

What would the garden be like without beans? People grow beans because they are good to eat. But the bean pods also have another purpose. They contain seeds that will grow into new bean plants.




SAMPLE

Pods are the fruit of the bean plants. If you run your fingers up and down a bean pod, you will feel bumps. Each bump is a seed. Split open a pod to see its seeds.

If you put a bean seed in soil and give it water, something magical will happen.







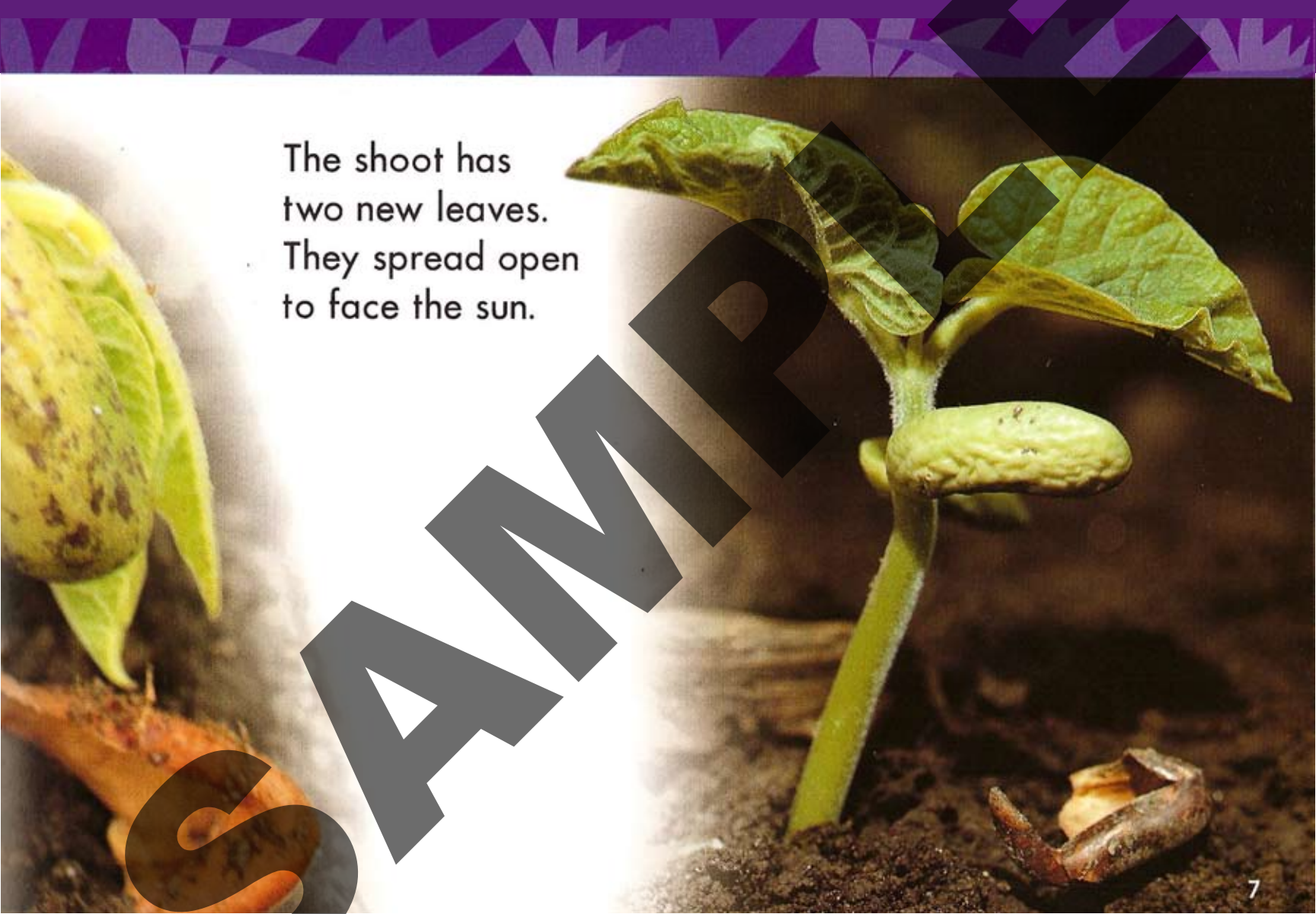
Inside each seed is a
tiny plant, or embryo.
The seed also has
two large white
sections called seed
leaves. They are
full of food for
the embryo.

In moist soil, the seed slowly swells with water. The embryo's tiny root begins to grow. The root breaks through the outer shell, or seed coat, and pushes downward into the soil. The seed has germinated.





A pale green shoot
begins to grow.
It pushes up and
forces the seed
leaves and seed
coat apart.
The seed coat
falls to the ground.



The shoot has
two new leaves.
They spread open
to face the sun.



The seedling keeps growing. More leaves form. The leaves make food for the whole plant. To make food, they use water from the ground, light from the sun, and carbon dioxide from the air.

Beetles and other insect pests come to eat the bean leaves. If the insects do not eat too many leaves, the plant will be strong enough to keep growing. When it is big enough, flower buds form. Soon they open into flowers.



A close-up photograph of several purple flowers, likely Mimulus lewisii, with green buds and stems. The petals are covered in small, clear water droplets. The background is a soft, out-of-focus light green.


Bees and other insects visit the flowers to sip the sweet nectar. A yellow dust called pollen sticks to the insects' bodies. When the insects move to other flowers, the pollen rubs off.

It fertilizes tiny eggs deep inside the flower.

The eggs begin to grow into new seeds,
and a bean pod forms around them.



SAMPLE



The flowers wither and drop off, but the pod keeps growing. The seeds inside get bigger. Fruit and seeds are good to eat, so people pick the pods. If they save some seeds and plant them next spring, the seeds will grow into new bean plants.





Can you put these in order?





Answer



L I F E C Y C L E S

CHOOSE FROM 12 TITLES IN THIS LIFE CYCLES SERIES!

CTP 3059 Monarch Butterfly

CTP 3060 Bean

CTP 3061 Sunflower

CTP 3062 Wood Frog

CTP 3063 Ladybug

CTP 3064 Chicken

CTP 3065 Jumping Spider

CTP 3066 Maple Tree

CTP 3067 Green Snake

CTP 3068 Hummingbird

CTP 3069 Horse

CTP 3070 Fighting Fish