



# Seeds Soil & Surprises

## SECTION 2:

# What do Plants Need to Live?

Teaching Resource for Grades K-2



## Quick Guide



### Time to Complete



**Preparation Time:** Up to 10 minutes



**Preparation Time:** Up to 30 minutes



### Key Question

What do plants need to live?



### Key Take Away

Plants need light, air, water, and nutrients (L.A.W.N.) to live.



### Key Task

Use the presentation to encourage inquiry as to the critical ingredients for plant life, where the ingredients come from, and how the plants use them.

## PART 1: Light



### Start Presentation

**PAUSE ON SLIDE #4**



### Things to Point Out

Light gives plants energy and helps them to make and process food.





## Discussion

- How does a plant get light?
  - What parts of the plant absorb light?
- 



## Fact

By using light, plants are able to make some of their own food. This is called photosynthesis; it is something amazing that plants can do that people cannot!

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## PART 2: Air



## Continue Presentation

PAUSE ON SLIDE #5



## Things to Point Out

Air is also needed for plants to survive and grow.

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## Discussion

- Do you think plants breathe?
  - Do you think plants breathe the same air people do?
  - Do you think plants breathe same way that people do?
- 



## Fact

Air has many parts, and plants “breathe in” the parts that humans “breathe out.” Humans and plants help each other this way! Plants use stomata to breathe, which are very little openings on their leaves.

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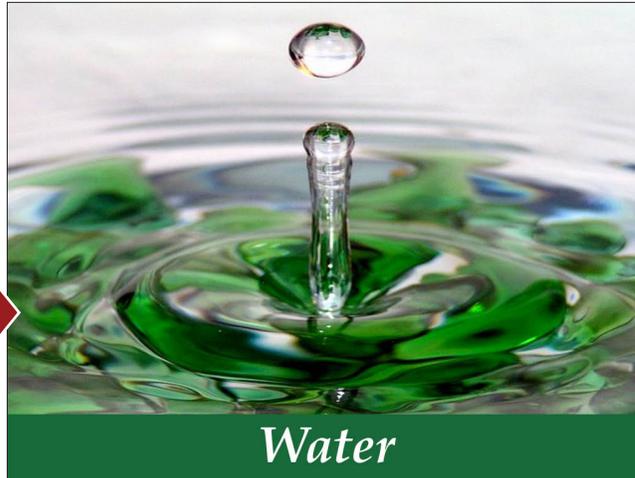


## PART 3: Water



**Advance  
Presentation**

**PAUSE ON SLIDE #6**



**Things to  
Point Out**

Water is also needed for plants to survive and grow.



**Observe  
& Interpret**

- How does a plant get water?
- What parts of the plant absorb water?
- What might water do inside of plants?
- Do you think all plants need the same amount of water?



**Fact**

The human body is two-thirds water, and the plant body is nine-tenths water! The moving water inside the plant helps food get to all parts of the plant.

## PART 4: Nutrients



**Advance  
Presentation**

**PAUSE ON SLIDE #8**





## Things to Point Out

Nutrients are the fourth thing that plants need. Nutrients are special kinds of minerals. Humans eat healthy food to get nutrients; plants get it from soil.



## Observe & Interpret

- What do you notice about the soil?
- What do you think is in the soil?
- How do you think the nutrients get into the plant?



## Reinforce

Soil is a mixture of three main ingredients. One ingredient is minerals (tiny bits of rock such as sand, clay, etc.); there are many different kinds of minerals that give plants nutrition. A second ingredient in soil is a living component, such as bacteria or worms. A third ingredient in soil is an organic component, or the remains of living things, in a form such as compost. But air and water are also important for healthy soil – in fact, half of a good soil’s volume is air!

It is also possible to improve the amount of nutrients in soil by adding compost. Compost uses decomposition, or the process of decaying natural materials that were once alive. You can make compost by adding leaves or simple food leftovers, such as banana peels to your soil, and taking care of it so it decomposes. This makes the soil healthier. Healthy soil is important for healthy plants.



## Advance Presentation

PAUSE ON SLIDE #9



## Reinforce

And now you know that plants need L.A.W.N.! (Have students reinforce by asking what the letters stand for.) Light, Air, Water, and Nutrients all work together to help the plant make its food and to grow.