

Hypothesis  
is true

Hypothesis  
is false

Report your  
results

## CONCLUSIONS

Soil # \_\_\_\_ is healthier than Soil # \_\_\_\_.

This means that Soil # \_\_\_\_ will...

We can help make soils healthier by...

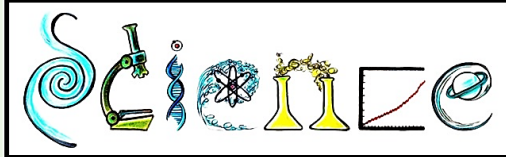
## REFLECTION

Keep wondering!  
Stay Curious!

I learned:

I liked:

I wonder:



### CERTIFICATE

Presented to:

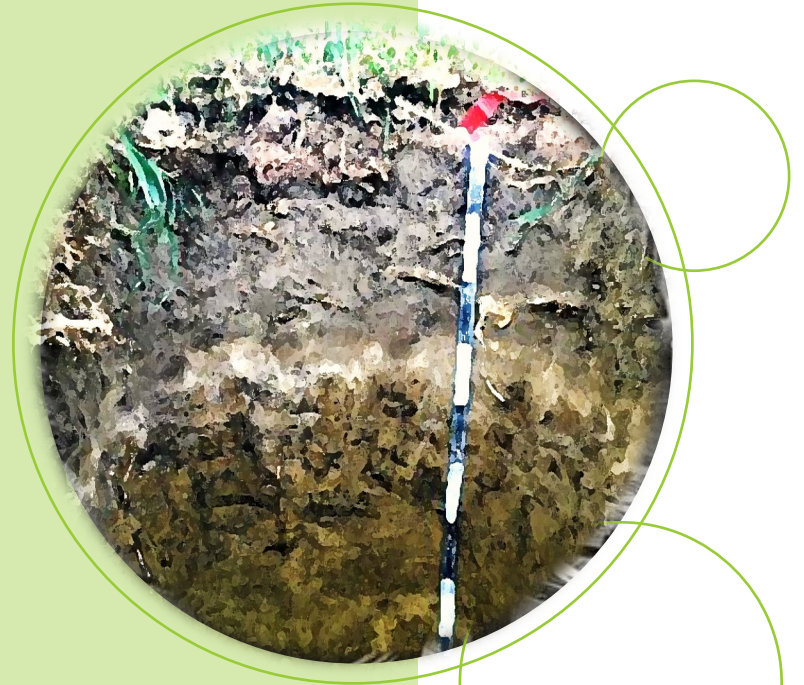
for

EXCELLENCE IN SCIENCE

Signed

Operation:

Let's Get Dirty!



U School  
Soil Science Lab

My Name: \_\_\_\_\_

Scientist: \_\_\_\_\_



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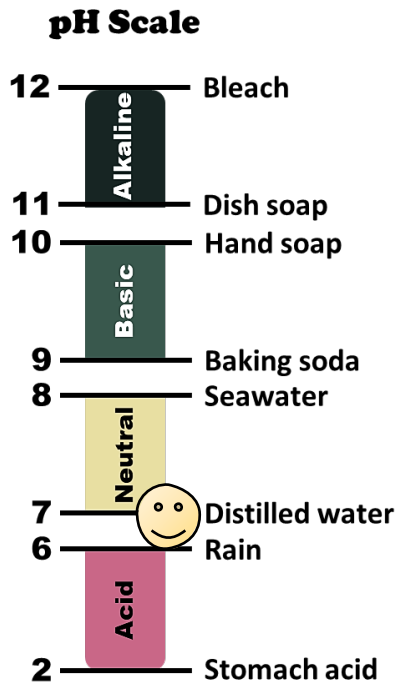
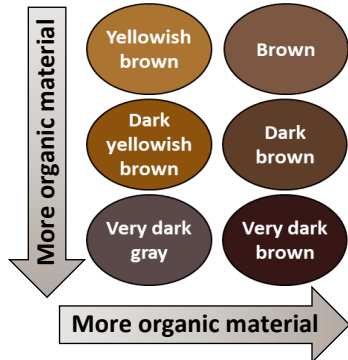
Test with an experiment!

Analyze your results

# EXPERIMENT

## Soil Color & Acidity

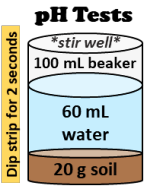
You can tell a lot about a soil by its color, like whether it has organic material, which provides nutrients, water storage, and structure! Soils with a more neutral pH (pH of 6 to 7) also provide more nutrients. **Let's investigate our soil further!**



## Results

Soil #1  
Smear moist Soil #1  
Color:

Soil #2  
Smear moist Soil #2  
Color:



Soil #1  
pH =  
Soil #2  
pH =

Tape pH test strip of Soil #1

Tape pH test strip of Soil #2

Test with an experiment!

Analyze your results

Ask a question

# EXPERIMENT

# OUR MISSION

## Soil Structure & Texture

Plants need good structure and texture from soil to grow. Plant roots need to breathe and hold on when it's windy. **Let's test which soil provides a better home for plants!**

### Results

#### Soil #1

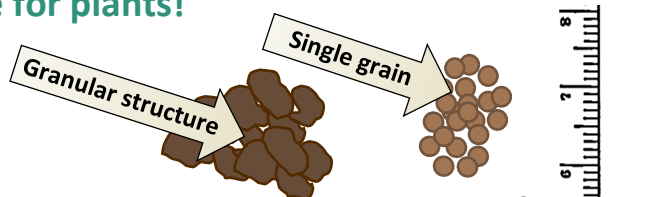
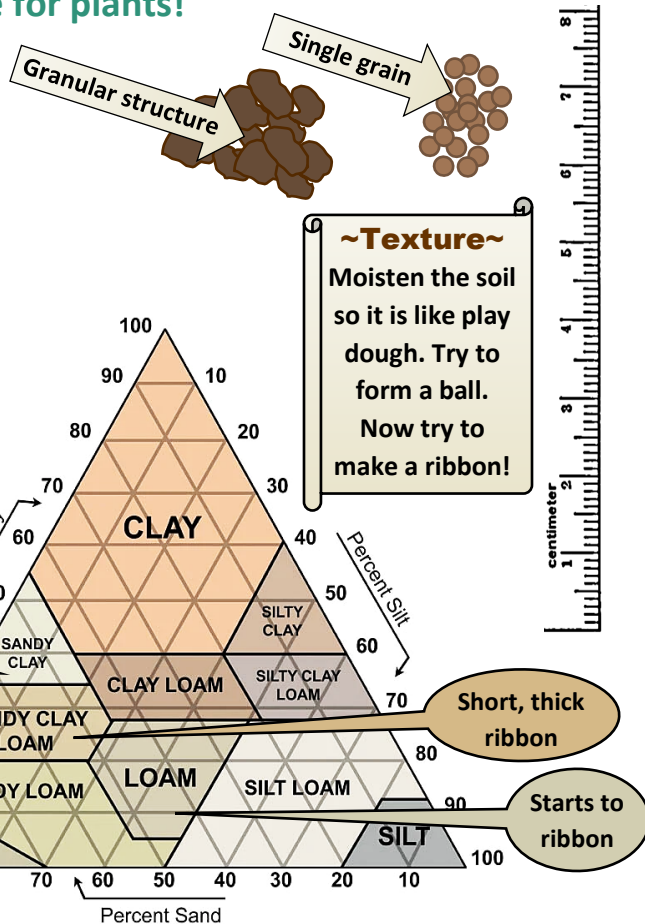
Structure:

Texture:

#### Soil #2

Structure:

Texture:

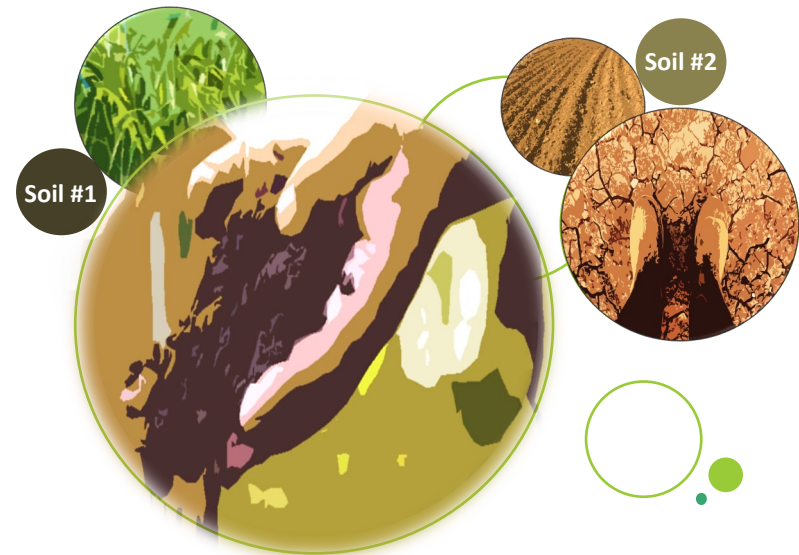


## Let's help make our soils healthy!

Healthy soils support healthy plants and a healthy Earth! Healthy soils are **full of life** (like bugs and microbes!) and **contain dead things, water, and air**.

## How can we help make our soils healthy?

**Some soils have plant coverage** most of the year and a lot of the dead plant parts return to the soil. **Other soils are left bare** for long time periods. **Let's test these soils to see which is healthier!**



Research

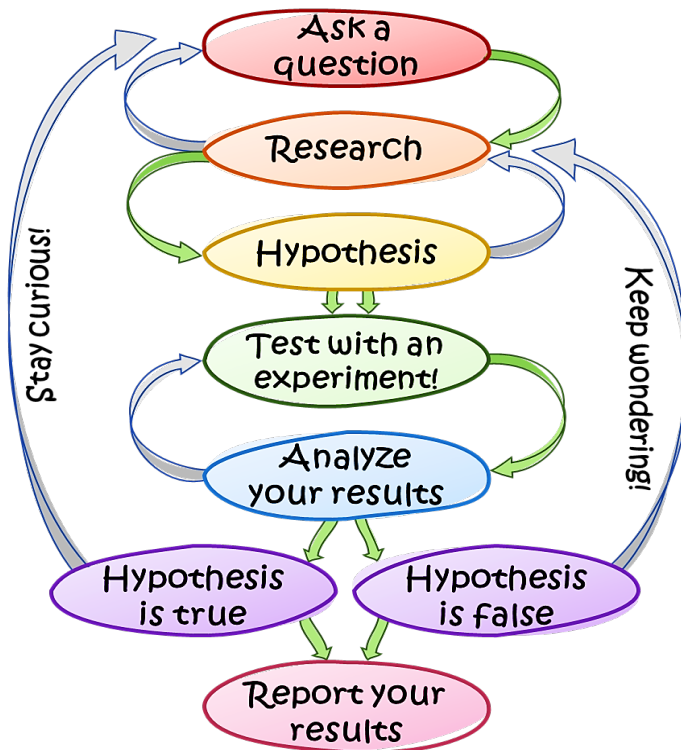
Hypothesis

# SCIENTIFIC METHOD

## Hypothesis

Soil # \_\_\_\_ is healthier than Soil # \_\_\_\_.

Why?



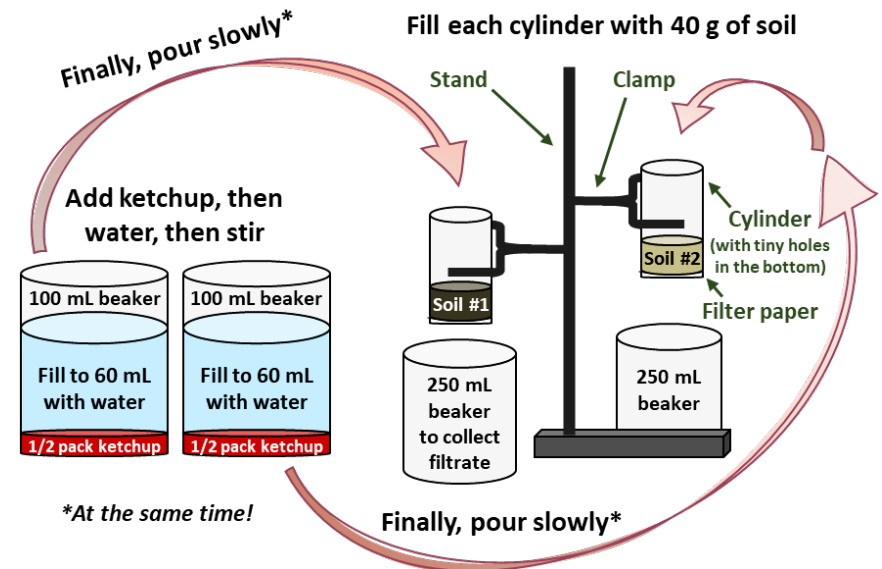
Test with an experiment!

Analyze your results

# EXPERIMENT

## Water & Nutrients

Plants and microbes need water and nutrients to survive. **Let's test which soil holds more water and nutrients, as well as filters water better!**



## Results

Time	2 min		5 min		30 min	
Soil #	1	2	1	2	1	2
Water lost*						
Redness**						
Cloudiness***						

\*in mL \*\*High, Medium, Low \*\*\*High, Medium, Low