1. NONVERBAL CITIZEN SCIENTIST
Communication Board / Choice Board

POLLINATOR CHOICES



BEE | BUTTERFLY / MOTH | FLY | WASP | OTHER INSECT

MY CHOICES



I SEE IT | MORE | LESS | SAME

AGAIN | HELP | FINISHED | STOP

YOU CAN SHOW ME BY...



POINTING | LOOKING | PRESSING MY SWITCH

MY OBSERVATIONS COUNT!
I am a citizen scientist!

ROBERTS ROCKETS STEM

2. AU CITIZEN SCIENTIST
Visual Task Strip & First / Then

MY JOB:
I am a citizen scientist!
I follow my steps.



1. GET READY — Check my tools.
2. GO TO GARDEN — Walk with my group.
3. FIND FLOWERS — Look at the flowers.
4. WATCH — Look carefully.
5. COUNT — Make tally marks.
6. RETURN INSIDE — Back to the lab.
7. GRAPH — Add my data to the graph.
8. FINISHED — Great job!

FIRST



Observe for ____ minutes.



THEN



Return to STEM Lab.

I CAN DO IT!

Take deep breaths. | Ask for help. | Use my break card. | Stay with my group. | I am a scientist!

ROBERTS ROCKETS STEM

3. VISUALLY IMPAIRED CITIZEN SCIENTIST
Tactile Data Mat & Support

POLLINATOR KEY (TACTILE)



BEE (fuzzy) | BUTTERFLY / MOTH (smooth) | FLY (raised dots) | WASP (ridged) | OTHER INSECT (ridged dots)

MY POLLINATOR DATA MAT



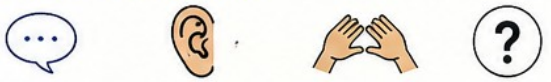
	BEES
	BUTTERFLIES / MOTHS
	FLIES
	WASPS
	OTHER INSECTS

MAKE SENSE OF OUR DATA (USE TOUCH OR HEAR DATA)



WHICH ROW IS THE LONGEST? | WHICH ROW IS THE SHORTEST? | ARE ANY ROWS THE SAME?

SHARE YOUR THINKING



I think... | I heard / was told... | I feel... | My question is...

EVERY OBSERVATION COUNTS!

ROBERTS ROCKETS STEM

ROBERTS ROCKETS STEM

1. NONVERBAL TOOL KIT

Communication Board / Choice Board

★ I am a citizen scientist. My observations count! ★

POLLINATOR CHOICES



BEE



BUTTERFLY / MOTH



FLY



WASP



OTHER INSECT



NONE

MY CHOICES



I SEE IT



MORE



LESS



SAME

AGAIN



HELP

FINISHED

STOP

YOU CAN SHOW ME BY...



POINTING



LOOKING



PRESSING MY SWITCH

REMEMBER

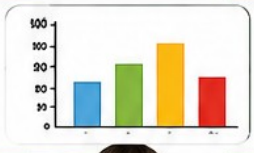
- You are the scientist!
- Your choices help us learn.
- Every observation is important!



2. VISUAL SCHEDULE FOR POLLINATOR COUNT

MY JOB:

I am a citizen scientist!
I follow my steps.

1		**GET READY** Check my tools.
2		**GO TO GARDEN** Walk with my group.
3		**FIND FLOWERS** Look at the flowers.
4		**WATCH** Look carefully.
5		**COUNT** Make tally marks for pollinators.
6		**RETURN INSIDE** Back to the lab.
7		**GRAPH** Add my data to the graph.
8		**FINISHED** Great job!

FIRST



Observe for ____ minutes.



THEN



Return to STEM Lab.

I CAN DO IT!

- Take deep breaths.
- Ask for help.
- Use my break card.
- Stay with my group.
- I am a scientist!

★ ROBERTS ROCKETS STEM ★

ROBERTS ROCKETS STEM

3. TACTILE COUNT

Tactile Data Mat & Support

I am a citizen scientist. Every observation counts!

POLLINATOR KEY (TACTILE)



BEE
(fuzzy)



BUTTERFLY / MOTH
(smooth)



FLY
(raised dots)



WASP
(ridged)



OTHER INSECT
(ridged dots)

MY POLLINATOR DATA MAT (USE TOUCH OR HEAR DATA)

	**BEES**	
	**BUTTERFLIES / MOTHS**	
	**FLIES**	
	**WASPS**	
	**OTHER INSECTS**	

MAKE SENSE OF OUR DATA (USE TOUCH OR HEAR DATA)



WHICH ROW IS THE LONGEST?



WHICH ROW IS THE SHORTEST?



ARE ANY ROWS THE SAME?

SHARE YOUR THINKING (USE TALKER, BRAILLE, OR VOICE)



I think...



I heard / was told...



I feel...



My question is...

ROBERTS ROCKETS STEM



TIP FOR PARTNERS
Describe what you see.
Let me place the counter.
Give me time to explore.

Roberts Rockets STEM
Pollinator Citizen Scientist

Name: _____ **Grade:** _____ **Date:** _____

My Job
I can observe pollinators, count what I see, and use my data to tell what I notice.

1 PREDICT

What pollinator do you think we will see the MOST?
Circle one:

Bee Butterfly/Moth Fly Wasp Other Insect

2 OBSERVE & COUNT

Watch the flowers carefully.
Make one tally mark each time a pollinator visits.



Pollinator	My Tallies	Total
Bumble Bee		
Carpenter Bee		
Honey Bee		
Small Bee		
Wasp		
Fly		
Butterfly or Moth		
Other Insect		

3 GRAPH OUR DATA

How many pollinators did we see?
Color one box for each pollinator visit.

Bees									
Butterflies / Moths									
Flies									
Wasps									
Other Insects									

4 THINK LIKE A SCIENTIST

Finish the sentences.

I saw the most _____.

I saw the fewest. _____.

I noticed _____

_____.

I wonder _____

_____.

Scientist Check

- ☐ I observed carefully.
- ☐ I recorded my data.
- ☐ I counted pollinator visits.
- ☐ I used my data to tell what I noticed.



POLLINATOR CITIZEN SCIENTIST
★ DATA & ANALYSIS ★

Roberts Rockets STEM

Name: _____ Grade: _____ Date: _____ Time: _____

LEARNING TARGET

I can collect, graph, and analyze pollinator data to identify patterns and support my thinking with evidence.

MY PREDICTION

Which pollinator do you predict will visit our garden most often? Why?

_____

_____

_____

1 OBSERVATION CONDITIONS

Scientists record information that may affect their results.

Plant observed: _____

Weather: Sunny Cloudy Rainy Windy

Temperature or how it feels: _____

Garden location: _____

2 COLLECT YOUR DATA

Record one tally for every pollinator visit.

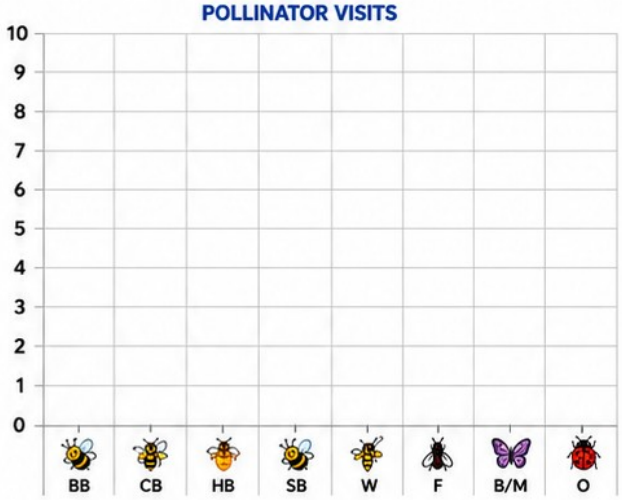
Pollinator Category	Tallies	Total
Bumble Bees		
Carpenter Bees		
Honey Bees		
Small Bees		
Wasps		
Flies		
Butterflies / Moths		
Other Insects		

Total Pollinator Visits: _____

3 GRAPH YOUR DATA

Create a bar graph using your totals.

POLLINATOR VISITS



KEY

BB = Bumble Bee CB = Carpenter Bee HB = Honey Bee SB = Small Bee
W = Wasp F = Fly B/M = Butterfly or Moth O = Other Insect

4 ANALYZE THE DATA

The most common pollinator was _____.

It visited _____ times.

The least common pollinator was _____.

It visited _____ times.

One pattern I noticed was _____

_____

_____

5 CLAIM → EVIDENCE → REASONING

CLAIM: What do you think your data tells us about our pollinator garden?

_____

_____

EVIDENCE: What numbers or information from your data support your claim?

_____

_____

REASONING: Why does that evidence support your claim?

_____

_____

6 THINK DEEPER

What might have affected the pollinators we observed? Circle any that may have mattered.

Time of Day | Weather | Temperature | Flower Type | Garden Location | Sunlight

One question I still have: _____

_____

If I collected data again, I would: _____

_____

7 COMPARE TO OUR SCHOOLWIDE DATA

After all classes enter their data, compare your results to the schoolwide digital graph.

One similarity I noticed: _____

One difference I noticed: _____

What does our schoolwide data tell us? _____

_____

What new questions does our schoolwide data create? _____

_____

_____

★ WE ARE CITIZEN SCIENTISTS!

I observed carefully. | I collected accurate data. | I represented my data. | I identified a pattern. | I supported my thinking with evidence. | I asked a new scientific question.

ROBERTS ROCKETS