants are found in most states. Fire ants can inflict painful stings. They can cause death to young wildlife and produce sores and nausea in humans. They are very active and aggressive.



## Wasps and Hornets

A Wasp or Hornet sting can be serious, so leave them alone. The kinds of wasps and hornets include: yellow jacket wasp, black wasp, red wasp and various hornets.



### Bee

The Bee is a busy, hard worker. Leave it alone and it will leave you alone. Bright, colorful clothing and fragrances will attract bees.

## Mosquito

Only female Mosquitoes buzz and bite. But they are still bad pests and may carry serious diseases. Use spray or repellent.



### Wood Tick

The Wood Tick can cause a serious wound and can carry serious diseases. Campers and hikers should inspect themselves daily for ticks. Remove any ticks found, clean the bite area and apply antiseptic.

## Chiggers

Chiggers (or red bugs) are a real nuisance that can cause uncomfortable itching in sensitive areas like ankles, legs and the groin. Use repellent before walking in tall weeds or grass.



## Scorpions

The scorpion is a unique insect that looks more ferocious than it is. Although they rarely sting unless bothered or touched accidentally (like in clothing or bedding), their sting is extremely painful. Being nocturnal, they generally hide during the day under logs or rocks.

## - Notes -

*"Let heaven and earth praise Him, the seas and everything that moves in them." (Psalm 69:34)*

## Nature Collections

Because of ecological and environmental concerns, you must be sensitive about the kinds and amounts of specimens you collect. Generally, nature should be undisturbed to help preserve the beauty and allow ecological patterns to continue naturally.

Books are good resources to learn about our natural world. Many basic nature books are inexpensive and provide interesting information.



**Leaf Prints** make an easy and attractive collection. Press leaves in a book to make them flat. Pin the leaf to a sheet of construction paper. To spatter, dip an old toothbrush in ink and pull a stick across the brush toward yourself. Remove the leaf and you have an attractive silhouette.

**"Know Your Trees"** displays are a little more involved, but help more in identifying trees. Make a plywood or cardboard background with the silhouette of a full grown tree of a particular variety. Then mount a leaf, some fruit or seeds and a piece of bark from that tree.

**Casting Animal Tracks** is a lot of fun for a hike. Take plaster of Paris, water, some type of mixing container, small paint brush, paper clips and cardboard strips with you into the woods. When you find a track, carefully brush away twigs and trash with the paint brush. Use a cardboard strip one and one-half inches wide and long enough to surround the track. Fasten strip with paper clip to form a dam. Push down lightly into the dirt. Mix the plaster with water until you have a thick, creamy consistency. Pour slowly over the track. After plaster hardens (about 30 minutes), lift out and peel the cardboard away. Paint it for an attractive room decoration and useful addition to your nature collection.





**Butterfly Collections** begin with a collecting net. You can buy one or make one out of inexpensive netting material and an old badminton racket. Sew the netting into a conical shape and then sew or weave it into the badminton racket.

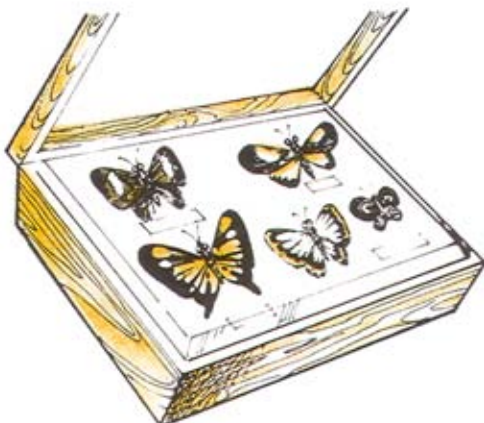


The “killing jar” consists of a wad of cotton in the bottom of a jar soaked in alcohol. Drop the butterfly in the jar and quickly close the lid. He will die painlessly and quickly.

The spreading board is made with a center channel for the insect’s body. Make this by gluing two strips of corrugated cardboard on a larger sheet of corrugated cardboard. Lay the butterfly down with its body in the channel. Lay small strips of paper or lightweight cardboard over the butterfly’s wings and pin through these strips. Leave until dry, about two days.

Mount and label your collection in a small box.

The butterflies can be mounted and framed behind glass if you remove the bodies from the wings and replace with art or painted paper bodies the same size. This will make an attractive decoration for your room!



## - Notes -

*“Therefore if anyone is in Christ, there is a new creation; old things have passed away, and look, new things have come.”  
(2 Corinthians 5:17)*

**Spider Web Collecting** can be an amazing hobby. First spray the web with spray paint in a color that will contrast with the construction paper you use. Then swish the cardboard or construction paper through the web and you have a colorfully mounted spider web.



Other nature collections might include rocks, fish in an aquarium, snakes or frogs in a terrarium, flowers or other plants, insects other than butterflies, nature craft collections, nature jewelry, nature Christmas ornaments, and nature musical instruments.



## Group Nature Activities

*Spend time outdoors being still and reflecting upon who God is and what He has done.*

**Find a Treasure** - Play on short walks outdoors. Each person in the group searches for his own treasure, which may be anything interesting or beautiful that is seen along the way. The treasures are not touched or collected. Instead, everyone stores them in their minds. At the end of the walk,



participants may describe the treasure in a phrase or single sentence written on a large sheet of paper passed around the group, or on individual slips of paper. The treasures may then be posted somewhere for all to read or shared aloud. With some groups, it is fun to sit down at the end of the walk and let each person tell the others about the thing he saw that he liked best. In camp, this game may be played on the way to the camp fire, with the treasures a part of the camp fire program.



### Other Activities Might Include:

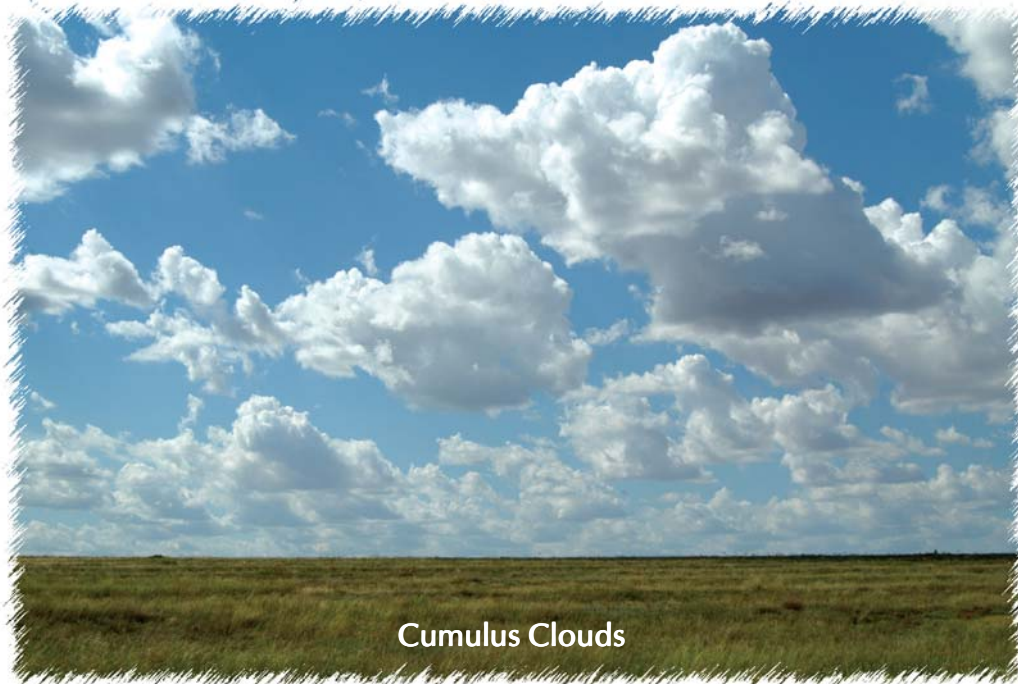
- Looking at everything through a magnifying glass - like a grasshopper or a spider. (Look closely at the eyes. What you see is amazing).
- Watching an ant carrying something. Watch it until it gets its load all the way home.
- Watching a bird or insect. Explain what you think it is doing.
- Watching a bird put on its "raincoat." (It pulls the oil gland back by the tail to fill its beak with oil, then passes the feathers through its bill to oil and "zip" them.)
- Taking photos of animals.

## Forecasting Weather

### Weather Sayings

Weather sayings are general indicators for current or upcoming weather conditions. The following have been used for many generations.

- Evening red and morning gray  
are certain signs of a fine day



Cumulus Clouds

- Cotton floating in the air,  
moderate wind and weather fair.

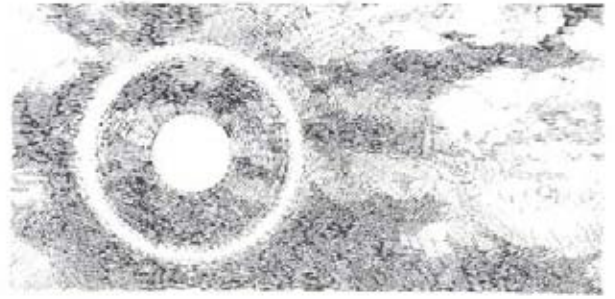


- Mackerel sky, storm is nigh.

*"The north wind produces rain, and a backbiting tongue, angry looks."  
(Proverbs 25:23)*



- A circle around the moon tells of a storm pretty soon.



- When stars above are bright, a good day is still in sight.

- When the dew is on the grass, rain will never come to pass.

- When grass is dry in morning light, look for rain before the night.

- When the grass is dry at night, look for rain before the light.



- Red sky in the morning, sailors take warning. Red sky at night, sailor's delight.
- Rain before seven, clear before eleven.
- Sounds travel far and wide, a stormy day will betide.

### Weather Indicators

There are many items in nature that react to current and upcoming weather conditions. The following will help you enjoy and maybe predict the weather.

- The common dandelion is an excellent barometer when its flower has gone to seed and its top is fluffy. If it's going to be a good day, it will be round like a ball. If rain is coming, it will shut like an umbrella.



- Crickets can tell us the temperature. Count the number of chirps in 14 seconds and add 40. The total is the temperature. It's accurate 90 percent of the time.



- Clover acts as a barometer. When rain is coming, the leaves shut together and don't open until good weather is for certain. Stems of clover and many tall grasses tend to swell a day or two before a storm.

### Fair Weather Signs

- Fog in the morning.
- Swallows flying high.
- Spiders very busy.
- Early morning showers.

### Rain Signs

- The tree frog cries.
- Fish swim near surface.
- Flies bother you and sting you.
- Smoke beats downward.
- Low clouds move swiftly.
- Pale yellow sunset.

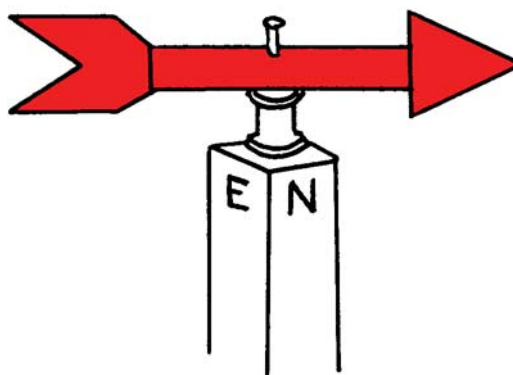


### Weather Vane

Knowing something about the weather can be handy outdoors. Try making a weather vane. It will tell you in which direction the wind is blowing. Winds carry weather from one place to the other.

You will need:

- Heavy corrugated cardboard
  - Long thin nail
  - Wooden spool
  - 2x2 inch stick, 5 or 6 feet long
  - Compass
1. Cut cardboard in shape of arrow.
  2. Push nail through center.
  3. Place in spool.
  4. Drive long stick into the ground.
  5. Place spool and vane on stick and drive nail in center of stick.
  6. Mark directions (north, south, east, west) on each side of the stick using the compass to tell direction.
  7. Adjust so the vane turns easily.
  8. Note the direction the arrow points. Wind is from that direction.



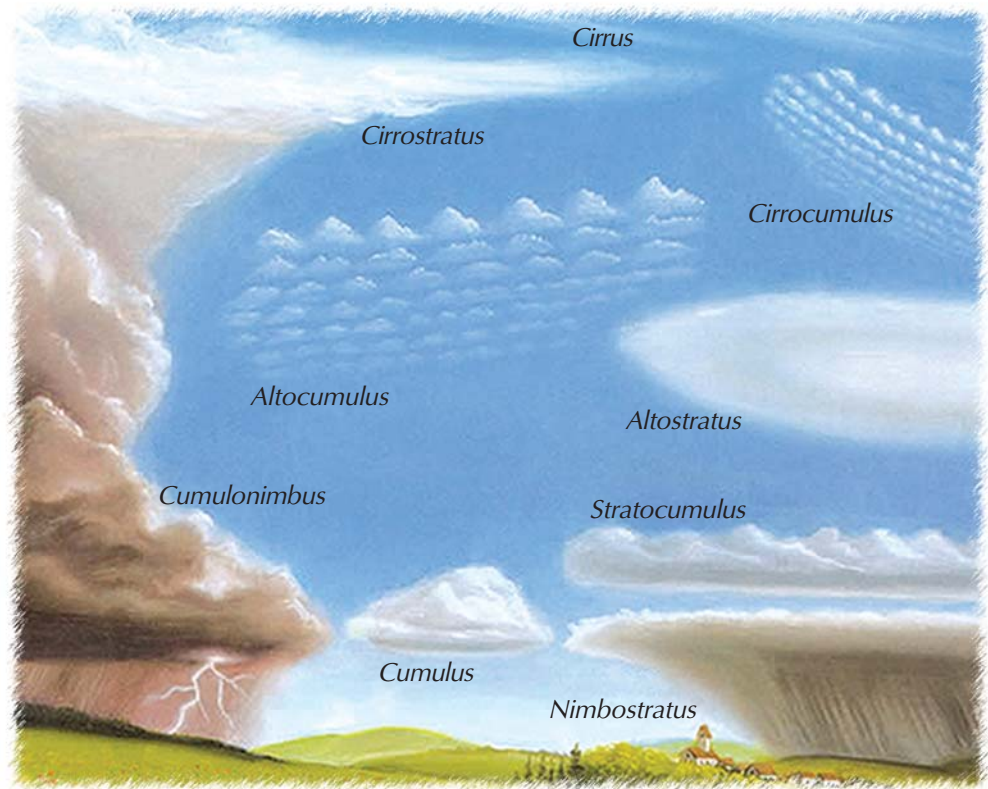


## - Notes -

*"LORD, our Lord, how magnificent is Your name throughout the earth! You have covered the heavens with your majesty. Because of Your adversaries, You have established a stronghold from the mouths of children and nursing infants, to silence the enemy and the avenger. When I observe Your heavens, the work of Your fingers, the moon and the stars, which You have set in place, what is man that You remember him, the son of man that You look after him? You made him little less than God and crowned him with glory and honor. You made him lord over the works of Your hands; You put everything under his feet: all the sheep and oxen, as well as animals in the wild, birds of the sky, and fish of the sea passing through the currents of the seas. LORD, our Lord, how magnificent is Your name throughout the earth!" (Psalm 8)*

### Clouds as Signs of What is Coming

Like frost and dew, clouds come from water vapor in the air. Many clouds are made up of tiny drops of water. They are like the little clouds of water that form near the spout of tea kettles or above the whistle of a steam engine. Other clouds are made up of bits of ice. They may be so high in the sky that the water has frozen to ice crystals like snow. If you were to go up into the cloud, you would find that it is like going into a fog because, fog is simply a cloud close to the ground. Not all clouds are alike. You have seen the big, fluffy kind and also the dark gray types. Scientists have names for many different kinds of clouds. The picture below depicts the main types. Clouds producing rain have "nimbo" or "nimbus" in their names.



*It is unlikely that all these kinds of clouds would be in one area of the sky at the same time.*

### Cirrus Clouds

These clouds which we see high in the sky looking like wisps or curls of white smoke are called Cirrus clouds. They are found at 30,000 feet and higher and are generally made up of ice crystals. At their high altitude they move along very fast blown by the strong winds. You have seen them with their thin, feather-like or flake-like appearance. They are usually white and fibrous and are sometimes called "Mare's Tails."





### **Alto-Cumulus and Alto-Stratus Clouds**

Coming down a little lower, we see the middle clouds, between 5,000 and 15,000 feet altitudes. These middle clouds are either Alto-Cumulus or Alto-Stratus. The Alto-Cumulus are sheep-back-like and woolly, arranged in waves, sometimes mackerel-like. Light sprinkles of rain may fall from them. The Alto-Stratus are sheetlike clouds gray and bluish in color, through which the sun is barely seen.



### **Cumulus/Stratus Clouds**

The lowest clouds, which we see usually from 900 to 5,000 feet are Cumulus or Stratus. Cumulus clouds are piled or heaped up in appearance. On a fair day they are the soft fluffy looking clouds at low levels and usually mean good weather is ahead. Stratus clouds are flat and layer-like in appearance. On a dark day when you expect it to rain, these clouds are the ones you see. Fog is Stratus clouds which have formed near the ground.



## *- Notes -*

*We can know about natural disasters that might occur in our area and help your family, church and community be prepared for such occurrences.*

### **Cumulo - Nimbus Clouds**

Also known as "Thunderheads" build up rapidly creating thunderstorms that generate heavy downpours. These clouds can produce high winds, lightning, large hail and tornadoes.





# Sharing God Through Nature

- Notes -

- **Bat** - The radar-like actions of a bat can remind us of the importance of listening to God.

- **Porpoise** - The sonar-like actions of a porpoise can also remind us of the importance of listening to God.



- **Turtle Shell** - This natural protection, made by God, reminds us of His protection over His people.



- **Birds** - Consider how God feeds them. Are we not better? Matthew 6:25-26

- **Flowers in Fields** - If God clothes the fields, shall He not do much more for you? Matthew 6:28-30.

- **Bird Nests** - (a) Birds can be identified by their nests. Orioles and wrens have intricately made nests while blue jays and blackbirds have sloppy nests. We, too, can be identified by the way we build our lives and our homes. (b) As birds build their nests on rocks and in high places for safety, we find shelter, safety, and strength by building our lives on faith in Christ, close to God. Job 39:27-28 and Psalm 61:2-3.



*"But ask the animals, and they will instruct you; ask the birds of the sky, and they will tell you. Or speak to the earth, and it will instruct you; let the fish of the sea inform you. Which of these does not know that the hand of the LORD has done this? The life of every living thing is in His hand, as well as the breath of all mankind." (Job 12:7-10)*



## - Notes -

*"Make your own attitude that of Christ Jesus, who, existed in the form of God, did not consider equality with God something to be used for His own advantage. Instead He humbled Himself by assuming the form of a slave, taking on the likeness of men. And when He had come as a man in His external form, He humbled Himself by becoming obedient to the point of death – even on the cross. For this reason God also highly exalted Him and gave Him the name that is above every name, so that at the name of Jesus every knee should bow – of those who are in heaven and on earth and under the earth – and every tongue should confess that Jesus Christ is Lord, to the glory of God the Father."*  
(Philippians 2:5-11)

- **Resurrection Plant** - Shows how water and sunlight cause growth. Use it to teach about the resurrection of Christ and of Christians.
- **Barrel Cactus and Others** - Stores water which can be used if lost in the desert. God provides! Isaiah 43:20.
- **Rocks** - (a) Israel brought 12 rocks for the 12 tribes and made a monument. (b) God is my rock and my fortress. Psalm 31:3. (c) Peter's faith in Christ is a rock upon which Christ builds His church. Matthew 16:18.



- **Nature in General** - Makes even the invisible things of God known. Romans 1:19-20.







• **Trees** - (a) All trees bear fruit as do all Christians. (b) The kind of fruit tells what kind of tree it is as the Christian's fruit tells what kind of Christian he is. (c) Hardwoods lose their leaves in the winter and rest while evergreens and conifers are green and active year round. Some Christians take a rest like the hardwoods, and others are always active like the evergreens. Which are you? (d) Trees grow because their roots are deep to get water and minerals and their leaves are high for sunshine. Christians grow when they are rooted deep in Bible study and ready to praise God in prayer.

## - Notes -

*"Learn this parable from the fig tree: As soon as it branch becomes tender and sprouts leaves, you know that summer is near. In the same way, when you see these things happening, know He is near - at the door!"  
(Mark 13:28-29)*

• **Soil or Dirt** - The parable of the sower. Matthew 13:18-23.





Have you ever thought about what the rainbow is? The rainbow is God's promise to us that He will never destroy the earth again by floods. God keeps His promises. Do you keep your promises to Him?



- **Seeds** - (a) Faith of a mustard seed. Matthew 17:20. (b) Parable of sower. Matthew 13:18-23. (c) Witnessing as seed sowing, etc. (d) Growth.

- **Weeds** - Like sin, crowd out the goodness of life.

- **Metamorphosis** - The word "metamorphosis" means change. Insects go through metamorphosis. Butterflies change from eggs to larvae to cocoons to adult butterflies. We have a type of spiritual metamorphosis when we change from a "lost" person to a Christian. 2 Corinthians 5:17.



- **Rainbows** - Now that we have looked all around us, let's look up into the sky. We see the rainbow in the sky after a good rain. If the rainbow is in the east, we will have good weather, because air currents move east. If the rainbow is at the end of the turbulence, it will be to the east of us. If the rainbow is in the west and the turbulence is moving east, we will probably have bad weather. Genesis 9:13-17.

