

LEAF LITTER

Aim:

Investigate the organisms responsible for the decay and breakdown of plant and animal matter in the leaf litter community. Find and observing the animals in the leaf litter. Learn about the recycling of nutrients in nature.

Exploring the Mysteries of a Hidden World

By Rachel Tonkin

(Lives in Castlemaine, Box-Ironbark Forest)

INITIAL QUESTIONS AND POINTS FOR DISCUSSION

- Invite children to discuss the cover of the book, the title, subtitle and the possible content within.
- Quiz children on their understanding of the term “leaf litter”.

Leaf litter is just what it sounds like. All the leaves and stuff that falls from the trees and bushes and makes up that sometimes crunchy, sometimes soft forest floor covering.

- Discuss the fact that everything in the story takes place beneath a single tree.

Read Intro Page 1

Leaves, twigs, branches and bark collect...

Page 2-3

The first soft rains of Autumn fall. The soil becomes damp.

Fungus threads, like cobwebs, spread into the leaf litter dissolving the rotting branches, animal dung and leaves so they are food for trees, plants and other fungi.

Toad stools and mushrooms grow.

A dead blue tongue lizard attracts blowflies. They lay eggs which hatch into maggots. These burrow into the rotting lizard and eat fast.

If they are lucky they will grow fat and wriggle into the ground to become a pupate.

The unlucky maggots will be eaten by birds, asps, spiders and beetles. Maggots are an irresistible meal for many creatures.

Page 4-5

Soon only the skin and bones of the blue tongue is left. Other insects have cleaned up the scraps.

Under a rock is a scorpion waiting for something to come by to eat - no hurry, scorpions can wait a long time – perhaps a year- between meals!

Hidden among the rotting leaves are seeds. When the soil is damp enough, many seeds germinate. See the wattle seed pushing its tiny leaves up through the leaves. It must grow strong before the summer heat comes. Most seeds are eaten before they can grow.

Page 6-7

Fairy Wren looking for small insects. Young magpie searching for seeds, and large insects. Lots of insects die after laying their eggs and are good food for other creatures. They lay their eggs in the leaf litter where it is warm and no frost.

A Lizard hibernating until spring. A Frog digs itself in during the day and comes out in the night time.

Page 8-9

Leaf litter like an umbrella in winter- stops worms drowning in their holes- they breathe through their skin. Stops soil, insect nests and seeds from washing away.

Instead the rain trickles through the leaf litter dissolving insect and animal dung. The rain water becomes full of nutrients as it soaks through the soil and feeds the trees, through their roots.

When the rain falls hard, puddles form in the leaf litter. The frogs lay their eggs quickly so there's time for the tadpoles to hatch and grow into frogs. Some slither along the trickles to find bigger puddles.

Page 10-11

When the weather is still cold, finches collect tiny feathers to line their grass nest. The feather from a yellow tailed black cockatoo is too big for them. It will be eaten by microscopic creatures.

Termites main food is wood. They forming a mound of chewed up wood with secret passages and tunnels into the leaf litter. Without termites to eat the dead branches, the leaf litter would be very high.

Page 12-13

It's almost Spring and the yam daisy is getting buds. Like many plants, it will flower in spring.

Insects like the spring too because they feed on nectar from the flowers and nibble the new soft leaves. But as the weather warms up, out comes the lizard from hibernation to eat these insects!

A house mouse has moved in. They came to Australia on the early sailing ships and have competed with the native mice for food. There are less Australian mice now. These two mice dig a burrow to keep safe in the day.

Page 14-15

Spring has arrived and lots of animals are having babies. Many creatures only come out at night.

Page 16-17

The day is warm and a brown snake has woken from hibernation, feeling hungry. He catches a mouse to eat.

Page 18-19

An owl at night swoops to catch a mouse. A frog sits like a statue flicking out its tongue to catch passing insects.

Page 20-21

The termite mound is smashed by two passing wallabies. A bearded dragon and two crows come to feast on the termites. A dead bird is buried by beetles so they can lay their eggs on it for the grubs to feed on.

The nymphs, grubs and caterpillars love eating the dead leaf litter: green and brown leaves, roots, twigs and branches.

Page 22-23

An Echidna comes along and eats the sugar ants. Digging out and disturbing other creature's homes too.

Page 24-25

Birds come back and feast on insects. Spit fire grubs build cocoons underground. Under the leaf litter a small spider lays its eggs in a ball of web.

Page 26-27

Summer has arrived. Many insects come out their cocoons changed into butterflies and moths and other creatures. Many have good camouflage in the leaf litter.

There isn't much rain now to dissolve animal dung but luckily dung beetles do a good job of tidying it up by rolling the dung into balls and taking into their burrows.

Page 28-29

It's now hot hot summer but the soil under the leaf litter stays cool and moist. A Rosella comes down to eat the wattle seeds that are popping out of their pods. The seeds that don't get eaten will start to grow in autumn. And the cycle starts all over again!

QUESTIONS TO FOLLOW SHARED READING

- What do you feel is the main message in the book?

The arthropods (invertebrates with jointed legs- insects, arachnids, crustaceans) and other little critters that make the litter their home

- Why might we miss the small details in the world around us?

Busy, don't understand/ think about it...

- How are the changes in the environment affected by humans?

Raking up leaf litter, dropping rubbish.

- How does leaf litter prevent soil erosion?

- Discuss the importance of camouflage in the natural world and the many ways in which creatures might hide from their prey?

Leaf litter vs Litter

- Is “leaf litter” rubbish?
- Explain why leaf litter is good for the environment and why human litter is often an environmental problem?
- Contrast leaf litter with litter created by humans. What can humans learn from nature about what to do with litter?

Unlike the litter that people make, forest litter is beautiful to look at, wonderful to smell and enchanting to hear.