



School District 47

Outdoor & Ecological Learning

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Rainforest Hide and Seek

Animal Adaptations and Camouflage



Field Experience Curriculum for Kindergarten Students

Curricular Workshops at the Powell Lake Outdoor Learning Center
A Tool for School District 47 Teachers

*Created in Partnership with Wild BC (Habitat Conservation Trust Foundation)
and the Powell Lake Outdoor Learning Center (2014)*



Powell Lake
OUTDOOR
LEARNING CENTRE





RAINFOREST HIDE AND SEEK

Animal Adaptations and Camouflage

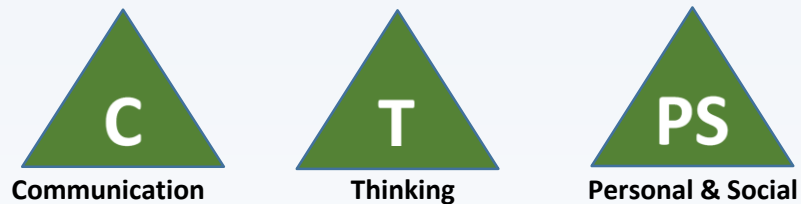
Workshop Background

Rainforest Hide and Seek will introduce Kindergarten students to the idea that animals in the Temperate Rainforest come in all shapes and sizes. Through play and place, students will use their creativity to explore the common characteristics of all living things while exploring how each animal species is unique and has special features or behaviours that are well suited to their environment and enable them to survive. These features are called adaptations and are a key characteristic of all living things.

Kindergarten Curriculum Connections *British Columbia Ministry of Education*

The table below lists all relevant curriculum connections between Rainforest Hide and Seek and BC's Education Plan. As Rainforest Hide and Seek is designed as a series of lessons to be delivered cohesively during one outdoor field experience, All Big Ideas are addressed in the holistic delivery of this field experience curriculum and are therefore listed together below.

CORE COMPETANCIES



SCIENCE

Big Ideas

Plants and animals have observable features.

LANGUAGE ARTS

Big Ideas

Language and stories can be a source of creativity and joy.

Listening and speaking builds our understanding and helps us learn.

ARTS EDUCATION

Big Ideas

People create art to express who they are as individuals and community.

Engagement in the arts creates opportunities for inquiry through purposeful play.

People connect to others and share ideas through the arts.

MATHEMATICS

Big Ideas

Number represents and describes quantity.

Developing computational fluency comes from a strong sense of number.

PHYSICAL EDUCATION

Big Ideas

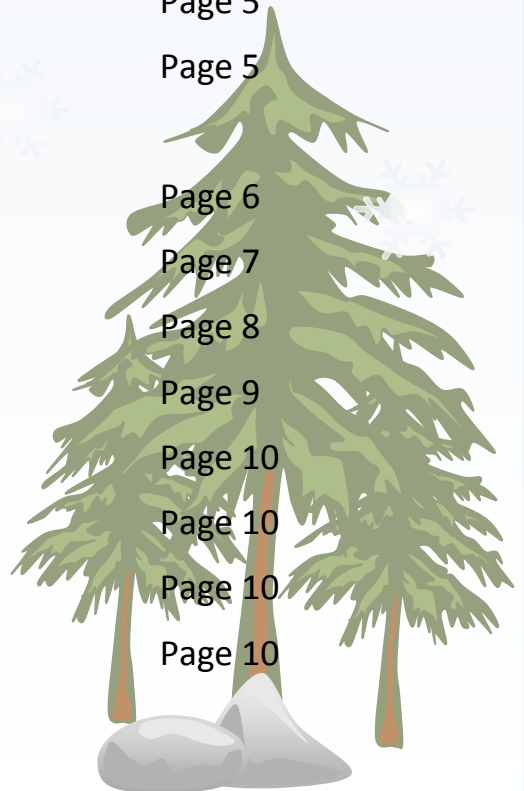
Daily physical activity helps us to develop movement skills and physical literacy, and is an important part of healthy living.



RAINFOREST HIDE AND SEEK

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RAINFOREST HIDE AND SEEK

Grab-and-Go Bin Checklist

Activity Bag 1: Freeze Birds

Materials:

- ☐ Picture cards of small birds and a bird of prey
- ☐ Rope to define boundary (optional)
- ☐ Bag of tokens(optional)
- ☐ Stomach bags for small birds (optional)

Activity Bag 3: A Perfect Match

Materials:

- ☐ Paint sample cards/Paint squares: bright rainbow colours and a series of green, tan and brown colours (at least three paint squares per student)
- ☐ One piece of camouflage coloured fabric
- ☐ One piece of brightly coloured fabric
- ☐ Several glue sticks
- ☐ Journals or heavy paper, one per student
- ☐ Pencils: plain or coloured

Activity Bag 5: Earth Ball Sharing

Materials:

- ☐ 1 Earth Ball

Activity Bag 2: Rainforest Seek

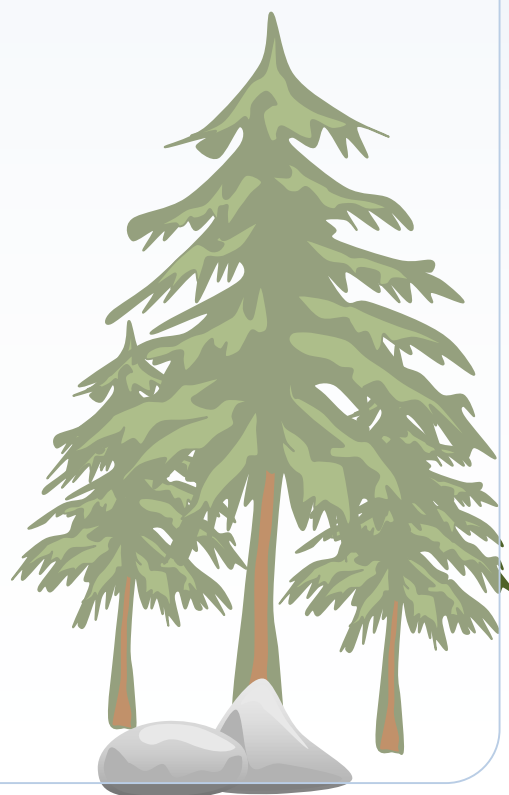
Materials:

- ☐ Animal Toy Pairs
- ☐ Blindfold
- ☐ Copies of ' What we Might See!'

Activity Bag 4: Building a Home

Materials:

- ☐ Toy animals, one for each group
- ☐ Pretend water (blue and green cloth and ribbons) in a bucket



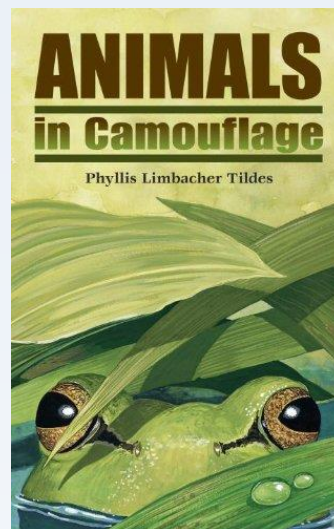
RAINFOREST HIDE AND SEEK

Classroom Beginnings

Novel Beginnings

Title: *Animals in Camouflage*

This book has incredible illustrations introducing animals in camouflage. The lush illustrations alone will enthrall young audiences, but clues to seven remarkably well-hidden animals will draw them into new worlds. Further explorations of the habits and lives of these animals is provided in the back of the book.



Camouflage collage

1. Pre-cut tissue-paper squares in many colours
2. Magazines with animal pictures
3. Blank poster paper one per student
4. Liquid starch solution

Have students choose an animal photo and cut or tear it out of the magazine. They will create a background for their animal to hide in using the tissue-paper squares. Challenge students to observe the texture, patterns and colours of their animal, and to choose tissue paper that will match. Get students or a helper to brush each poster paper with liquid starch solution. Students arrange the background tissue paper colours on the poster paper. Finally place the animal on top of the background and brush liquid starch solution over the whole collage.

Source: *Growing Up Wild* (page 35)

Camouflage Song

(to the tune of Jingle Bells)

Camouflage, camouflage,
Colours, spots, and stripes,
Helps protect prey animals,
Many different types.

Oh!

Camouflage, camouflage,
Better watch your back.
Predators will use it too.
Then they can attack.

(Repeat)

The Nature Journal

Encourage students to record something in a Nature Journal each time they are out in nature. Spend some time listening and smelling, and ask students to draw the sound or smell, or to use words to describe it. Students can record the changes of a plant or tree through the seasons, or they can illustrate something they would like to remember from each nature experience. Noticing how things change during the seasons seems to fascinate kindergarteners and can spark a lifelong appreciation for the natural world.

An important goal of teaching place-based awareness and life science is an appreciation and respect for the living world. Memorizing names from a worksheet is less likely to bring a child to that goal than spending time enjoying nature and noticing all the wonders of the natural world. When outside, encourage students to notice the big and small things in nature rather than memorize every single part of a flower. Learning to enjoy nature and having an appreciation for life is one important goal of life science for kindergarteners.

Bring your journals on any outdoor field experience.

Hide and Seek Activity 1: Freeze Birds

Outside
20 Minutes

Summary

This freeze game illustrates some strategies of small birds evading predators.

Gathering "seeds" is an optional addition.

Background: Camouflage helps animals blend into their surroundings, and it helps when they can stay very still.

Animals also evade predators by hiding in groups. This tactic works well in open areas, where there are few hiding places. Examples are antelope on open plains or bird colonies on rocky bluffs. Even in the forest there is safety in numbers.

Key Words: Predator, Prey, Behaviour

Flow Learning: Awaken Enthusiasm

Bin Materials

- ☐ Picture cards of small birds and a bird of prey
- ☐ Rope to define boundary (optional)
- ☐ Bag of tokens(optional)
- ☐ Stomach bags for small birds (optional)

Where to Play: Open field; indicate boundaries

Preparation: Spread food tokens, "seeds", on the ground within the game area.

Before Beginning the Game

Show students pictures of golden crowned kinglets, brown backed chickadees and other local small birds. Ask what they know about these birds. Feeding habits include travelling in groups among the branches. Why is this a good strategy? What predators might threaten them? Notice that their eyes are on either side of their heads so that they can see things beside and behind them.

Show the students a picture of a Merlin, or another bird of prey. Notice that the eyes are facing forward. Why is this a good feature for finding, chasing, and catching small birds? What other features do they see or know that make this a prey animal?

Activity

1. One student is selected as the Merlin. The others will be a flock of small seed eating birds.
2. The merlin turns her back and counts to twenty, while the birds gather up "seeds"
3. When the merlin has finished she shouts "Hawk Hawk" and turns around to see the group.
4. Small birds call out "Freeze Bird, Freeze Bird" and remain still where they are.
5. If the merlin sees a bird move, she points and catches that bird.
6. The caught bird will trade places with the merlin, giving her his stomach bag.
7. After a few rounds the birds can count their tokens to see who is the best fed bird.

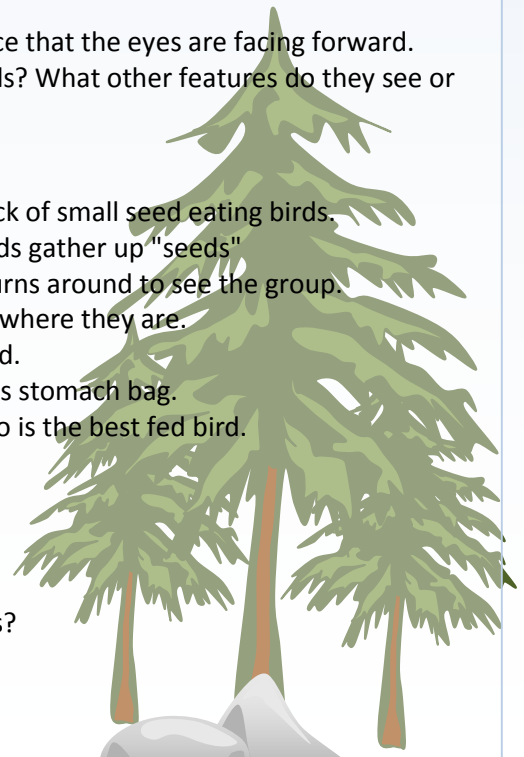
Discussion Questions

What did it feel like to be a small bird?

What skills did you use to avoid being caught? What behaviours?

What do you know about small birds that help them escape predators?

Source: Growing Up Wild: Page 34 (Take Me Outside)



Compiled by Karin Westland & Janet May

Hide and Seek Activity 2: Rainforest Seek

Outside
40 Minutes

Summary

This activity will help students to sink into their new environmental by paying careful attention to what they see around them. This is simple activity that allows students to become familiar with a new place while focusing their attention on the natural surroundings.

Key Words: Camouflage, Predator, Prey

Flow Learning: Focus Attention

Bin Materials

- ☐ Animal Toy Pairs
- ☐ Blindfold
- ☐ Copies of 'What we Might See!'

Where to Play: A short forest hike.

Preparation: Place 4 or 5 of the animal toys along the trail against backgrounds where they are difficult to see.

Place a pair near the starting point one against a background that it blends into, the other against a contrasting background.

Have 3 more animals for hiding at the start point.

Activity

1. At the start point, announce that two animals are nearby.
2. Without moving from where they are standing, challenge students to find the animals using only their eyes. (We mean the toy pair, but if there really is an animal, work with it!)
3. Which one is easier to find? Why? Remind them of the word 'Camouflage'.
4. Choose a student to be a hungry predator. He should close his eyes behind the blindfold and think about food.
5. Select three or four students to place prey animal toys where the animals can watch the predator.
6. Allow the hungry predator to remove the blindfold and point to his prey.
7. What other senses could a real predator use to find prey?
8. Ask students what kinds of animals they think they might see in the Temperate Rainforest?
9. Show them the page 'What we Might See!'
10. Tell students they will be going to be like predators on the prowl. Students can use their eyes, noses, and ears to find animals. Remind students that if they want to see animals, they need to move quietly and slowly. Silence is best.
11. Begin walking/prowling along the trail.
12. Meet at the finish point.

Discussion Questions

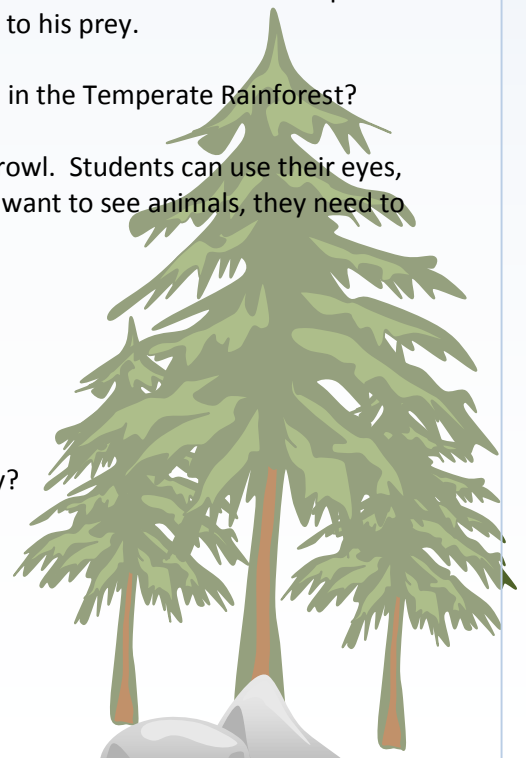
Were some animals harder to see or hear than others?

What colour is Camouflage?

What animals might have been here that we did not see or hear? Why?

Is there an animal you would have liked to see?

Source: Growing Up Wild, page 34 (Warm Up, Ready, Set, Go)



Compiled by Karin Westland & Janet May

Summary

At first students think about which colours make good camouflage. This activity enables students to discern between the spectrum of 'green' and 'brown' hues. They will observe that a tree is not just green, and that animals that hide in trees can be a variety of colours.

Key Words: Camouflage, Blending in

Flow Learning: Focus Attention

Bin Materials

- ☐ Paint sample cards/Paint squares: bright rainbow colours and a series of green, tan and brown colours (at least three paint squares per student)
- ☐ One piece of camouflage coloured fabric
- ☐ One piece of brightly coloured fabric
- ☐ Several glue sticks
- ☐ Journals or heavy paper, one per student
- ☐ Pencils: plain or coloured

Where to Play: An outdoor area that includes some combination of grass, moss, earth, branches, leaves and other natural elements of varying colours.

Preparation: Identify game boundaries. Hang both pieces of fabric where they can be seen from the starting point.

Before Beginning the Game

Show students the bright rainbow paint squares. Ask them which is their favourite? Where do they see that colour? Would this be a good colour for camouflage? Why or why not? What colours are good for camouflage in this environment?

Show the students where they are going to play the game. Show them the boundaries and ask what can they see hanging? Which piece of fabric is easier to see?

Show students the array of green, tan and brown paint squares.

Activity

1. Each student chooses two paint squares. She can choose from either selection.
2. Before they go into the play area remind students that we are visitors and we should not move anything in the area, instead we use our eyes.
3. As they go into the area students will look with their eyes for a Perfect Match for each square.
4. Once she has found two perfect matches for each square each student can return to the starting point and glue her favourite paint square into her journal.
5. Allow students some time to draw the thing that was the Perfect Match for that colour.

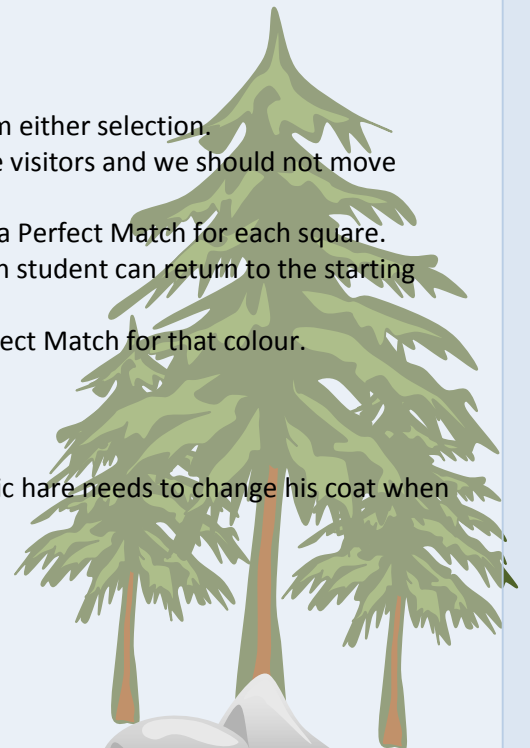
Discussion Questions

Why is colour important for prey animals?

If we put a white rabbit in this forest would he be in danger? The arctic hare needs to change his coat when the snow melts.

What other features help prey animals to hide in their environment?

Source: Growing Up Wild: Page 35 (Color Camouflage)



Hide and Seek Activity 4: Building a Home

Outside
40 Minutes

Summary

This activity enables students to imagine and play. It expands on the camouflage idea to include shelter, and introduces the habitat: food, water and space. Advanced learners will incorporate other elements of habitat: food, water, space.

Key Words: Shelter, Habitat

Note: Shelter is one element of Habitat. The word “Home” is used to describe the student’s creation which may be more than shelter alone, and less than a complete habitat.

Flow Learning: Direct Experience

Bin Materials

- ☐ Toy animals, one for each group
- ☐ Pretend water (blue and green cloth and ribbons) in a bucket

Where to Play: Forested Area

Preparation: Set boundaries for play

Before Beginning the Activity

In a circle, ask students what kinds of animals they think they might see in the Temperate Rainforest?

Activity

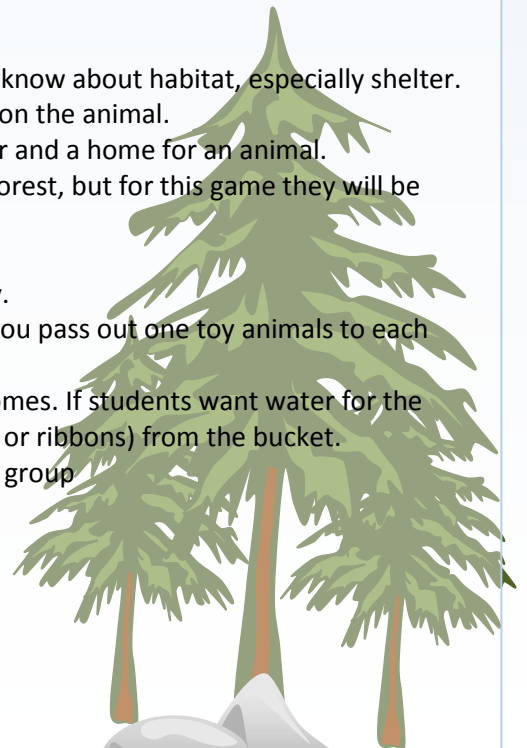
1. Divide the class into groups of 2 or 3.
2. In a circle near the play area, ask the students what they know about habitat, especially shelter.
3. What sort of shelter does an animal need? This depends on the animal.
4. Tell the students that today they will be building a shelter and a home for an animal.
5. Emphasize that ordinarily we do not move things in the forest, but for this game they will be using rocks and wood from the forest to build a home.
6. Show them the area boundaries.
7. Show them the toy animals that will need a shelter today.
8. Ask them to think about what each animal will need, as you pass out one toy animals to each group.
9. Allow about 15 minutes for the students to build their homes. If students want water for the habitat, let them choose a piece of pretend water (fabric or ribbons) from the bucket.
10. Allow time for the students to display their homes to the group

Discussion Questions

What do you like best about your shelter?

What do you admire in another students shelter? Why?

Have you ever spent a night outdoors? What did you need?



Compiled by Karin Westland & Janet May

Hide and Seek Activity 5: Earth Ball Sharing

Outside/Inside
15 Minutes

Summary

This is a reflection activity where students have an opportunity to share a special experience from the day.

Flow Learning: Share Inspiration

Bin Materials:

- 1 Earth Ball

Where to Play: On the field or indoors

Activity

1. Invite students to either stand or sit in a circle.
2. Retell the story of the day back to students.
3. Give students a moment to reflect back on the day and choose one special learning experience they would like to share with the group.
4. With the Earth ball in hand, tell students that the person with the Earth ball is the only one who gets to speak. Tell students that after they share their special learning experience with the group, they can roll the ball to someone across the circle with their hand up.
5. The Earth ball should begin and end with the teacher.
6. Once all students have had an opportunity to share with the group, the teacher, holding the earth ball, can close the circle.

Classroom Connections

Heron and Herring: Subtraction Game

1. Students stand in a circle and pretend to be a school of herring.
2. The herring count off and record how many herring there are in the school. 12
3. The herring swim about. When they hear a predator coming they will freeze.
4. The teacher is a heron. The heron flaps and calls "Cawrk , Carwk" and taps one of the herring.
5. The tapped herring crouches down, and hides in the reeds.
6. All the standing herring count off and the equation is recorded: $12-1=11$
7. Repeat until all the herring are crouching in the reeds.
8. The Heron goes hungry.
9. Add the herring back to the school one by one.

Source: Growing Up Wild (Page 35); adapted from Coyotes and Cottontails

Camouflage Caterpillars:

1. Plates or napkins one per student
2. Salad tongs
3. Salad greens with different coloured leaves
4. Snap peas

Hand out plates and give each child a tong-full of salad mix.

Ask about caterpillars that the students have seen.

Where did they see them? What colours were they? What do caterpillars do to leaves?

Get each student to choose two (snap pea) caterpillars and take them back to the plate.

Ask the students "Which leaves are the best hiding places for their caterpillars?" Eat the display!

