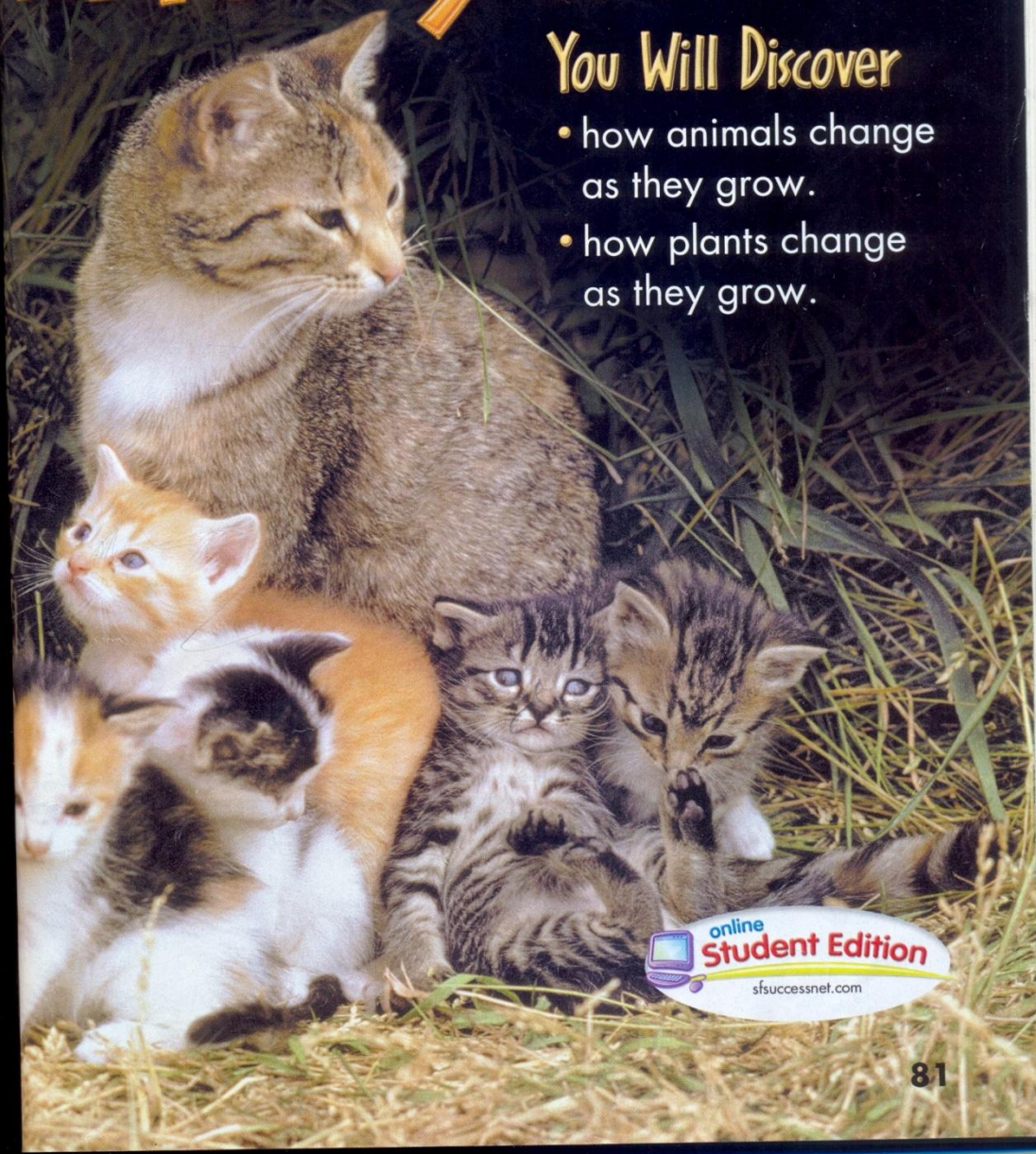
Chapter 4

Life Cycles

You Will Discover

- how animals change as they grow.
- how plants change as they grow.



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Build Background

How do animals and plants grow and change?

life cycle

tadpole

larva

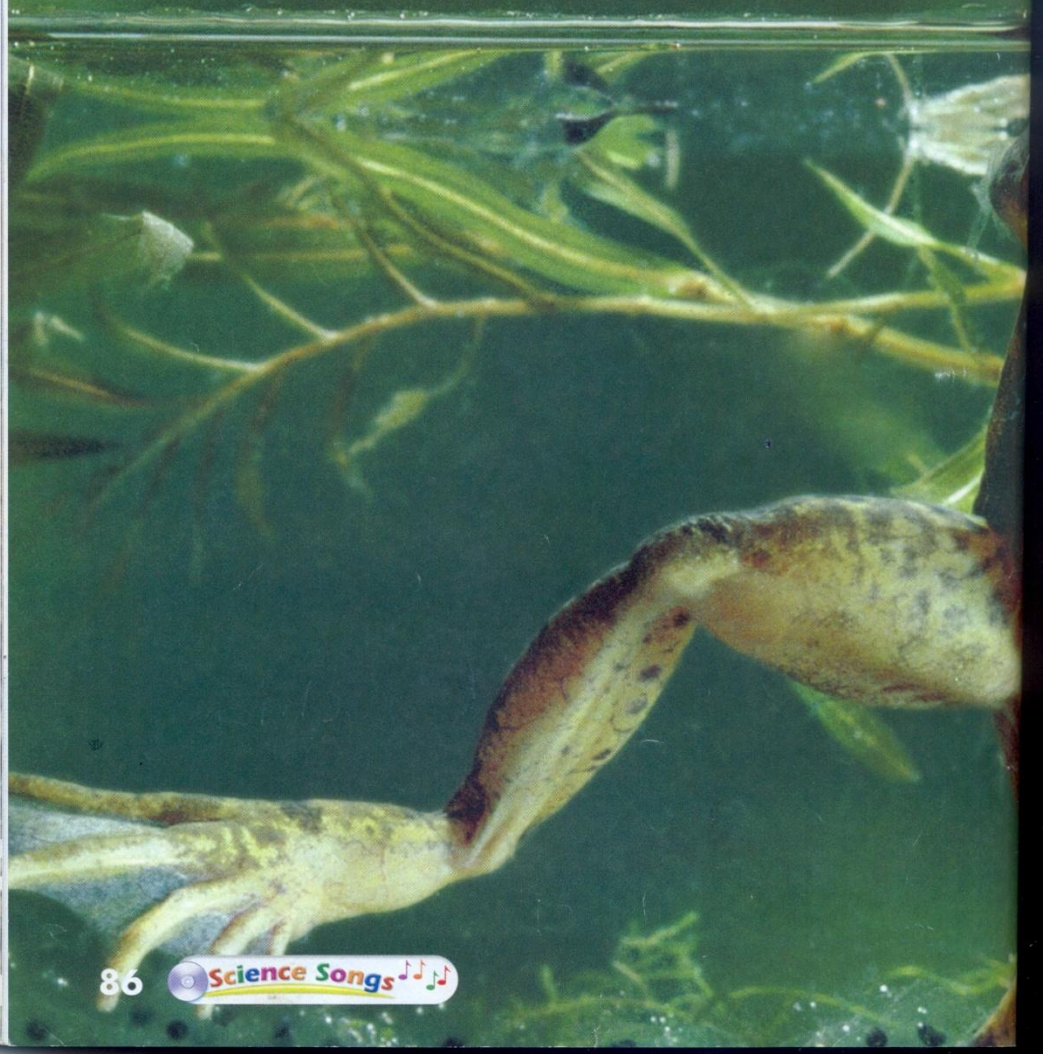
Chapter 4 Vocabulary

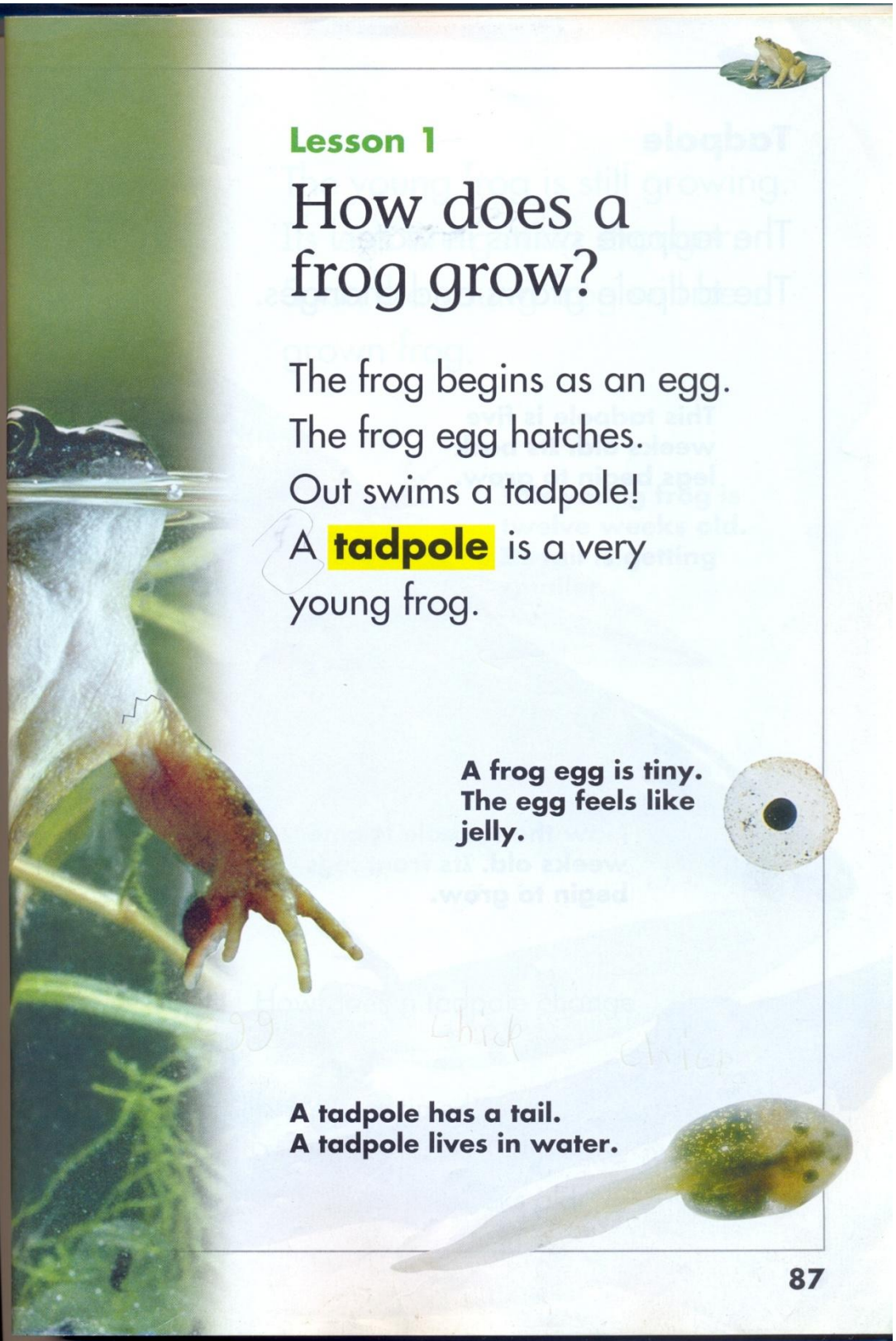
You Are There

That's a Life Cycle

Sung to the tune of "Pop Goes the Weasel"
Lyrics by Gerri Brioso & Richard Freitas/The Dovetail Group, Inc.

Let's play a game of "First, Next, Last"
So all of us will know,
How things change before our eyes
As they grow and grow.





Lesson 1

How does a frog grow?

The frog begins as an egg.
The frog egg hatches.
Out swims a tadpole!
A **tadpole** is a very young frog.

A frog egg is tiny.
The egg feels like jelly.

A tadpole has a tail.
A tadpole lives in water.

Tadpole

The tadpole swims in water.
The tadpole grows and changes.

This tadpole is five weeks old. Its back legs begin to grow.

Now the tadpole is nine weeks old. Its front legs begin to grow.

The young frog is still growing. Its legs are getting stronger. Soon the young frog will be a grown frog.

This young frog is twelve weeks old. Its tail is getting smaller.

1. **Checkpoint** How does a tadpole change as it grows?
2. **Math** in Science Make a time line of the growing frog. Draw when it is an egg and how it looks at 5, 9, and 12 weeks old.

Grown Frog

The tadpole grows into a frog.
The grown frog lives on
land and in water.
The frog hops on land.

Animals grow and change.
All of these changes are
called a **life cycle.**
Look at all the changes
in the frog's life cycle.

**First, a frog start
life as an egg.**

**Next, a tadpole
hatches from the
egg. The tadpole
swims in the wa**

Last, the tadpole grows into a frog. The grown frog may lay eggs in the water.

Lesson Checkpoint

1. How do frogs and tadpoles move?
2. **Put Things in Order**
   Tell about the life cycle of a frog. What happens first, next, and last?

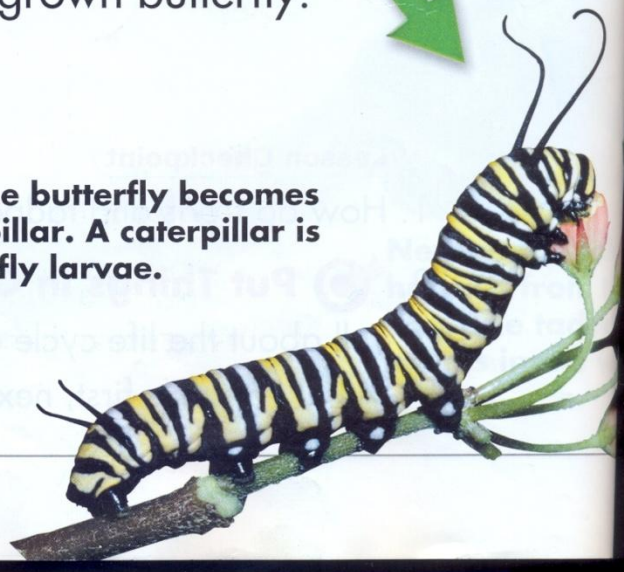
Lesson 2

How does a butterfly grow?

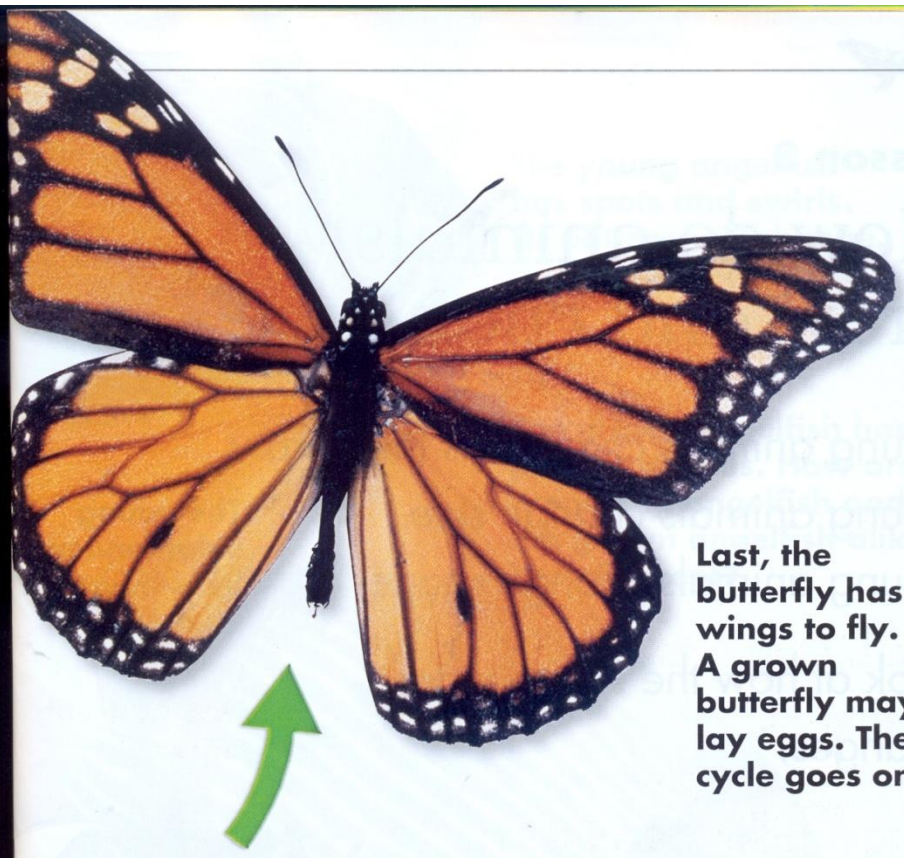
The butterfly begins as an egg.
A larva hatches from the egg.
A **larva** is a young insect.
The butterfly larva is called a caterpillar.

First, the butter is a tiny egg.

A caterpillar becomes a **pupa** when it is changing inside a hard covering.
Out flies a grown butterfly.



Next, the butterfly becomes a caterpillar. A caterpillar is a butterfly larvae.



Last, the butterfly has wings to fly. A grown butterfly may lay eggs. The life cycle goes on.

Then, the larva changes into a pupa.

Lesson Checkpoint

1. What is a larva?
2. **Math** in Science How many steps are there in the life cycle of a butterfly?

Lesson 3

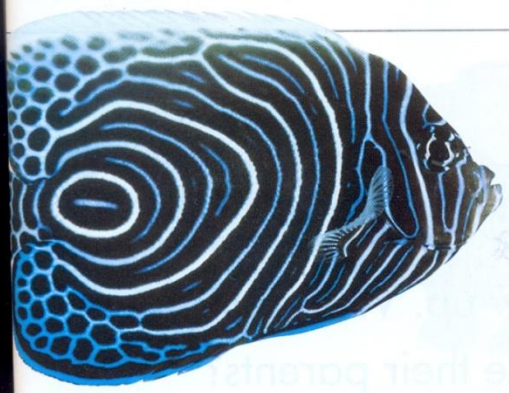
How do animals grow and change?

Young animals change as they grow.
Young animals change size.
Young animals change shape.

Look at how the salamander changes.

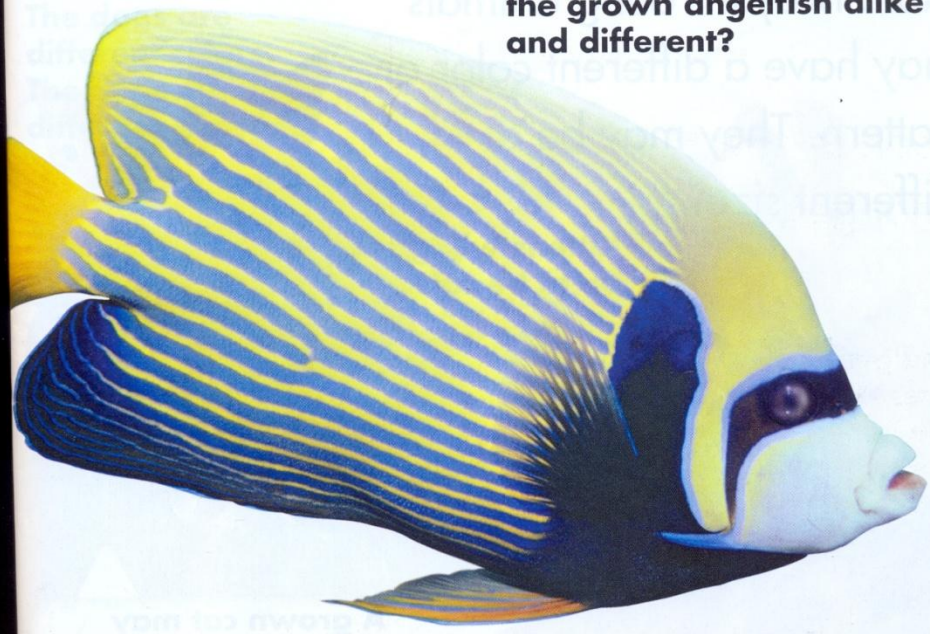
The young salamande lives in wa

The grown salamander lives on land. How are the young salamander and the grown salamander different?



The young angelfish has spots and swirls. Its pattern will change.

The grown angelfish has a pattern of lines. How are the young angelfish and the grown angelfish alike and different?

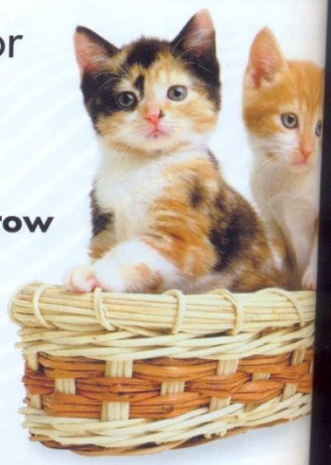


1. **Checkpoint** Tell two ways that animals may change as they grow.
2. **Art** in Science Draw and color a young angelfish. Draw and color a grown angelfish.

Growing Up

Young animals may look like their parents when they grow up. Will young animals look exactly like their parents?

Not always! Young animals may have a different color or pattern. They may be a different size.



Kittens will grow up to be cats.

A grown cat may have a different color pattern than its kittens.

One puppy may grow bigger than the other puppies.

The dogs are different colors. The dogs are different sizes.

Lesson Checkpoint

1. How do animals look different from their parents?
2. **Writing** in Science Write two sentences about how these dogs and puppies look **alike and different**.

Lesson 4

How does a daisy grow?

Plants have a life cycle.
Most plants grow from seeds.
A **seed coat** covers the seed.
A seed coat protects the seed.

A seedling will grow from the seed.
A **seedling** is a very young plant.

First, the life cycle of a daisy begins with a seed.

Next, a seedling begins to grow. The seedling has roots and a ste

Last, the seedling grows into a plant with flowers. The flowers make seeds. The seeds may grow into new plants.

Lesson Checkpoint

1. How does a seed coat help a seed?
2. **Put Things in Order** What happens first, next, and last in the life cycle of a daisy?

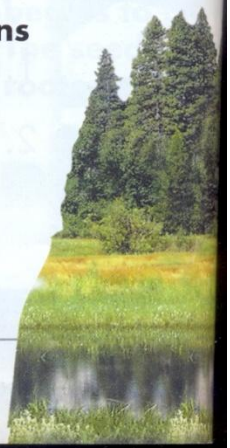
Lesson 5

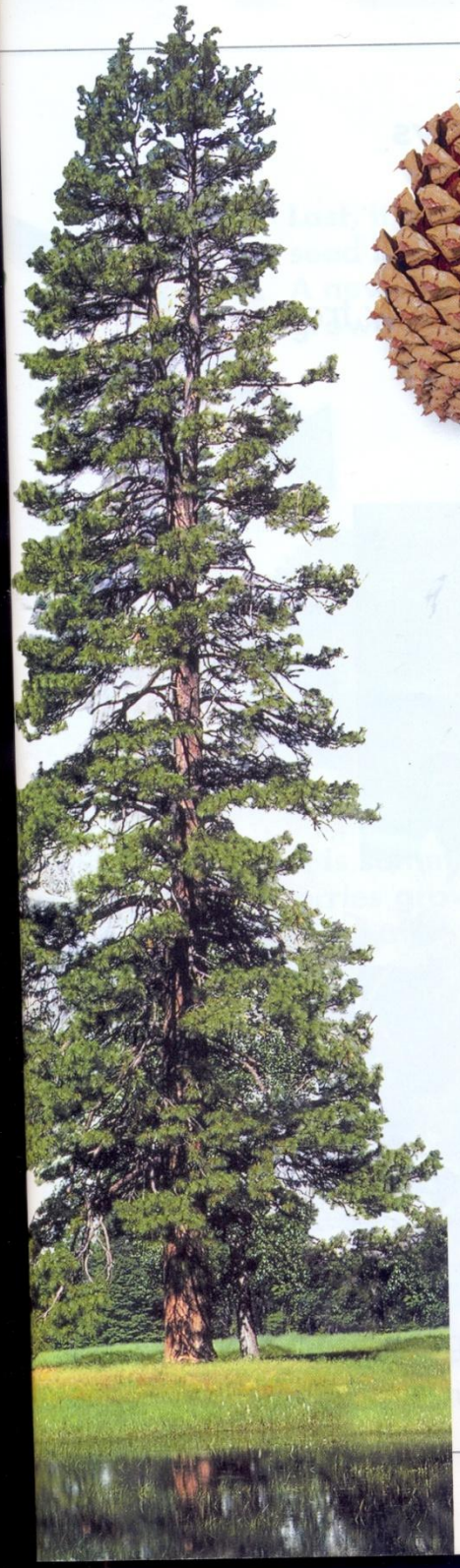
How do trees grow?

A tree grows from a seed.
A tree changes as it grows.
A tree takes many years to grow.

First, the life cyc
of a pine tree
begins with a se

Next, a seedling begins to grow. The seedling has roots and a stem.





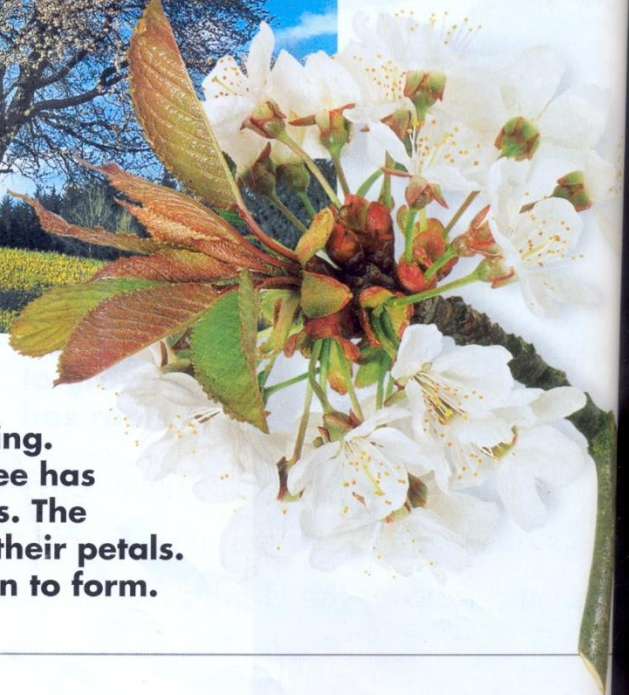
Last, the seedling grows into a pine tree. The pine tree makes pinecones. The pinecones make seeds. The seeds may grow into new seedlings.

1. **Checkpoint** What part of a pine tree makes seeds? How is this different from a daisy?

2. **Writing** in Science Write in your **science journal,** tell how a seed grows into a pine tree.

How a Cherry Tree Grows

A cherry is a fruit.
A cherry comes from a cherry tree.
The pictures show how
a cherry tree changes.



**First, it is spring.
The cherry tree has
many flowers. The
flowers lose their petals.
Cherries begin to form.**

Last, it is fall. Find the seed inside the cherry. A new cherry tree may grow from the seed.

Next, it is summer. The cherries grow on the tree all summer.

Lesson Checkpoint

1. What will grow from the flowers on the cherry trees?
2. **Social Studies** in Science There are many cherry trees in Washington, D.C. Find this city on a map of the United States.

Lesson 6

How do plants grow and change?

Young plants change as they grow. Look at how the tulip changes.

a tulip beginning to grow

a tulip with a flower

Tulips have different color patterns.

Tulips ha different kinds of petals.

The oak seedling has a thin stem.
The oak seedling has
small leaves.
The oak seedling will grow.
It will start to look like the
grown oak tree.

The grown oak tree
has a thick trunk.
The grown oak tree
has big leaves.

Lesson Checkpoint

1. How are the tulips alike and different?
2. **Art** in Science Find two leaves from the same kind of tree. Put them under paper. Rub the paper with a crayon. Tell how the leaves are different.