

The World of Nature is a Wonderful Place

The world of nature is a wonderful place of discovery for young children, so...

Take them outside. Let them play. It is the way children "learn how to learn." It is how:

- They get to learn about the world around them
- They learn to appreciate and love the wonders of the natural world
- They can improve their fitness level
- They challenge themselves to try new things and stretch a little - climb a tree, turn somersaults
- They learn valuable life skills
- They discover Nature's laws. For example: the mechanics of motion by doing somersaults in the grass or the laws of gravity by hanging upside down from a tree branch

Let them get dirty. When children play in the sand and the mud they will:

- Develop their large and small motor skills
- Improve their problem-solving skills
- Develop their powers of concentration by focusing on one activity for a long time
- Experiment with language and improve their word skills
- Learn how to cooperate with other people
- Figure out where and how they fit in the world

Let them explore. As they discover the wonders of nature's treasures, and as they discover how the natural world works, they are developing skills that will last a lifetime.

- A sense of curiosity
- Creativity
- Empathy

JOIN IN!

Play and exploration isn't just good for kids: it's good for grownups too.

So join in and get a little dirty!

But remember: this is the child's world.

Follow his/her lead and enjoy where it takes you.

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Sun and Rain, Light and Shade, Winds and Clouds

Group Activity

Follow your shadow (an outdoor activity)

You will need:

- Large sheets of paper and crayons
- A sunny day

Ask children to find their shadow. Tell them to jump, shake their arms, etc, and see what their shadow does. Can they run and chase their shadow? Is it sometimes in front of them, and sometimes behind them? Do they know why?

Give each adult and child a sheet of paper and crayons. As the child stands still the adult can trace the outline of the child's shadow. Then have the children color their shadow.

Suggest that the children try to find their shadow at different times of the day, and see if it changes shape and size. Or go for a family moonlight walk and look for shadows.

If time, the children and adults can go on a shadow hunt in the immediate area and see what shadow patterns they can find.

Shadow play (an indoor activity)

You will need:

- Black card or construction paper, drinking straws, large sheets of paper, crayons
- Flashlights or other light source
- A room that can be darkened and a blank wall or screen

Using the card or construction paper, make simple puppets using basic animal shapes. Cut out the puppets and glue a drinking straw to the base of each to create a handle.

Darken the room then shine a beam of light onto the puppets to create a shadow on the wall or screen.

You may wish to have extra puppets prepared, so the children can create their own shadow puppets. Or they may wish to use their hands to create shadow patterns.

Attach large sheets of paper to the wall or screen. Have the children stand so that their shadow is cast onto the paper. The adults can trace the outline of the children's' shadows, ready for the children to color.

Creepy Crawly Creatures in the Wild Group Activities

Creepy Crawly Treasure Hunt

An outdoor activity to discover the life that lives all around us.

You will need:

- A grassy area
- Several lengths of rope, or hula-hoops
- Sheets of white card (approx 8 $\frac{1}{2}$ " by 11")
- Reference materials and magnifying glasses

Ask the children if they can name any tiny creatures that might live in the grass (ants, grasshoppers, etc.) Tell them they are going on a Creepy Crawly Treasure Hunt to see what they can find.

Divide them into small groups, with adults in each group, and give each group a length of rope or a hula-hoop. Instruct them to lay the rope on the ground in a circle. A hula-hoop can be used instead. Also give each group sheets of white card.

Their job is to see which "Creepy Crawlies" live in their circle. Talk about being very careful not to harm anything. The adults can help to get the bugs to crawl on the card, so they can be seen more clearly, but it is better not to handle them.

Have reference materials available for anyone who wants to identify what they have found, but this should not be a priority.

Can you find more with a magnifying glass?

When the children come back together let them tell you what they have found. Suggest they have a Creepy Crawly Treasure Hunt at home with their family.

End the session with a story such as Eric Carle's *The Very Hungry Caterpillar*.

Sun and Rain, Light and Shade, Winds and Clouds

Simple activities to do at home

Sun Prints

Let the sun create it's own special art work.

You will need:

- Construction paper in dark colors
- White card and scissors
- A sunny day
- A flat surface outdoors

Use the white card to cut out simple shapes.

Place the construction paper on a flat surface in a sunny spot outdoors. (Late morning to mid-afternoon works best.)

Leave the shapes on the paper for 1-2 hours. The sun will bleach the color from the paper and leave dark shapes where the cutouts were placed.

Experiment with other objects - leaves, rocks, necklaces, etc. to make patterns.

Make Your Own Rainbow

You will need:

- A sunny day
- A garden hose with spray attachment. (Or put your finger over the end of the hose to create a fine spray.)

Stand together with your backs to the sun. Create a fine water spray in front of you. If you look directly into the spray at a 45% angle, you can see the colors of the rainbow. (You may have to wriggle around a little to get into the right position.)

Look around you. You will see drops of water from the spray on leaves and plants and other objects. Can you see rainbows reflected in the water drops?

Indoor Rainbow

You will need:

- Clear glass jar or tumbler
- Water
- Windowsill in bright sunlight
- White paper

Fill the jar or tumbler with water to the top, and set on windowsill in bright sunlight. (It should stick over ledge a little bit.)

Place white paper on floor or counter surface beneath the window. As the sun shines through the water, it will cast a rainbow onto the paper.

Chase a Rainbow

Next time you are driving together in the rain look for a rainbow.

If there's time, and if the traffic allows, follow the rainbow and see where it leads.

Imagine what you might find at the rainbow's end.

A Walk in the Rain

Oh no! It's raining. But you can still have fun. Put on rain gear, take an umbrella, and go on a rain walk. Can you tell:

- What do birds do when it rains?
- What makes puddles?
- How do raindrops taste?
- Where do worms go when it rains?
- What happens to your umbrella when the wind blows?
- What happens when you jump in a puddle?
- What else have you discovered?

Racing Raindrops - an indoor activity

Sit comfortably together and watch the raindrops on the window. Encourage your child to trace the patterns the raindrops make with her/his finger.

Then choose a couple of raindrops at the top of the window and guess which will reach the bottom first. Ready, get set, go!

Run with the Wind

Take a trip to the park on a windy day. Watch the trees blowing in the wind. See the fluttering leaves. Look at the birds and see how they fly in the wind.

Now pretend to be a bird and fly with the wind. Spread your arms and RUN. How does the wind feel in your face? In your hair? On your arms?

Imagine where you would go if you could really fly with the wind.

A Balloon-full of Air

You will need:

- Balloons in many colors
- String or ribbons

Blow up several balloons and tie them with string or colored ribbons. Take the balloons outside and see what happens to them when the wind blows.

Draw faces on some of the balloons with a felt tip pen. Let these balloons go and watch them float away until they are out of sight. Imagine together what the balloons might see on their travels.

Blow up another balloon, but instead of tying it with string, pinch the neck closed, then suddenly let go. What does the balloon do? How far does it fly? What made it fly so fast?

Blow up another balloon and again pinch the neck closed. Slowly let the air out of the balloon. Can you hear the air escaping? Can you feel it? Can you see it?

A Little Night Walk

You will need:

- A clear moonlit night
- A flash light

Take a family walk in the moonlight. What do you hear? See? Smell?

Do you have a shadow? Is it different from your daytime shadow?

Look up in the sky. What do you see? Can you count the stars?

If you can find a quiet grassy spot, lie down together, be very quiet, and enjoy the beauty of the night sky.

Plan to take another walk together on a night when there is no moon, but a clear starry sky.

More Family Activities with Small Children

- Blowing bubbles.
- Playing with pinwheels
- Kite flying
- Running through the sprinklers
- Making and flying paper planes

Note: All these activities can be done at little or no cost. Any materials you need to buy can be found on sale at most drug stores.

Creepy Crawly Creatures in the Wild

Simple activities to do at home

Spider Web Catchers (1)

You will need

- Black Card
- Talcum powder
- Spray glue
- Scissors

Take a walk outside, looking for spider webs. (Early morning is best.)

When you have found a web, first make sure there is no spider in it. (You want to catch the web, not the spider.)

Gently blow talcum powder all over the web, which will now be easier to see.

Spray one side of the black card with glue, and VERY GENTLY bring the card up behind the web, until the web sticks to the card. Carefully cut the web away from its original supports.

You can protect the web by slipping it into a plastic sleeve or you can frame it to show off your spider's art work.

Spider Web Catchers (2)

You will need:

- A flexible twig, about 12-15" long
- A length of yarn or string
- Scissors

Prepare your "web catcher" by gently bending the twig in half to form a loop. Tie the two ends together with string or yarn to fasten your loop.

Take a walk outside, looking for spider webs. (Early morning is best.)

When you have found a web, first make sure there is no spider in it. (You want to catch the web, not the spider.)

VERY GENTLY bring the looped "web catcher" up behind the web, until the web is caught in the loop.

Gently cut the web away from its original supports.

Note. If you return to the same spot the next morning you will probably find that the spider has spun a new web overnight.

Buggy I Spy (1)

A simple quiet game to play indoors or out.

Say to your child "I spy a creepy crawly with wings. It is red with black spots. What is it?" (*Ladybug.*) Or "I spy a creepy crawly with eight legs, and it spins its own home. What is it?" (*Spider.*)

Try to pick examples that your child can easily recognize, such as ants, butterflies, pill bugs, caterpillars. After a few turns, change roles.

Buggy I Spy (2)

Sit quietly in a window, or in a favorite place outdoors and WATCH. You will be surprised at how many creepy crawlies you can see from where you're sitting. Don't worry if you don't know their proper names. Let your child create his/her own names.

Going on a Bug Hunt.

You will need:

- Plastic tweezers or a wooden spoon, so the bugs can be picked up without being hurt.
- A magnifying glass
- A clear jar with holes punched in the lid
- A handful of moist soil
- Green leaves
- Twigs
- Gloves

Start by making a temporary home for the bugs you collect. Place a small amount of soil in the bottom of the jar, then add a few leaves and twigs.

Take the tweezers or wooden spoon, magnifying glass, and the jar with its lid outside. (If you're going out after dark you'll also need a flashlight.)

Wearing gloves, start hunting. Check around flowers, bushes and trees, underneath rocks and sticks. Turn over a little soil with a stick.

Once you've found a bug that you want to study more closely, collect it VERY GENTLY with the tweezers or the wooden spoon, and place it - again VERY GENTLY- in the jar.

Now you can study it more closely, with the magnifying glass if you wish. Then make sure to let it go again.

Farming Snails and Slugs

You will need:

- Paper plate
- Apple slices and lettuce leaves
- Four small rocks
- A tile, piece of wood or strong card, slightly larger than the plate

Put the apple and lettuce leaves on the plate and place on the ground outdoors, near plants.

Cover the plate with the tile, wood, or card, resting it on the rocks. This will create a space for the creatures to crawl onto the plate.

Leave overnight.

Check the plate the next morning. What do you see? Slugs and snails may have left their slimy trails, or they may be hiding under the lettuce, or even under the plate. What else found its way onto your plate?

After you've had time to study your snails and slugs, let them go again. Make sure to place them away from your treasured plants.

Wiggle Worms

If you're digging in the garden ask your child to be your "Worm Spotter". Explain that worms are good gardeners - they improve the soil. Remind them to handle the worms with care and return them to the soil.

These activities provide an excellent opportunity to model respect for nature's creatures.
Your child will follow your lead.

Note: All these activities can be done at little or no cost. Any materials you need to buy can be found on sale at most drug stores.

Roots, Shoots and Seeds

Simple activities to do at home

1. Kitchen Gardening

A Vegetable Top Forest

You will need:

- Selection of root vegetable tops (carrot, beet, turnips, kohlrabi, etc.)
- Foil tray
- Very small rocks
- Water
- Potting soil
- Bird seed or grass seed

Cut the tops off a selection of vegetables. (Beets, turnips and other large vegetables need half the root. Carrots need about one inch.)

Arrange the vegetable tops in the foil tray and surround them with the small rocks. Pour in $\frac{1}{2}$ " of water and place in a sunny windowsill.

Add more water each day and make sure the roots do not dry out.

When the leaves are about 3" tall, sprinkle potting soil and the bird seed or grass seed over the rocks. Continue to water each day.

In about a week you will have a leafy grassy forest that you can decorate with model animals.

Pineapple Surprise

A spiky pineapple top standing in water will grow roots. You can then pot it in potting soil, keep it in a warm place, and wait for it to grow a new spiky top.

Grow an onion

What you will need

- A large, firm onion
- A glass jar filled with water

Choose a large firm onion and rest it (root end down) in the mouth of the jar. After a few weeks the onion will start to grow roots, which will spread down into the water.

Later the onion will start to grow leaves, and you can plant it in a pot, or the garden, to see if it grows a flower.

Roots and shoots

Do you have an extra **sweet potato** in the vegetable bin? Half fill a plant pot with potting soil. Place the sweet potato in the pot and completely cover it with more soil. Place pot inside a plastic bag.

Keep in a warm dark place until leaves begin to sprout. Remove pot from the plastic bag, stand it on a saucer and place it in a warm sunny spot indoors. It will grow into a twining house plant with sweet-smelling flowers

If you cook with **fresh ginger root**, try cutting off a section (about 2 inches) that has developed growing buds. Plant in potting soil in a plant pot, water, then place pot inside a plastic bag. Keep in a warm dark place until leaves begin to sprout.

Remove pot from the plastic bag and place it in a warm sunny spot indoors

Try growing "Kitchen seeds" - **apple, orange, tomato**. What else can you experiment with?

Beans in a glass jar

You will need:

- Empty, clean mayonnaise jar
- Paper towels
- Beans (from seed packet)
- Blunt-ended tweezers

Line the (inside) sides of the jar with 2-3 layers of paper towel.

Using tweezers, carefully place 5-6 beans between the paper towel lining and the sides of the jar. Gently pour about $\frac{1}{2}$ " water into the jar. The paper towels will absorb the water and provide a moist bed for the beans.

Place the jar in a well-lighted spot, away from direct sunlight.

Within a few days the beans should put out small rootlets, and within a few more days you will see small shoots appear. Keep the towels moist by adding a little more water each day. Be careful not to over-water.

When the shoots are about 2" tall you can carefully transfer the beans to plant pots filled with potting soil.

Beans on cotton

You will need:

- Small plastic container
- Sufficient cotton to cover the bottom of the container
- Beans (from seed packet)

Line the bottom of the container with cotton. Place 5-6 beans on the "bed" of cotton. Gently pour water into the cotton, until all the water is absorbed. (The cotton should be damp, not soaking wet.)

Cover the container with plastic. Place the jar in a well-lighted spot, away from direct sunlight.

Within a few days the beans should put out small rootlets. Remove the plastic, and within a few more days you will see small shoots appear. Keep the cotton moist by adding a little more water each day. Be careful not to over-water.

When the shoots are about 2" tall you can carefully transfer the beans to plant pots filled with potting soil.

2. Outdoor Gardening

Hand-me-down Gardens

a) Boot Gardening

You will need:

- Old worn-out boot (or boots)
- Potting soil
- Water
- Seeds (Nasturtiums work well. Or choose seeds that will germinate quickly, such as marigolds or radishes.)

Make drainage holes in the boot, then fill the boot to the brim with potting soil.

Sow seeds, and cover them lightly with potting soil. Water gently (a spray bottle works well.) Place boot in a sunny spot outdoors and water as needed.

Over time other seeds or seedlings can be added.

If you do not have an old boot, an old sneaker will work just as well.

b) Remember Your Hat and Gloves

Line an **old hat** with a plastic bag, fill with potting soil and you'll have a unique planter for your garden.

Or fill an **old pair of work gloves** with potting soil. Nail them to a fence and sprinkle allyssum seeds over the soil. Add a few nasturtium seeds.

Water gently and check each day for the first seedlings to appear.

3. More Ideas

A Pot of Sunshine

You will need:

- Calendula seeds
- Potting soil
- 8-10" clay pot

Place small rocks in the bottom of the pot for drainage, and fill with potting soil to about an inch from the top.

Place 4 -6 seeds in the soil, poking them in lightly. They should be evenly spaced so there is an equal amount of room between each one and the edge of the pot.

Cover the seeds with more soil until the pot is almost filled. Water lightly, making sure the soil is moistened, but the seeds are not disturbed. Place the pot in a sunny spot outside on a deck, porch or on a windowsill. Keep it moist until the seedlings appear. After this, water, but don't let the soil get soggy. When the plant gets larger and is established, watering once a day will be fine.

On very hot days it may need to be watered twice a day.

Within a few more weeks, your plants will begin to produce bright orange flowers.

Pinch off the blooms as they wither, and more will continue to grow. Near the end of the summer stop pinching the flowers off, and seeds will form. Let them dry on the plant, collect them and save for next year.

A Bird Seed Garden

If you have a birdfeeder, maybe the birds can spare a few seeds to make a mini-garden.

You will need:

- Assorted bird seed
- Flower pot
- Potting soil

Fill the flower pot with potting soil within $\frac{3}{4}$ " of the top. Sprinkle bird seed over the soil and press in gently. Cover with a fine sprinkling of potting soil.

Water, and place in a warm, well-lit place, and wait to see what comes up. Make sure to keep the soil moist.

A Salad Garden

- Assorted lettuce seeds
- Flower pot
- Potting soil

Fill the flower pot with potting soil within $\frac{3}{4}$ " of the top. Sprinkle lettuce seed over the soil and press in gently. Cover with a fine sprinkling of potting soil.

Water and place outdoors in a well-lit place, protected from the sun. Keep the soil moist, and look forward to your harvest.

It's a Wonderful, Watery world

Simple activities to do at home

Water Play

Important: *Make sure children are supervised at all times.*

Water play can happen in the sink, bath, wading pool . . . or anywhere there's water.

You will need:

- Suitable clothing or aprons. (*A simple apron can be made by cutting neck and armholes from a large plastic garbage bag. Be sure that it is long enough to protect clothing, but short enough to prevent tripping.*)
- Water in containers - bath tub, wading pool, buckets.
- Old towels

Just let the children play - splashing, pouring, making puddles, experimenting. Join in. You can have fun, too!

Making Fountains

You will need:

- Cylindrical containers such as shampoo bottles
- Plastic tubs, such as margarine tubs
- Nails, or something similar, to make holes in the containers

Punch holes up the side of the shampoo containers. (This is a job for adults.) Fill the containers with water and watch how the water spurts out like a fountain.

Punch holes in the bottom of the margarine containers. Make the holes of varying sizes. Pour water into the container and see what happens.

Let it Pour

You will need:

- Plastic containers of various sizes
- Funnels. (*Make your own simple funnel by cutting the top off a plastic soda bottle and turning it upside down*)
- Colanders
- Water * in large containers

Let your child play with the containers, pouring water from one to the other. Through exploration he/she is experiencing the mathematical laws of volume and capacity.

Note: this is *not* a time to teach. At this age the *experience* is sufficient. Teaching can come later.

* *This is an activity that can also be done with sand or dry corn meal.*

Sunny Day Painter

Next sunny day, fill buckets with water and give children paintbrushes to "paint" the outside walls of the house, the fence, or the concrete paths.

Oil and Water

You will need:

- Clear plastic soda bottle, with top
- Food coloring
- Cooking oil

Half fill the soda bottle with water, then add a few drops of food coloring. Add cooking oil until the bottle is $\frac{3}{4}$ full. Put the lid on tightly, and shake well. Watch what happens. Then let the bottle stand for a few minutes. Now what is happening?

Bubbles

Everyone loves blowing bubbles. Keep a supply of bubble solution on hand, either commercial, which can be bought inexpensively at your local drug store, or make your own.

Homemade Bubble Solution (1)

You will need:

- 2 cups *Lemon Joy* dish detergent
- 6 cups cold water
- $\frac{3}{4}$ cup *Karo* corn syrup (light)

Pour all ingredients into a large plastic container, with lid. An empty milk jug works well. Mix, shake, and let settle. Bubbles will be better and last longer if the solution sits overnight to settle.

Homemade Bubble Solution (2)

This recipe results in longer lasting bubbles.

You will need:

- 9 cups water
- 1 cup *Lemon Joy* dish detergent
- $\frac{1}{2}$ cup glycerin *

Pour all ingredients into a large plastic container, with lid. An empty milk jug works well. Mix, shake, and let settle. Bubbles will be better and last longer if the solution sits overnight to settle.

* *Glycerin is a clear liquid available in the first aid section of any pharmacy.*

Note: Store indoors, as sun weakens the mix.

Warning: This solution may stain clothing or carpeting. Use outdoors.

Bubbles, Big and Small

Your local drug store will usually carry a variety of bubble kits, but you can also experiment with what's at hand at home. For example:

For tiny bubbles, dip a flyswatter into the solution and shake.

For giant bubbles, pour solution into a wading pool (add more if needed). Add a hula-hoop to the bottom of the pool. Take off your shoes and socks and step in. Pull the hula-hoop up to your shoulders, or over your head. You will be inside a giant bubble!

Recycled berry baskets are wonderful for the smallest children. Multiple bubbles can be made by dipping the entire basket in the solution, then waving it through the air. It can also be thrust up and down in the solution to make suds.

Also experiment with:

- The plastic rings from a soda six-pack
- Empty cans with both ends cut out
- Wire coat hangers twisted into a large loop

To allow you to create bubbles large and small pour the solution into:

- Dish pan
- Oven pan
- Wading pool
- Garbage can lid

Just for Fun

Try adding a few drops of food coloring to the solution.