G. LIST OF PACK CONTENTS

1 clipboard
2 magnifying glasses
1 map of the area
1 model of a wildflower with assembly instructions
1 roll of masking tape
4 pencils
4 pipecleaners

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1 Take-home booklet
1 Wildflowers of the Canadian Rockies

**Indicates that you may keep this item.
HELLO!

Here is a chance for you to discover exciting secrets about wild flowers. You will find that different wildflowers can be found throughout Kananaskis Country depending upon the time of year, the soil, temperature, moisture and elevation.

The activities found in this booklet will help you in your wildflower explorations. The following trails are recommended for wildflower viewing:

<table>
<thead>
<tr>
<th>Peter Lougheed Provincial Park</th>
<th>Bow Valley Provincial Park</th>
<th>Elbow Valley Provincial Park</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ptarmigan Cirque</td>
<td>Many Springs</td>
<td>Paddy’s Flat</td>
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<tr>
<td>Marl Lake</td>
<td>Montane</td>
<td>Little Elbow</td>
</tr>
<tr>
<td>Mt. Everest Expedition</td>
<td>Flowing Water</td>
<td>Riverview</td>
</tr>
<tr>
<td>Mt. Indefatigible</td>
<td>Middle Lake</td>
<td>Elbow Valley</td>
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</tbody>
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Trails differ in their display of flowers. For current information on the best wildflower trails, along with trail hiking times, check with the Visitor Information Center nearest you.

Two booklets are included in this Discovery pack: a Take-home booklet and this Activity booklet. Feel free to keep the Take-home booklet as it contains fun activities and a list of references so you can discover more about flowers living near your home.

SAFETY: Stay on marked hiking trails. Wildflowers are of interest to everyone. Please leave them as you found them.

When you are ready to return the pack, please ensure that all the pack’s contents are present. A list of the contents is located at the back of this booklet.

HAVE FUN!
F. THE BUTTERWORT MURDERS: A FLORAL WHODUNIT

HOW AND WHY BUTTERWORTS CAPTURE THEIR PREY.

TIME TO EXPLORE: 30 minutes

DISCOVERY TOOLS: magnifying glass

Wildflowers of the Canadian Rockies

WHAT’S UP: The relationships between plants and animals can be complex and fascinating. We usually think of plant-eating animals (herbivores), but how often have you seen animal-eating plants? Here is your chance to meet one of these carnivorous (meat-eating) plants and find out how it functions.

HERE’S HOW: Look at the illustration of the butterwort on page 149 of the Wildflowers of the Canadian Rockies. The butterwort can be found in moist and shaded areas along pond, stream or river banks. Good trails include Paddy’s Flat along the Elbow River and Many Springs along the boardwalk in Bow Valley Provincial Park. Although it blooms from late June through July, you can do this activity at any time in the summer.

Look at the bright green leaves of the plant with the magnifying glass. Can you see any insects inside? If you find some, why do you suppose they are there?

Carefully examine the butterwort for hidden weapons. You may be familiar with other insect-eating plants. Do you see any hidden spring traps as in the Venus flytrap? How about pitfall water traps as in the pitcher plant? No? Gently touch the surface of one of the leaves. What does it feel like? Each butterwort leaf is covered with two different kinds of glands. The first kind secretes a...
TIME TO EXPLORE: 15 minutes

DISCOVERY TOOLS: magnifying glass

Wildflowers of the Canadian Rockies

WHAT’S UP: There are literally hundreds of varieties of flowering plants in Kananaskis Country. To the first-time flower watcher, the task of identifying them can seem a bit discouraging. This activity will help you get started.

HERE’S HOW: The easiest way to identify wildflowers is to look at the colour of the flower.

Choose a flower along the trail. What colour is it? Turn to the appropriate colour section of the book Wildflowers of the Canadian Rockies. For example: If you find a yellow flower, look it up in the section on yellow flowers in the book. Now flip through the pages until you find a picture which matches your flower. Read through the description in the book. Does it sound like your flower? If you are certain of the identification of the flower, note whether you found it in the forest, in a field or in a wet area. Check off the flower and its location in the checklist beginning on page 3 of your Take-home booklet.

Choose a different flower and follow the same steps to identify it. As you discover new flowers, look for characteristics which make them unique. In this way, you will find out more than just the names of the flowers.

FOLLOW-UP: Turn to page 11 in your Take-home booklet. There you will find a list of some of the dryad’s adaptations to its environment. Try to come up with ways in which people adapt to the same mountain conditions. To get you started, the first one is completed for you. When you’re finished, you will have a checklist of what to take with you on your next trip to Kananaskis Country.

How tall is the plant? How tall are the other plants in the area? Plants living in windy areas often grow close to the ground.

Feel the leaves of the plant. What do they feel like? Why do you think they are like that? Can you see other plants in the area with similar leaves?

Many plants growing in mountainous areas have characteristics similar to the dryad. Look for other plants with the following features, that prevent loss of water and protect the plant from the harsh environment:

- woolly hair covering
- waxy leaf surfaces
- evergreen leaves
- tough, leathery leaves
- plant growing close to the ground
FOLLOW-UP:

All the flowers which grow in your garden are related to wildflowers. When you find a new wildflower, look at it closely and see if it looks familiar. As you look up each flower in the book *Wildflowers of the Canadian Rockies*, note the name of the family it belongs to. For example, the aster belongs to the composite or daisy family.

Each flower family has a set of characteristics which makes it unique. As you get to know the flowers better, you will start to recognize similarities between family members. Here is a list of some of the common families in the area, along with some wild and domestic members of those families.

<table>
<thead>
<tr>
<th>COMMON NAME OF FAMILY</th>
<th>LATIN NAME OF FAMILY</th>
<th>DOMESTIC MEMBERS OF FAMILY</th>
<th>WILD MEMBERS OF FAMILY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pea</td>
<td>Leguminosae</td>
<td>Garden Pea</td>
<td>Late Yellow Locoweed</td>
</tr>
<tr>
<td>Lily</td>
<td>Liliaceae</td>
<td>Tiger Lily</td>
<td>White Camas</td>
</tr>
<tr>
<td>Rose</td>
<td>Rosaceae</td>
<td>Rose</td>
<td>Wild Strawberry</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Yellow Dryad</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Prickly Rose</td>
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<td></td>
<td></td>
<td></td>
<td>Shrubby Cinquefoil</td>
</tr>
<tr>
<td>Heather</td>
<td>Ericaceae</td>
<td>Heather</td>
<td>Bearberry</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>False Huckleberry</td>
</tr>
<tr>
<td>Daisy</td>
<td>Compositae</td>
<td>Daisy</td>
<td>Aster</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Heartleaf Arnica</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Brown-eyed Susan</td>
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</tbody>
</table>

To assist you in identifying plant families, turn to page 4 in the *Take-home* booklet for a list of common families and their characteristics.

TIME TO EXPLORE: 30 minutes

WHAT’S UP: Many plants have special adaptations to allow them to survive in their environment. This activity will look at one plant which has a variety of adaptations which allow it to survive in harsh mountain conditions.

HERE’S HOW: Look at the illustration of the yellow dryad on page 79 of the *Wildflowers of the Canadian Rockies*. Now look for them along a trail.

If you’re in the Elbow Valley, look for these flowers along Paddy’s Flat trail near the river, on the Little Elbow trail near Forget-Me-Not pond, or on the river flats at Gooseberry campground.

At Bow Valley Provincial Park, yellow dryad can be found on the ridge halfway along the Flowing Water trail and on the first half kilometre of Many Springs trail.

In Peter Lougheed Provincial Park look for the flowers beside Upper Lake trail on the south side of the lake and along the rocky sections of Ptarmigan Cirque trail.

What kind of soil is the dryad living in? Gravelly soil usually means that moisture doesn’t stay long. How do you think the dryad overcomes this problem?
**TIME TO EXPLORE:** 20 minutes

**DISCOVERY TOOLS:**
- flower-making materials
- magnifying glass

**WHAT'S UP:**
Almost all flowers have petals, sepals, pistils and stamens. The variety of shape, size and colour of these features accounts for the over 275,000 species of flowering plants known today. This activity will help you recognize these flower parts and give you a sense of how amazing the world of flowers really is.

**HERE'S HOW:**
Take the flower-making materials out of the pack. Put together the flower without looking at the instructions. Now read the instructions included with the materials. How did you do?

Now look at a real flower. Can you recognize the petal, sepals, stamens and pistils? How many of each part are there? Use the magnifying glass to help you. Are they the same shape as the parts which made up the model? Are there any flower parts missing?

Look at the other flowers around you and see how many shapes and sizes of flower parts you can find. Why do you think there is so much variety? In the spring and early summer, look at trees and grasses. You might be surprised at where a flower blossoms.

**FOLLOW-UP:**
Flowering plants are made up of roots, stems, leaves, flowers and seeds. How many parts of a flowering plant have you eaten in the last week? What would happen if all the flowering plants disappeared?

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**B. FLOWER POWER**

**A LOOK AT FLOWER PARTS.**

through the digestive system of an animal before they can germinate. The seeds are then deposited, along with a little fertilizer!

Look for berry-producing plants such as wild strawberry, red osier dogwood, bunchberry, twinberry, bearberry or buffaloberry. Now look around the berry producing plants for bird and animal droppings. Can you see any seeds in the droppings?

**CAUTION:**
When looking at animal droppings, always keep at arm’s length and do not touch them, as some droppings may contain harmful parasites.

**FOLLOW-UP:**
Return to the area in two weeks to see if there are any other plants in seed. Are there any seed dispersal methods which seem to be the most common?

Think of all the seeds you ate in the last week. Write your list on page 10 of your *Take-home* booklet. Did you remember the sunflower seeds in your cooking oil, the wheat in your bread? Life would not exist as we know it today without the seeds of flowering plants.

**Grow a few wildflowers:**
The flowers and seeds in our provincial parks and recreation areas are protected to ensure that more flowers will grow here in the years to come. You may collect a few seeds outside of these areas, such as along cut lines and road sides. Wrap them in a moist paper towel, put them in your freezer for three weeks, then take them out and plant them in potting soil. Keep the soil moist, but not wet. Pots or containers should be placed in a warm, sunny spot.
C. FLOWERS AS ANIMAL ATTRAICTORS

HOW ANIMALS HELP FLOWERS WITH POLLINATION.

TIME TO EXPLORE: 30 minutes

DISCOVERY TOOLS:
2 magnifying glasses
roll of masking tape
Take-home booklet

WHAT'S UP: Plants have a variety of ways to distribute their seeds to other growing areas. Here is a chance to find out about some of them.

HERE'S HOW: Wind the masking tape around the toe of your shoe, with the sticky side out. Walk through a field or along a roadway for a few minutes. Carefully take the tape off. What sorts of things are attached to the tape? Are there any seeds, grass or twigs? Look closely at the seeds. What shapes are they? How are they attached to the tape? Use the magnifying glass to help you. Remove the seeds and other debris from the tape. Do you think the seeds will grow where you dropped them? Wheat do seeds need in order to grow?

Have you ever blown the seeds off the head of a dandelion and watched them parachute to the ground? Find another kind of plant which disperses its seeds in a similar way. Anemones, asters, fireweed, brown-eyed Susan and arnica are a few examples of plants which do this.

Have you ever eaten a berry? Why do you think the seeds are so well hidden in a sweet juicy coating? Some of the seeds of berry-producing plants have to pass...
Here is an opportunity to discover how flowers attract pollinating animals to them and how the animals transfer pollen from plant to plant.

HERE’S HOW:

Look at the flowers around you. How many different colours of flowers can you see? What colour seems to be the most common? Some insects are attracted to certain colours. For example, bees are attracted to yellow and blue flowers. Can you see any bees visiting flowers?

Bend down and smell the flowers. Flies are attracted to flowers with strong odours. Can you see any flies visiting the flowers with strong odours?

Can you see any lines or dots on the petals of the flowers? These patterns direct insects to the centre of the flower where the nectar lies.

Some flowers have a lower petal which serves as a landing pad for insects to stand on. Can you find any flowers with this feature?

To find out how animals pick up the pollen from the plants, try this activity. Take the pipe cleaners from the pack. Gently insert a cleaner, or, if you have small hands, use your little finger and gently place it in a flower. How far into the flower would the bee have to get to get the nectar? Now remove the cleaner or your finger. Is there any pollen on it? What colour is it? Rub it between your fingers. What does it feel like?

Now, find another flower of the same type and gently rub the pollen from your pipe-cleaner or finger onto the stigma. You have just pollinated a flower!

FOLLOW-UP:

Find an insect which is pollinating a flower and follow it. Where does it go? What does it do? Does it always visit the same kind of flower? Can you see any pollen on its body? Look at a flower after the insect has left it. Is there any evidence that the insect has been there? Use the magnifying glass to help you.

Take the time to look at the different flowers around you. See how many different insects you can find pollinating flowers. What do you think would happen if all these insects were to disappear?

Come back to this area in a week or a month. You will see a great difference in the types of flowers. You may also see a new group of insects, busily pollinating the most recent bloom of flowers.