

The Magic and Mystery of Trees

By Jen Green

A Tree For Every Season



Let's follow one maple tree through the seasons ...



Spring



Sun and rain wake
up the tree from
its slumber.



First Shoots

After the cold, dark winter, spring is the season of new beginnings. The weather gets warmer and days grow longer. Trees know when the winter has passed. In spring, the tree grows green buds. The buds open, uncurling and spreading new leaves in the sunshine. The tree's flowers bloom.



Summer



A full crown of
leaves grows.



Hot Days

Like many humans, trees love the sunshine, summer is the hottest season, with the longest days of the year, and the trees are ready to soak up the sunlight. Branches are covered with leaves that form a dense, shady layer. In late summer, the tree's fruits start to grow. Trees do most of their growing during the summer months.



Autumn



Leaves lose their
green colour and fall.

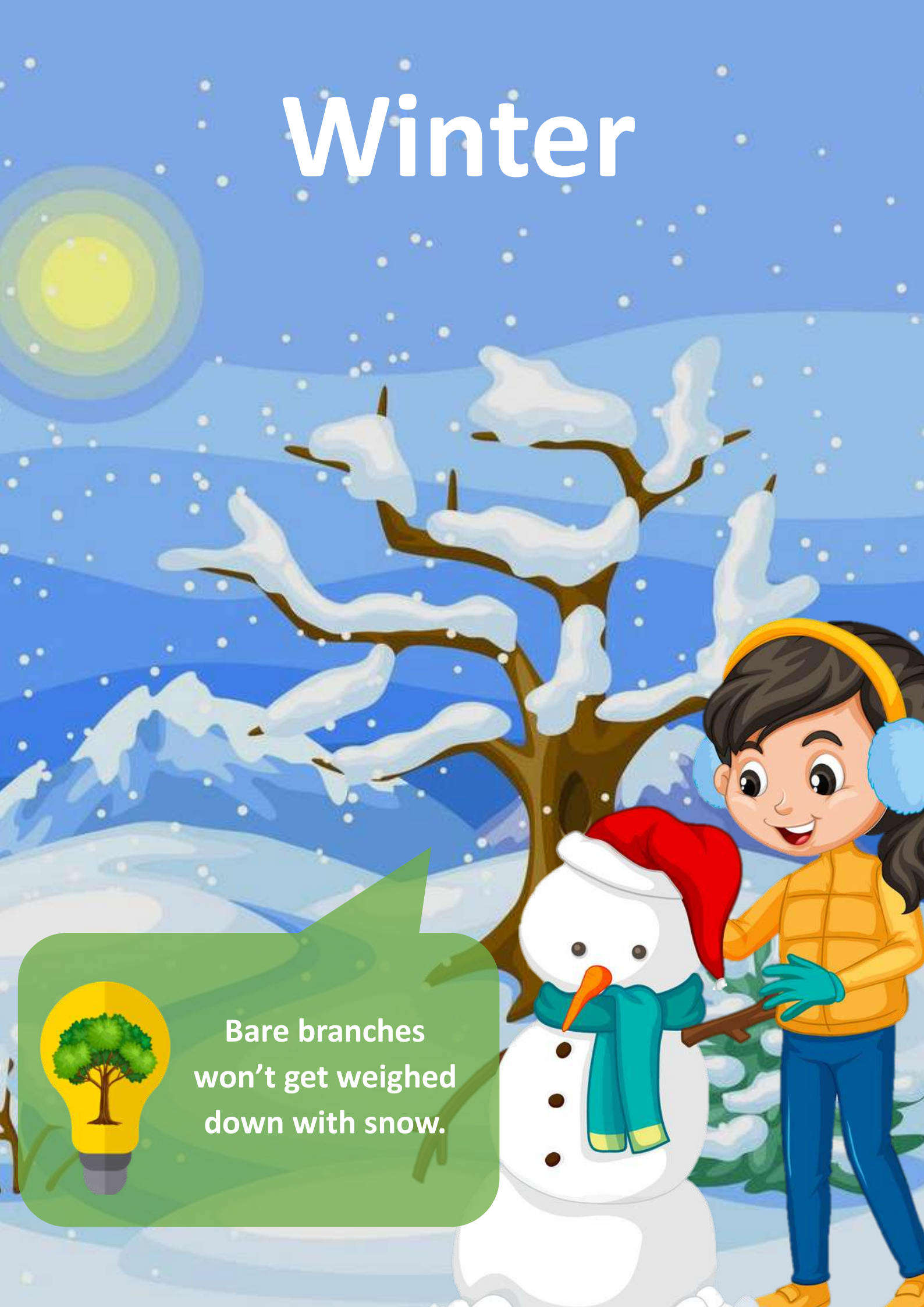


Changing Colours

In autumn, the weather turns cooler and days get shorter. Fruits and nuts ripen, and trees spread their seeds. Flat, wide leaves can catch blustery autumn winds, so the tree sheds them to avoid damage to its branches. Its green leaves turn yellow, orange, red and brown then drift down to the ground.



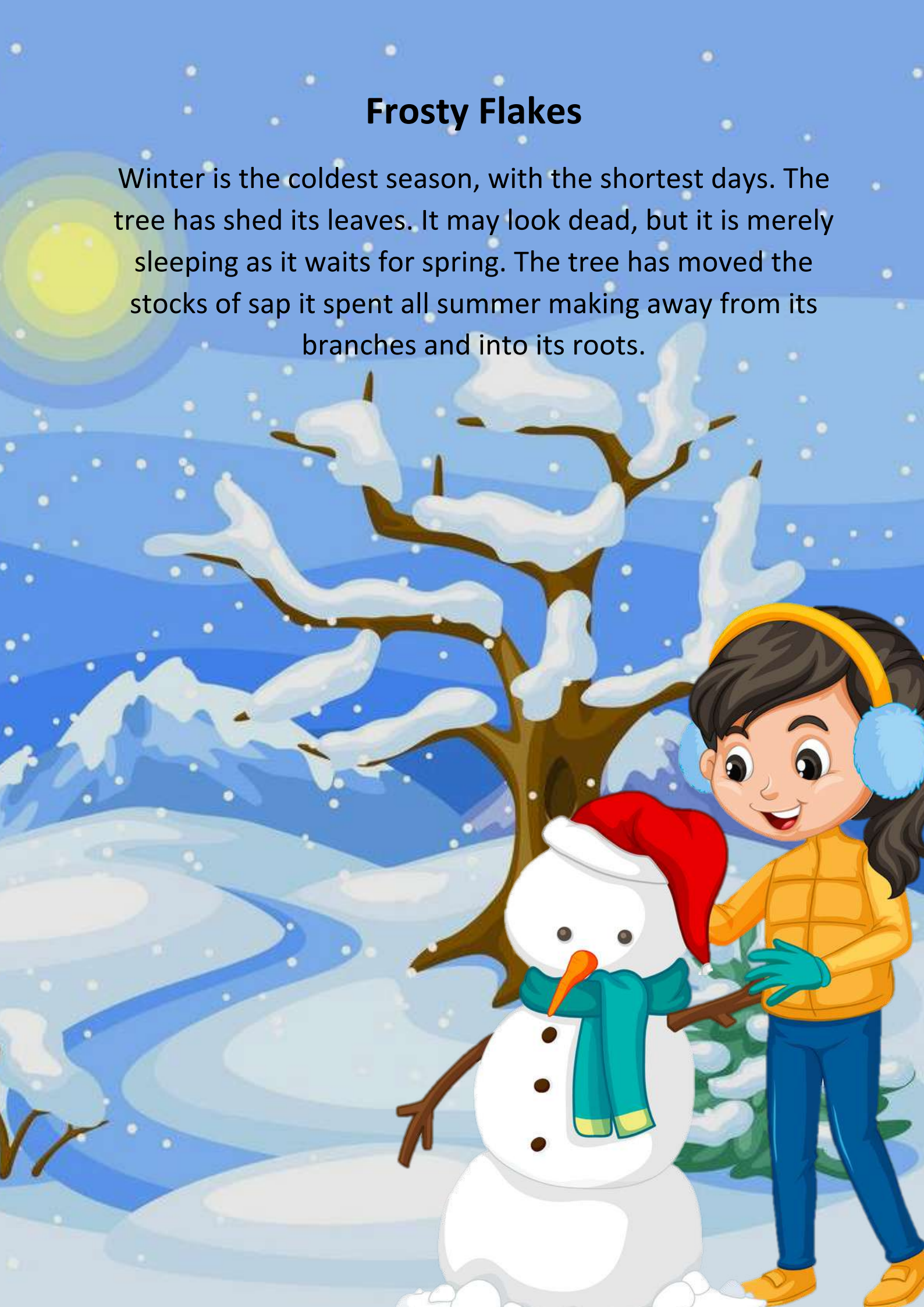
Winter



Bare branches
won't get weighed
down with snow.

Frosty Flakes

Winter is the coldest season, with the shortest days. The tree has shed its leaves. It may look dead, but it is merely sleeping as it waits for spring. The tree has moved the stocks of sap it spent all summer making away from its branches and into its roots.





Flowers, Fruits and Seeds

Trees need to make new trees for the forest to stay healthy. That's why they grow flowers, fruits and seeds.





Flowers

The flowers bloom in spring. During the warm days of spring, bees buzz from tree to tree, visiting as many flowers as they can.



Seeds

Seeds are little parcels that contain a whole new tree, ready to grow. They ripen in summer and autumn. Each seed needs to find a good place to grow.

Trees, like all living things, are born, grow and eventually die. But they leave behind the promise of new forests still to come...



Flowers



Trees that want to attract insects have large, showy flowers, while ones that spread pollen on the wind have tiny, delicate ones. Some tree flowers are so small that they can be tricky to spot, but they have vital work to do.





Cherry Tree Blossom

Blossoms

In spring, apple and cherry trees are covered with flowers we call blossom. These flowers make the trees look beautiful, but their main job is to tell insects such as bees that there's a treat ready for them.





DID YOU KNOW?

Flowers have male and female parts? The male part produces pollen. The female part makes tiny eggs. Male pollen must join with these eggs to make them fertile and then they can ripen into seeds.



Grains of
pollen stick to
the bee's
hairy body

Little Helpers

Insects visit flowers to drink a sweet liquid called nectar. Any pollen grains on its body rub off inside the next flower the bee visits. This makes the next flower fertile (able to make seeds)



The bright colours
and sweet smells
of flowers tell the
insects the nectar
is ready.

Fruits and Seeds



Once the tree's flowers have been made fertile by pollen, it is time for seeds to grow. They can develop inside fruit, cones, hard shells, or papery covers.





Conifer Seeds

Most conifer trees make their seeds inside cones, not fruits. When the seeds are ripe, the cones open. The light, papery seeds tumble out and blow away on the breeze. Yew and juniper are unusual conifers. They make small, bitter berries. Birds love them!



Conifer
Seeds





Fruits

If you've ever enjoyed a crunchy apple or juicy cherry, you've eaten the fruit of a broadleaved tree. Mangoes, peaches and cherries contain just one large seed, called stone. Apples, oranges and lemons have many small seeds called pips.





Nuts

The hard shells on these seeds look very different, but they all do the same job. They protect seeds and help them to spread. Hazel, chestnut and walnut trees make seeds with a hard shell – we call these nuts. Acorns are the seeds of the oak tree.

Acorns

Hazelnuts





Blown on the Wind

Tree seeds must be scattered far and wide so that new trees can grow. Some seeds are scattered by the wind. Sycamore, maple and ash trees have light, winged seeds that spin through the air like mini-helicopter blades to land far away.

Sycamore
Seeds





Carried by Currents

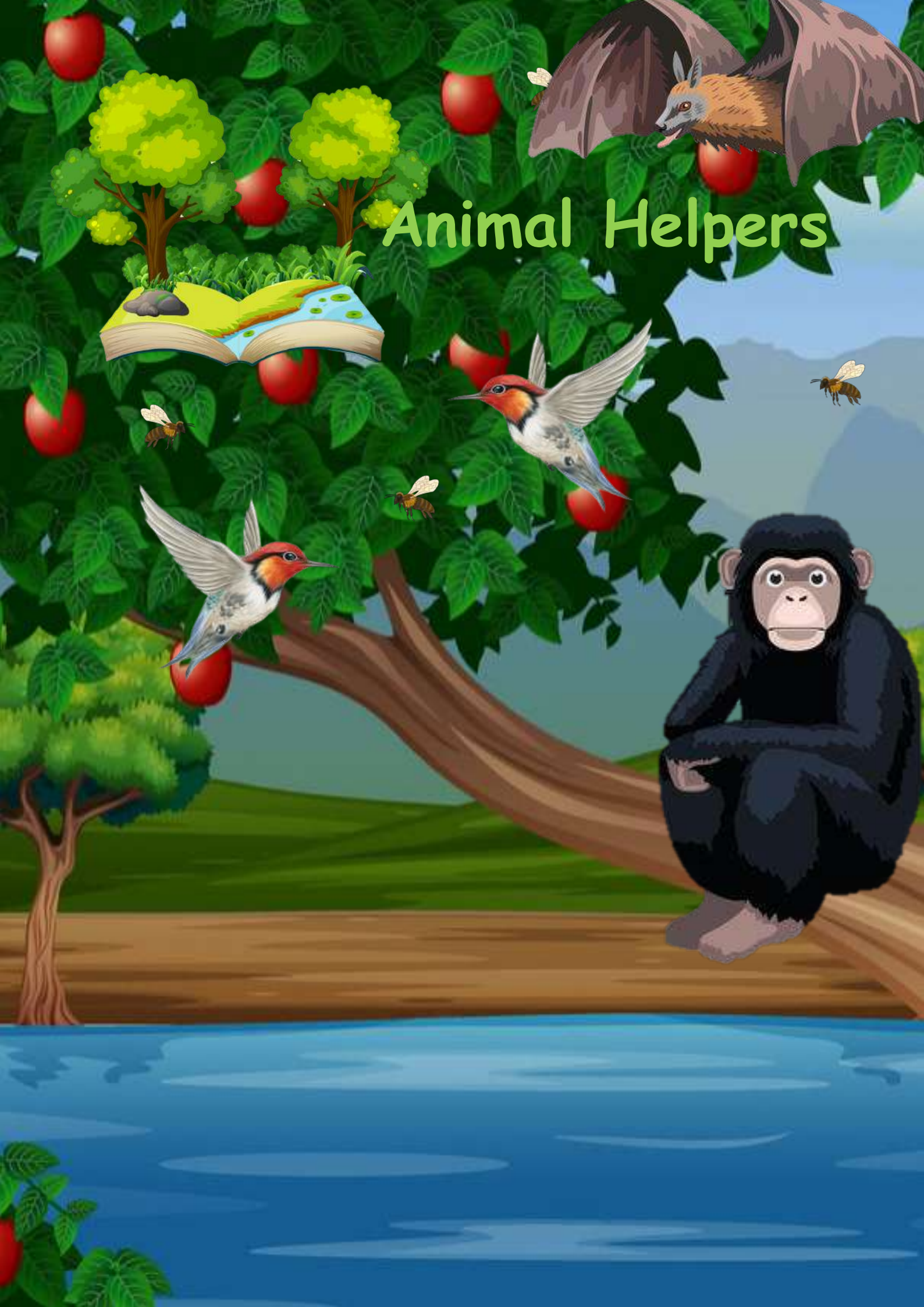
Trees that live by rivers and oceans make seeds that float. The current carries the away. Coconut palms grow on the seashore in warm places. Ripe coconuts plop into the water. The tide washes them away to root on distant coasts.



Ripe
Coconuts



Animal Helpers



Animals love the bright colours and mouth-watering smells of fruit. Trees get animals to spread their seeds for them by putting them inside delicious things.



Adventure Time

For children, the best place to grow up is near our parents, who provide everything we need. Trees are very different – they like their seeds to travel alone to distant places. Fast-moving animals provide a perfect transport system.



Buried Nuts

In autumn, squirrels and jays prepare for winter by burying nuts and acorns. Nuts make a handy food store during the long, bleak months of winter – as long as the animal doesn't forget where its food is buried! Any forgotten seeds will sprout into new trees in the spring.



Monkey Dung

Monkeys love to feast on figs. They can digest the juicy flesh, but the hard seeds pass right through the animals' bodies and come out in their pool.

Tropical Fig
Tree



As the monkeys wander from tree to tree, the seeds in their dung get scattered all over the forest. Monkey poo contains all the nutrients a seed needs to sprout and grow strong and healthy.

Monkey
Dung





THINK

DIGITAL ACADEMY