

# LogBook

January 14 • Planned and thought about the experiment. Decided to do the topic on plants and a global issue about them

7:26-9:00pm January 15 • formatted a rough copy question and adjusted it based off my ideas and thoughts

5pm January 16 • thought about how to perform experiment and materials

12:00-12:26pm  
9:26pm Jan 22 • Began working on manipulated variable, materials, question  
• altered question to make more sense, hypothesis

8-10pm Jan 23 - fixed hypothesis, finalized variables, materials

Jan 24-25 - Began, edited, and completed background information

Jan 26 - all cites and sources added to doc's

11:00pm Feb 4 - procedure, extensions

Feb 27

2pm/11pm experiments started, observed before and right after experiment

Feb 28 / Mar 1/2/3

3pm/10pm repeated experiment and wrote observations + data

March 2

Completed experiments

March 3

3pm fixed out CTSE

2:30 pm

# Plant Observations

Feb 27, 2026

## Before experiment

### - Humidity plant -

- Thick smooth green leaves, yellow smaller leaves (6 leaves total)
- Standing up tall
- Damp rich soil
- Stem is reddish brown with spots
- Fibrous roots (peperomia obtusifolia)
- 12.5cm

### - Regular -

- Waxy, yellow spots towards outside edge (8 leaves total) - extremely small leaf
- One main stem branching upwards
- Rich damp soil
- Reddish brown stem with spots
- Fibrous roots, (peperomia obtusifolia)
- 13.6cm
- Appears to look healthiest

### Incense stick (smoke) -

- Twisting leaf, light green with darker spots (6 leaves total)
- Small stem standing up
- damp soil
- Reddish stem with spots
- Fibrous roots (peperomia obtusifolia)
- more yellow spots than others
- 12.0cm

### Atmosphere

- Oxygenated air
- open environment
- Room temperature

Feb 27

# Plant Observations

- During Experiment - (right after experiment started)

## - Humidity Plant -

Jar	environment	Plant
• water droplets	• Humid	• soil is damp (3 on moisturemeter)
• translucent	• enclosed - small space	• Nothing changed yet
• condensation forming	• warm from hot water	• leaves covered in humidity

## - Regular plant -

Jar	environment	Plant
• clear	• Room temp	• Regular
• transparent	• enclosed	• appears to be healthy
	• Not humid or dry	• squished at top of the jar
	• trapped air	• damp soil (3 on moisturemeter)
		• Nothing changed yet

## - Incense Stick -

Jar	environment	Plant
• translucent	• low oxygen from smoke	• Soil is damp (3 on moisturemeter)
• Fog	• Smokey	• plant is coated with layer of smoke
• greyish tint	• enclosed	• Nothing changed yet
• smoke covering jar	• air trapped	

	Observing	Humidity Plant	Regular plant	Incense Stick Plant
Jar	Opacity	translucent	Transparent	Translucent
Jar	Glass	Water droplets Condensation forming	clear	Smoke covering, Fog, greyish tint
Environment	Temperature	Warm/humid	Room temp	Warm/humid
	Air	Humid	Not humid or dry	Smokey/low oxygen
Plant	Atmosphere	enclosed space, trapped humidity	enclosed space, trapped air	enclosed space, Smoke trapped
	Soil	damp (3 on moisturemeter)	damp (3 on moisturemeter)	damp (3 on moisturemeter)
	Leaves	covered in humidity	Nothing changed yet	covered in cloud of smoke
	Roots	Nothing changed yet	Nothing changed yet	Nothing changed yet
	Stem	Nothing changed yet	Nothing changed yet	Nothing changed yet

# Plant Observations

- During Experiment - (1 hours after experiment began)

## - Humidity plant -

### Jar

- water droplets
- transparent

### Environment

- Humid
- enclosed
- no air circulation
- Room temp. To cool

### Plant

- moist soil (3 on moisturemeter)
- leaves covered in condensation
- stem is wet

## - Regular Plant -

### Jar

- clear
- transparent

### Environment

- Not humid or dry
- enclosed
- No air circulation
- Room temp.

### Plant

- damp soil (2 on moisturemeter)
- waxy smooth green leaves
- dry stems
- Nothing changed yet -

## - Incense Stick -

### Jar

- translucent
- light grey tint
- light fog

### Environment

- Smokey
- warm
- enclosed
- No air circulation

### Plant

- damp soil (2 on moisturemeter)
- smooth plant leaves
- Nothing changed yet -

	Humidity Plant	Regular Plant	Incense stick Plant
Observing	Transparent	transparent	translucent
Capacity	Water droplets	clear	Light grey tint
Glass	Room Temp - cool	Room temperature	Warm
Temperature	Humid / No air circulation	similar to room air	Some smoke has escaped
air	enclosed, no air circulation	enclosed, No air circulation	enclosed No air circulation
Atmosphere	moist (3 on moisturemeter)	damp (2 on moisturemeter)	damp (2 on moisturemeter)
Soil	Covered in condensation	waxy, smooth, green	smooth, plant leaves
leaves	No visible changes yet	Nothing changed yet	Nothing changed yet
Roots	Stem is wet	dry	Nothing changed yet
Stem			

Jar Environment Plant

# Plant Observations

10pm Feb 28

## - During Experiment -

### Humidity Plant

#### Jar

- Condensation
- "fog"
- translucent

#### Environment

- extremely humid
- enclosed
- No air circulation
- warm

#### Plant

- "really moist" Soil (4 on moisture meter)
- "stiff" leaves
- stem is flexible and moist

## - Regular Plant -

#### Jar

- very little condensation
- clear
- transparent

#### Environment

- damp air
- enclosed
- No air circulation
- Room temperature - Cool

#### Plant

- damp soil (3 on moisture meter)
- leaves drier than before
- stem is more greenish
- ↳ has a top dry layer

## Incense stick Plant -

#### Jar

- fog
- grayish-tint
- translucent

#### Environment

- light smoke "warm"
- enclosed
- air and smoke is trapped

#### Plant

- In between
- Dry Soil (2 on moisture meter)
- Dry and wilting leaves
- stem is darker

	Observing	Humidity Plant	Regular plant	Incense Plant
Jar	Opacity	translucent	transparent	translucent
	Glass	"foggy, condensation"	very little condensation forming clear	fog, tint
Environment	Temperature	warm	Room Temperature → cool	slightly warmer
	Air	extremely humid	damp fr regular room air	light smoke
	Atmosphere	enclosed, no air circulation	enclosed, no air circulation	enclosed, air + smoke trapped
Plant	Soil	really moist (4 on m.m.)	damp (3 on moisture meter)	Dry (1.5 on m.m.)
	leaves	stiff, "leather like"	drier than before	Dry and wilting slightly
	Roots	unnoticeable change	unnoticeable change	unnoticeable change
	Stem	flexible and moist	more greenish, healthy	darker, ...

# Plant Observations

7pm Mar 1

## During Experiment -

### Humidity plant

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Jar</li> <li>• moisture buildup</li> <li>• translucent</li> </ul> | <p><u>environment</u></p> <ul style="list-style-type: none"> <li>• Humid</li> <li>• enclosed</li> <li>• No air circulation</li> <li>• Room temperature</li> </ul> |
|--|---|

### Plant

- wet soil (5 on moisturemeter)
- stiff, more yellow leaves
- dark reddish flexible stem
- Small leaf more yellow

### Regular Plant

- |   |  |
|---|--|
| <p><u>Jar</u></p> <ul style="list-style-type: none"> <li>• little condensation</li> <li>• clear</li> <li>• transparent</li> <li>• noticeable transpiration</li> </ul> | <p><u>environment</u></p> <ul style="list-style-type: none"> <li>• damp air</li> <li>• enclosed</li> <li>• No air circulation</li> <li>• Room temperature</li> </ul> |
|---|--|

### Plant

- damp/og soil (3 on moisturemeter)
- leaves look healthy, green, condensation
- spotted stem, standing up tall

### Incense stick Plant

- |  |   |
|--|---|
| <p><u>Jar</u></p> <ul style="list-style-type: none"> <li>• cloud of smoke</li> <li>• grey tint</li> <li>• translucent</li> </ul> | <p><u>environment</u></p> <ul style="list-style-type: none"> <li>• light smoky layer</li> <li>• enclosed</li> <li>• air and smoke combined</li> </ul> |
|--|---|

### Plant

- dry soil (1 on moisturemeter)
- dull leaves, more yellow
- bent and darker stem

	Humidity plant	Regular Plant	Incense stick Plant
Observing	Translucent	Transparent	Translucent
Opacity	Moisture buildup	little condensation, clear, noticeable transpiration	grey tint, fog
Glass	Room temperature	Room temperature	• Room temp warm
Temperature	Humid	damp air	light smoke combined
Air	enclosed, no air circulation	enclosed, no air circulation	cloud of smoke, air and smoke combined, enclosed
Atmosphere	wet (5 on moisturemeter)	damp/og (3 on moisturemeter)	dry soil (1 on moisturemeter)
Soil	stiff, slightly more yellow	Healthy, green, little condensation	dull leaves, more yellow
leaves	Unnoticeable change	noticeable change	noticeable change
Roots	darkish, reddish, flexible	spotted, standing up tall	bent and darker stem
stem			

# Plant Observations

5pm

Mar 2

## During Experiment -

### Humidity Plant

#### Jar

- Translucent
- layers of moisture buildup
- water droplets

#### Environment

- lukewarm
- steamy
- enclosed, no air circ.

#### Plant

- wet soil (4 on moisture meter)
- stiff (almost "crunchy" cut branch)
- dull, pointed down leaves
- roots appear thicker

### Regular Plant

#### Jar

- water dripping
- translucent
- little condensation

#### Environment

- lukewarm
- enclosed
- "no" air circulation
- air is trapped

#### Plant

- soil = moist (4 on moisture meter)
- leaves look thick
- less vibrant colored leaves
- stem is more brown
- roots seem brighter

### Incense Stick plant

#### Jar

- fog buildup
- grey
- translucent

#### environment

- warm
- enclosed
- no air circulation
- more smoke than air

#### Plant

- dry soil (1.5 on moisture meter)
- some leaves died
- stem is darker + weaker
- roots look normal

# Plant Observations

7pm March 3

## Drying Experiment - Humidity Plant

### Jar

- translucent
- layers of steam and moisture buildup
- water droplets, condensation

### environment

- warm/hot
- steamy
- enclosed, no air circ

### Plant

- Soil wet (5 on moisturemeter)
- dull, drooping leaves
- Roots look same
- stem looks taller

## Regular Plant

### Jar

- water droplets on jar
- translucent
- very little condensation

### environment

- warm
- enclosed
- No air circulation

### Plant

- moist soil (4 on moisturemeter)
- leaves look healthy
- smaller leaves grew
- stem stayed same
- roots stayed same

## Incense Stick plant

### Jar

- grey
- translucent
- cloud of smoke

### environment

- Room temperature
- enclosed
- No air circulation
- High smoke concentration

### Plant

- dry soil (1 on moisturemeter)
- Some leaves withered/died
- stem broke at some areas
- Roots are slightly orange/dark

# Qualitative and Quantitative

## Qualitative

Observations

↳ Jar, glass

↳ stem, leaves, Roots, Soil

↳ air, atmosphere

## Quantitative

- Height

- Moisturemeter

## Procedure Rough copy

1.) gather all materials

2.) paper plate

3.) Jar

4.) Humidity Jar

5.) Incense stick Jar

6.) observation