NATURE BASED PLAY

Learning with nature - cheap and free activities

Bringing the light of Christ into communities

Providing services for Churches of Christ in Queensland and working with Churches of Christ in Vic/Tas
About Churches of Christ Care

Established in 1930, Churches of Christ Care is one of Australia’s largest and most diverse not-for-profit organisations, operating more than 150 care services throughout Queensland and Melbourne, Victoria, with the support of over 3,200 staff and almost 900 volunteers. It is active in the areas of early childhood care, child, youth and family services, community housing, retirement living, home care and residential aged care services, providing Christ-inspired care and compassion to vulnerable people at different stages of their life journey.

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The benefits of learning with nature

In the past, children spent hours playing outdoors – climbing trees, playing ball, riding bikes and collecting nature’s treasures. These early experiences helped shape children’s views of the world.

These days, however, indoor media captures much of a child’s time while fascinating adventures outside remain unexplored. Even when children do go outside, their outdoor play spaces consist primarily of plastic or metal play structures that sit atop asphalt or other manufactured materials. Nature is often absent or on the other side of a fence, out of children’s reach.

Spending time in a nature-rich environment can benefit young children emotionally, developmentally and physically. Some of the benefits are:

- increased physical activity
- advanced motor fitness, including coordination, balance and agility
- better powers of observation
- enhanced creativity
- more developed imagination and sense of wonder
- improved ability to concentrate (particularly in those with Attention Deficit Disorder)
- better judgement around what is risky and what is safe, resulting in fewer physical accidents
- enriched ability to better understand themselves
- greater appreciation of, and respect for, the environment.
- This booklet contains a number of ideas for encouraging your children to embrace nature.

*If we want children to flourish, to become truly empowered, then let us allow children to love the earth before we ask them to save it.*

David Sobel
Tree time

Take a walk in your neighbourhood. Find an interesting tree.

Encourage children to relate parts of trees to their own body parts, help them to observe closely and develop a sense of wonder about trees.

- Roots are like the tree’s feet. They keep the tree sturdy and hold it to the ground, just like your feet keep you sturdy. Roots also help the tree soak up water.
- Branches are like the tree’s arms. Can you shake your arms like tree branches in the rain?
- Bark is like the tree’s skin. It keeps the tree protected and covered all over (just like your skin protects you).
- Can you make your body into the shape of a tree? Can you move your body like a tree in the wind?
- Can you draw a picture of your tree and all its parts? Will you draw with a pencil, chalk or your finger in the dirt?

Bark rubbing

Helping children learn to appreciate all living things starts them on their journey toward becoming lifelong environmental stewards.

Materials:
- piece of plain white A4 paper
- charcoal pencil or crayons
- a tree, piece of bark and a leaf

Method:
Press paper against the tree, or some bark or a leaf on the ground. Rub your charcoal pencil or crayon against the paper gently until an image of the tree bark has formed.
Bird feeder

Make a bird feeder and observe the different kinds of birds that come to feed.

Materials:
- Pine cones (one for each feeder)
- 1/4 cup peanut butter or honey per pine cone
- Popsicle sticks
- 2 cups birdseed (mixed variety)
- String or yarn cut into 1.2 metre strips
- Old newspapers

Method:
1. Collect pine cones with the children.
2. Place old newspapers on the work surface where you'll be making the bird feeders.
3. Using a popsicle stick, spread peanut butter over each pine cone. Make sure to cover the surface completely.
   
   Note: Be aware of any children with a peanut allergy – use honey as an alternative.

4. Spread birdseed on the newspapers. Roll each pine cone in the birdseed until it is completely coated with no peanut butter visible.
5. Tie a piece of string around the top of each pine cone.
6. Hang the pine cones from tree branches in your yard, or wherever you can watch the birds.

Each day, watch your bird feeder at the same time of day. Keep a record of the kinds of birds that visit. Talk with your child about why birds have a hard time finding food in winter.
**Air in motion**

Go outside and see if you can feel or see evidence of wind. This is air in motion!

- Is the wind blowing today? Hold a blade of grass, a leaf or a scarf. What happens when you let go? Did you feel the wind’s power?
- Wind helps plants grow by blowing seeds to new places. You can blow like the wind too!
- Can you pretend that your body is blowing in the wind? How does your movement change if the air is moving fast or slow?
- Talk about the many uses of wind power in our everyday life.

**Mobile movement**

Build a mobile outdoors to help see the wind’s power.

**Materials:**
- Coat hanger
- Scissors
- Hole punch
- String
- Paper shapes or light, natural materials to hang

**Method:**
1. Punch a hole near the edge of each shape or natural object.
2. Tie a piece of string around each hole and hang up on the coat hanger. 
   *Note: Tie the items on the hanger one at a time, deciding how to shift their weight until the mobile is balanced.*
3. Hang the coat hanger over the clothes line of a similar fixed object.

*Now watch your mobile. Do you see the wind’s power making your objects move?*
Rainy day adventure

Wouldn’t it be fun to play outside in the rain? Why not try it!

- How does the rain feel on your skin?
- Do you notice rain helping any living things?
- Where does the rain go when it falls to the earth?
- Let’s put out a container and leave it in the rain for a while. What do you think will happen? What do you think we should do with the water?

Dig in the dirt

Want to explore some soil?

- What happens when you sift the soil?
- What happens if you add water to soil? What do you notice? Use all your senses.
- What happens if you dig the soil? Look closely and what do you find in the soil? Insects? Pieces of sticks?
- Let’s make mud art! Which way will you choose? Will you make mud pies? Will you draw on paper with a muddy finger? Will you make large mud art on the ground?

Talk with children about why it is okay, even good, to get dirty sometimes. Help children think about soil as more than just dirt. Soil supports life literally from the ground up.
Create a compost bin

Create a compost bin that can be used to enrich and protect soil. Compost adds nutrients to soil that help keep plants healthy.

Materials:
- Storage bin
- Tray for under the bin
- Water
- Soil
- Red Wiggler Worms (Eisenia Fetida)
- Newspaper
- Dry leaves

Method:
1. Make bedding by tearing newspaper into strips and filling the container half full of paper and/or dry leaves.
2. Add water to the bedding until it is damp.
3. Add soil until the container is almost full.
4. Add worms.
5. Fill the tray with water and place the container in the tray.

Feed your worms:
- Add fruit and vegetable scraps, egg shells, tea bags and coffee grounds to the container. Do not add bones, dairy products or onion skins.
- Periodically add water and more bedding as needed to keep it moist and mostly full.

You’ll know your compost/worm bin is healthy when your bin does not smell and your worms are having babies.

When you created a compost bin, you did something good to help our soil! Now we can put compost back in our soil to keep it healthier.

Healthy soil helps plants be healthier and helps us be healthier when we eat those plants!
**Worm farm**

**Materials:**
- Glass jar or see-through container
- Sand
- Soil
- Garden worms
- Dry leaves

**Method:**
1. Moisten the soil and the sand.
2. Build up separate layers of sand and soil in the jar.
3. Add the worms to the jar.
4. Cover the worms with a few dry leaves.
5. Put the jar in a cool, dark place and check the jar each day for worm activity. Watch the worms make tracks in the sand and soil.
6. Add fruit and vegetable scraps, eggs shells, tea bags and coffee grounds to feed your worms.

**Insect trap**

**Materials:**
- Small container
- Trowel
- Small rocks
- Piece of flat wood or cardboard
- Bait (e.g. cheese, apple, crumbs, meat)

**Method:**
1. Dig a hole in the garden near plants.
2. Place the container in the hole so it is level with the ground surface.
3. Place some bait in the container.
4. Place rocks either side of container and place the wood or cardboard over the container so rain or larger animals don’t get into trap.
5. Check the trap each day to see the creatures that have been caught.
6. Study the creatures before returning them to the garden.
Snail trails

Materials:
- Snails
- Black paper

Method:
1. Collect snails with children, study and discuss them.
2. Place snails on black paper and watch ‘snail trails’ appear as the snail crawls across the paper.

Snails can be kept safely in a damp container for several days, and can be gently handled by children. Always return creatures to the garden. Do not encourage children to kill living creatures!

Caterpillar house

Materials:
- Caterpillars
- Large box with a lid
- Paper towel
- See-through cloth (muslin)
- Twigs and leaves from the plant where caterpillars were found

Method:
1. Collect caterpillars with children. Study and discuss them.
   Note: Do not handle caterpillars with bare skin as some may cause allergic reactions.
2. Place paper towel in bottom of container. Place twigs and leaves in container. Place caterpillars in container.
3. Cover container with see-through cloth (muslin). Place lid on the box.
4. Check each day. See caterpillars eating the leaves, caterpillars’ droppings, and eventually caterpillars’ chrysalis. Then watch them turn into a butterfly or moth.
**Herb garden**

**Materials:**
- Seeds or plants (chives, parsley, mint, basil, thyme, cress, grass)
- Containers for planting (recycled container)
- Soil or potting mix
- Gloves (and mask, if using potting mix)

**Method:**
1. Children enjoy growing plants and especially if they can then use them in cooking.
2. Choose plants or seeds which are easy to look after.
3. Take precautions if using potting mix (e.g. wear gardening gloves and disposable face mask).
4. Discuss with children the types of plants being used, and the care of plants.

**Sprouting seeds**

**Materials:**
- Seeds to sprout (alfalfa, fenugreek, broccoli, lentils wheat grass, barley grass, snow pea, field pea, sunflower, cress, mustard)
- Container (glass or plastic jar, shallow tray)

**Method:**
1. Place seeds in container.
2. Rinse with water each day; don’t leave seeds sitting in water. (Use a spray bottle to water, or cover with water and then drain).
Grow vegetable tops

Materials:
- Tops of vegetables (e.g. carrots, radish, turnip, parsnip)
- Saucer or shallow container

Method:
1. Cut the top of the vegetable leaving a small amount.
2. Place the top on a saucer, cut end down. Add enough water so it covers the cut surface.
3. Place in a light spot and wait to see it grow new leaves.

Bean in a jar

Materials:
- Bean seed
- Jar
- Blotting paper or paper towel

Method:
1. Line the inside of the jar with paper towel.
2. Place bean seed (two to three seeds) between the paper and the outside of the jar.
3. Half fill with water (ensure seed is not sitting in water).
4. Check each day and watch the roots and the leaves grow.

Camp out in your backyard

Kids love this activity. All you'll need is a tent and your family to join you. Pitch the tent, bring some torches, ghost stories and enjoy the adventure. Have a picnic while ‘camping’.
Grow an avocado tree

Materials:
- Avocado seed
- Container with soil or a glass with water and toothpicks

Method:
1. Soak the seed in water for 24 hours.
2. Plant the seed in container with pointed end up or in a glass jar with water using toothpicks to keep seed floating.
3. Label the container.
4. Seed will take two to eight weeks to grow. Keep moist and in the light. Container can be covered with a clear plastic bag to retain moisture.

Beneficial bugs adventure

Are you ready to be a scientist?
Let’s go on an adventure to look for helpful bugs.

- First, take a walk to where insects might be and turn on all your senses: look, listen, smell.
- Choose one type of insect to observe closely and learn more by recording your discoveries.
- Sketch the insect.
- Build a model of the insect.
- Move like the insect.
- Discuss where you find insects. Why are they there? What do they eat? How do they move from one place to another?

*Always return creatures to the place they were found.*
Create a garden

Creating a garden with children allows them to see how plants grow.

Think about the following:
1. How big does the garden need to be?
2. Where is the best location for the garden?
3. What needs to be added to the garden to ensure best growth?
4. What plants or seeds are going to be planted?
   - Establish a garden with the children’s help.
   - Each day study the garden and notice the changes taking place.
   - Each day water the garden and discuss what plants need to grow.
   - Children may enjoy growing edible plants and vegetables.

Nature bracelet

Materials:
- 2cm masking tape
- Collectables from nature

Method:
1. Tear off a piece of masking tape to fit around child's wrist.
2. Place it around wrist with the sticky side out.
3. Find things in the environment to stick to the masking tape like leaves, wild flowers, twigs, seeds, pods, etc.
A beautiful nature journey

Take children for a nature walk and see what they can see.

- Plants
- Clouds
- Flowers
- Trees
- Grass
- Rocks
- Insects and animals
- Spider webs and spiders

Take the time to stop and study, ask questions and feel.

Take some magnifying glasses with you and encourage children to look more closely at things.

Now listen to the sounds of nature:

- Is the wind blowing?
- Are the birds chirping?
- What sound do rain drops make?
- Can you make your body into a shape that reminds you of the sound you heard?

On your nature journey collect some things to take back to:

- study more closely
- use for collage
- display on a nature table
- find information in a book or on the internet
- take some photos of them and combine with a learning story.
**Nature scavenger hunt**

Make a list of some common things, and a few rarer ones, that can be found outside near your home or in a nearby park. You can include things such as pine cones, flat rocks, bird feathers or even a lizard skin. Walk with the children and tick off the list as you find each item.

**Pet rock**

Collect rocks with the children and let them decorate them and hey presto – you have a pet rock!

**Flower power**

**Materials:**

- Fresh flowers
- Paper plates
- Ribbon and hole punch
- Glue

**Method:**

1. Children collect fresh flowers from around the garden. Discuss flowers, colours, shape, petals, stem, pollination
2. Children glue flowers onto paper plates.
3. Punch a hole and thread ribbon to hang plate (can be simply hung on a door handle). Flowers will often last well for several days.
Crystal rock garden

Kids love magic.

Watching things appear out of thin air. When children make crystals form on ordinary rocks and pebbles, they’ll feel just like a magician!

Materials:

- 1/2 cup water
- 55 grams alum (sold in the canning or spice sections of supermarkets)
- Clear glass bowl
- Clean rocks and pebbles
- Mixing spoon

Method:

1. Children to gather as many rocks and pebbles as they like.
2. Rinse the rocks clean in the sink or tub.
3. On the stove, boil 1/2 cup of water.
4. Add 55 grams alum to the hot water and stir until the alum is dissolved.
5. Pour the solution into a clear glass bowl.
6. Fill the bowl halfway with the clean rocks and pebbles.
7. Now watch in amazement as crystals form like magic!

This activity is perfect for children aged four and up. Younger children will need adult assistance.
**Flower press**

One of the best ways to make a simple flower press is to use bricks or heavy books to weigh down your flowers. It's a good idea to get some firm wooden boards made of heavy three-ply wood (or thick cardboard) to place in between your batches of flower pages. You can make a flower press as illustrated.

**Materials:**
- Two pieces of timber 3cm² x 15mm long
- Two (four will be more secure) 100mm screws, washers and wing nuts
- Cardboard
- Absorbent paper

**Method:**
1. Place picked flowers between two pieces of absorbent paper.
2. Sandwich paper between pieces of ply board or cardboard.
3. Place in flower press or under heavy weights. Leave for three to four weeks.
4. Children can then use flowers for art and craft.

**Shadow fun**

**Take children outside and look at shadows.**

- Place an object on the cement and draw the shadow, return later to see where the shadow has moved to.
- Discuss where a shadow comes from, and why.
- Search for a shadow on a cloudy day.
- Use bodies to make funny shadows.
- Look at the shapes of shadows from different trees/plants/rocks.

*Play chase the shadow – a child runs with an object and the other children have to try and stand on the shadow.*
Beach walk

Take children on a beach walk at low tide. Look, discuss, collect.

- Allow discussions to lead to many questions, much learning and discovery.
- Children may often visit a beach but do they really interact with the nature all around them. With an interested adult, children can discover so much.
- Discuss the water – what’s in the water, why is the water salty, tides, waves, touch, smell, taste, rock pools, sand, shells, etc.

When you return from the beach walk:

1. Set up a nature display.
2. Do some beach craft, including collage and sand craft.
3. Read books about the beach or the ocean.
5. Print photos and make a learning story with the children.

Discussion after an event reinforces the learning and may extend the learning.
**Seashell mobile**

**Materials:**
- Phillips-head screwdriver
- A curved branch or a short wooden dowel
- Clear plastic thread (e.g. fishing line)
- Seashells
- Scissors

**Method:**
1. Wash shells
2. Thread shells onto fishing line
3. Hang from branch

**Special effects:**
Be creative! You can hang more than one shell on a piece of plastic thread. Make sure the thread is strong enough to hold the shells. Put smaller shells closer to the top and larger ones towards the bottom. Once all shells are tied to your branch, decorate the top to hide the knots. Wrap yarn around the branch or glue shells along it.

**Sand-filled bottle**

**Materials:**
- Sand (collect with the children if possible)
- Glass or plastic clear bottle
- Coloured chalk
- Funnel
- Newspaper

**Method:**
1. Spread sand onto newspaper and rub with a coloured chalk until sand changes colour.
2. Repeat the above with different coloured chalk.
3. Using the funnel, pour sand into the bottle, creating different coloured layers.

**Special effects:**
1. Using a skewer or similar, push skewer into sand, down the sides of the bottle to give different effect.
2. Add scent to sand to add a perfumed effect.
The most important things that young children can learn about the Earth are that it is full of beauty and wonder. It is a sense of wonder that will serve as the strongest incentive to save Planet Earth. It is also a sense of wonder that will add immeasurably to their enjoyment and appreciation of life.

Ruth Wilson, from her book, *Nature and Young Children.*