



UPCYCLED ENTOMOLOGY

DIY Moth Traps for Backyard Investigations

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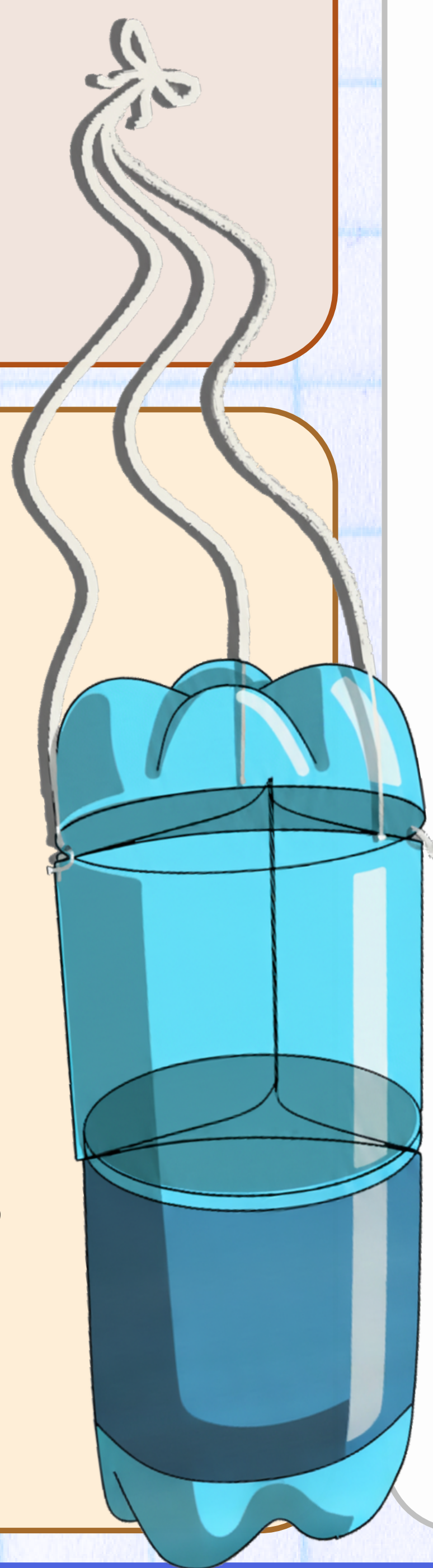
THE “WHAT”

- Bringing authentic investigations to the classroom
- Students designed their own research projects
- DIY traps are low-cost and reusable
- Multiple opportunities for public engagement

SUPPLIES

- 2x 2L Soda Bottles
- 2x Binder Clips
- Twine
- Tape
- LED Keychain Light
- Hot Shot No-Pest Strip

Cost: ~\$3 / trap

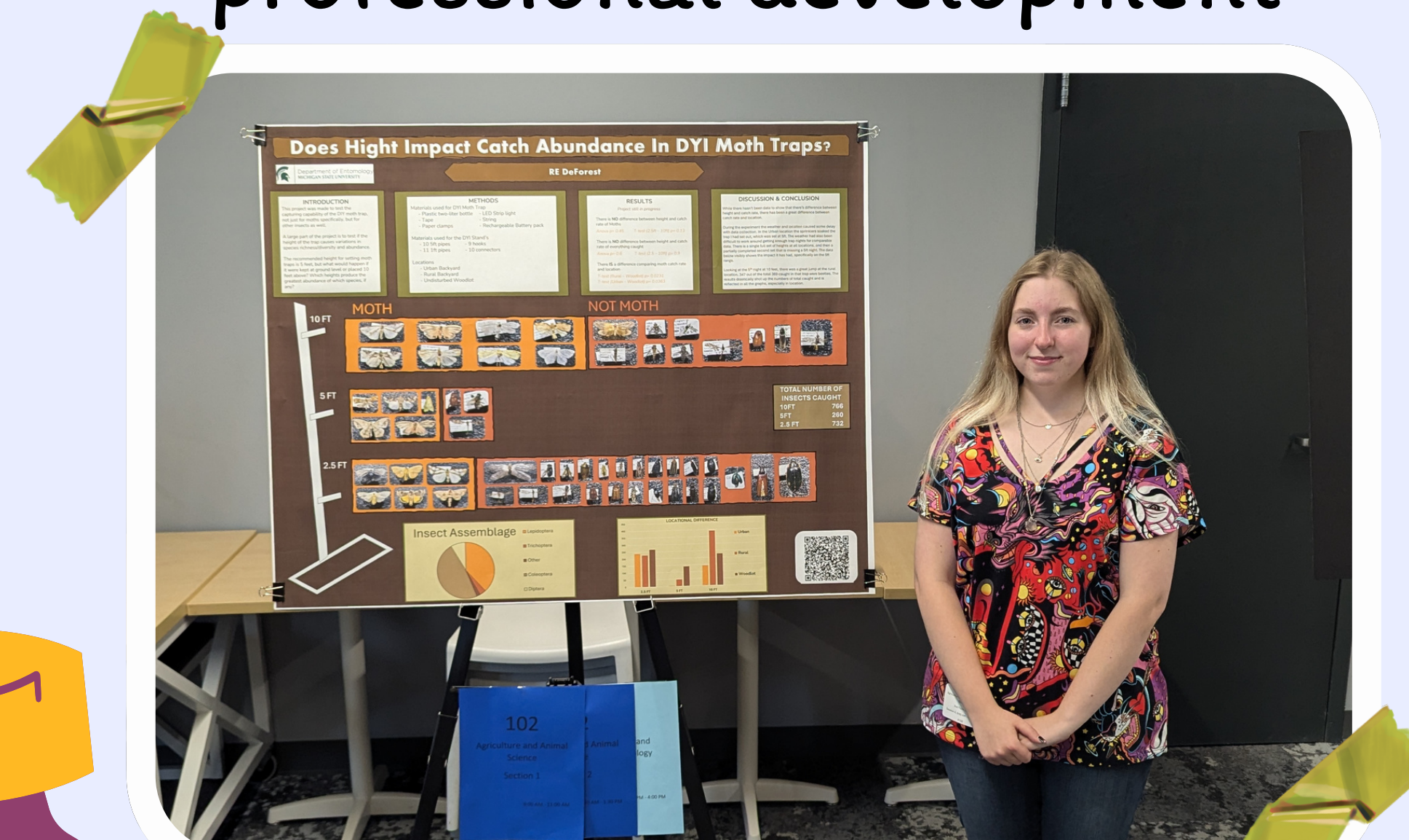


If all you had in your lab was a recycle bin and some undergrads,
how could you conduct your research using upcycled materials?



3. UNDERGRAD RESEARCH PROJECT

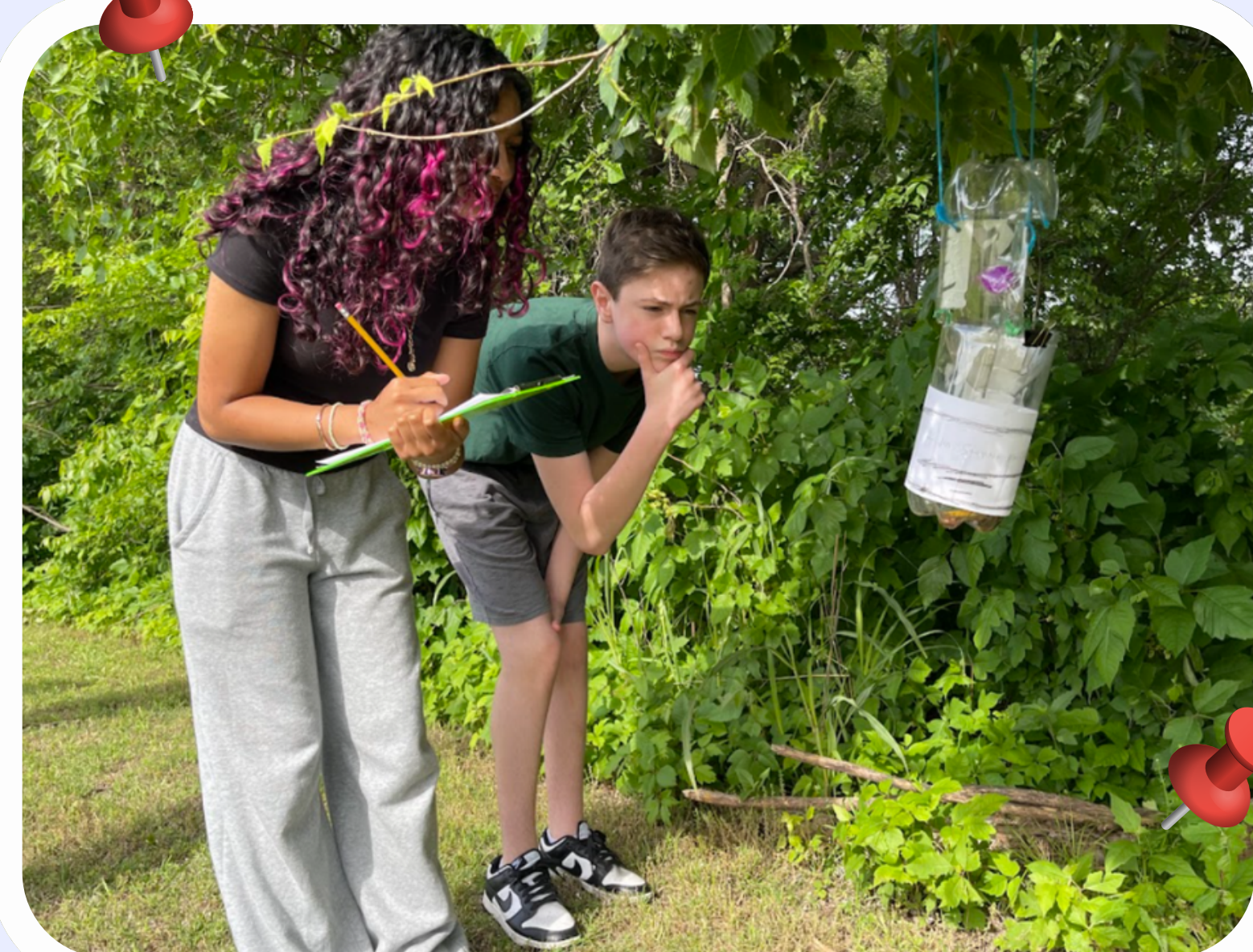
- Model professional skills
- Encourage autonomy
- Foster discipline-specific science literacy
- Create opportunities for professional development



THE “WHY”

- Entomology as a sub-discipline lacks in racial diversity (Orfinger, 2020)
- Civic trust in science is declining (Pew Research Center, 2023)
- Civic science creates inclusive spaces that can advance public problem solving (Garlick & Levine, 2017)
- Interfacing with the public has the potential to transform all parties involved (Boyer, 1990)

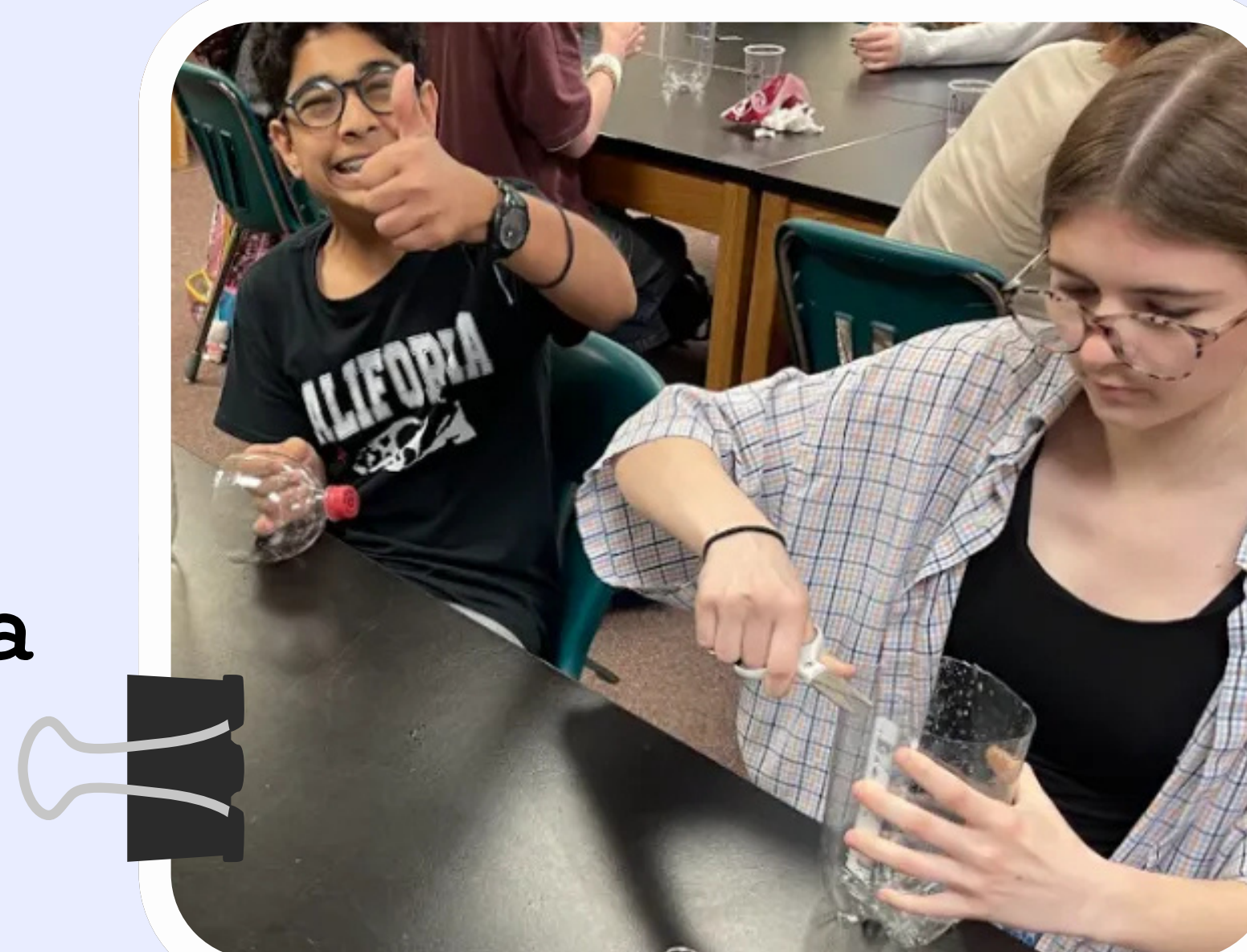
1. K-12 CLASSROOMS



- Partner with local teachers
- Collaborate to align district, state, and NGSS standards
- Help facilitate in-class data collection
- Act as consulting scientist

2. PUBLIC OUTREACH EVENT

- Equip families for “backyard science”
- Connect with local citizen science networks
- Address the biophobia
- Leverage local ecosystems



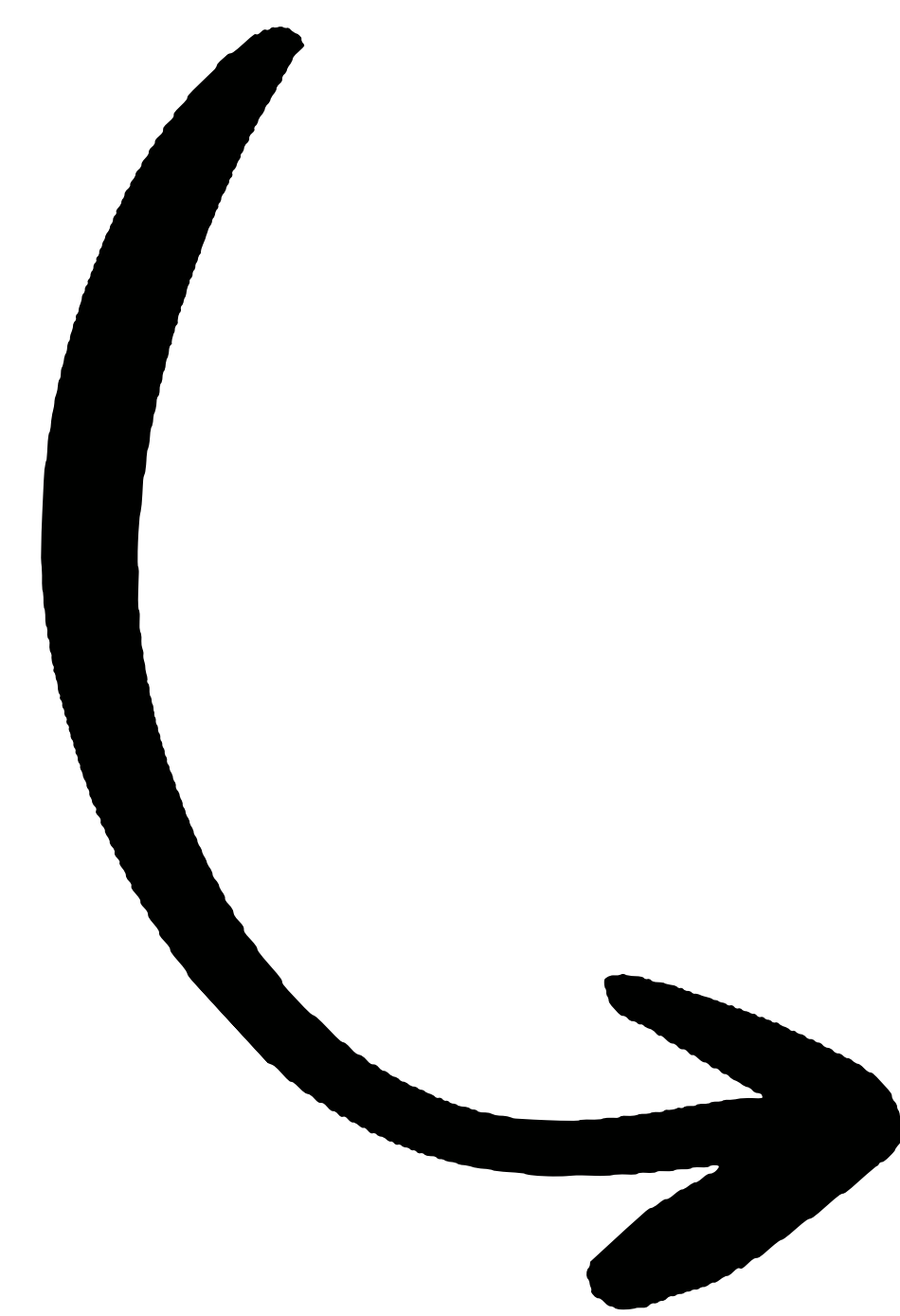
Acknowledgements

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DIGITAL
VERSION &
REFERENCES



ATTENDEES
WERE INVITED
TO
BRAINSTORM
ON THE POSTER





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DIY Moth Traps for Backyard Investigations

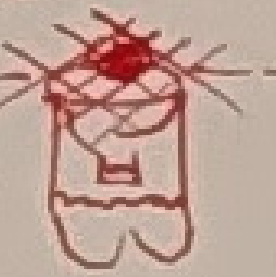
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If all you had in your lab was a recycle bin and some undergrads, how could you conduct your research using upcycled materials?

** WRITE ON ME! **

Find big light in parking lot
have undergrads work over night
collecting nocturnal insects

Use 2 liter bottles cut in 1/2
as pitfall traps! 

Can also be used (if covered)
to rear larval mosquitoes.

Or add a little hand sanitizer,
hand outside and lure in
bark beetles.

White paint to attract longhorn beetles
in some genera out west

Paper cup
pitfall traps!

Take paper (card board)
and use as mulch or
physical barrier for
soil-dwelling pests.

Bumble bee domes
out of re-used honey
bee package boxes!

Plastic bottles to hold
paper tubes for tunnel
nesting bees

Paper/Reused fabric
beet sheet!

Boards on ground
for biodiversity counts
(cardboard weighted down?)

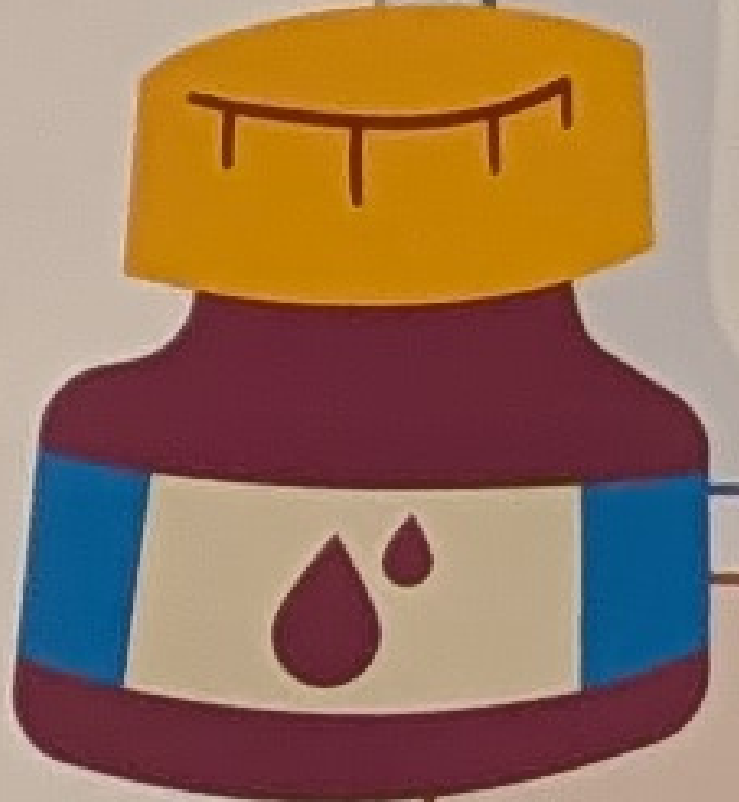
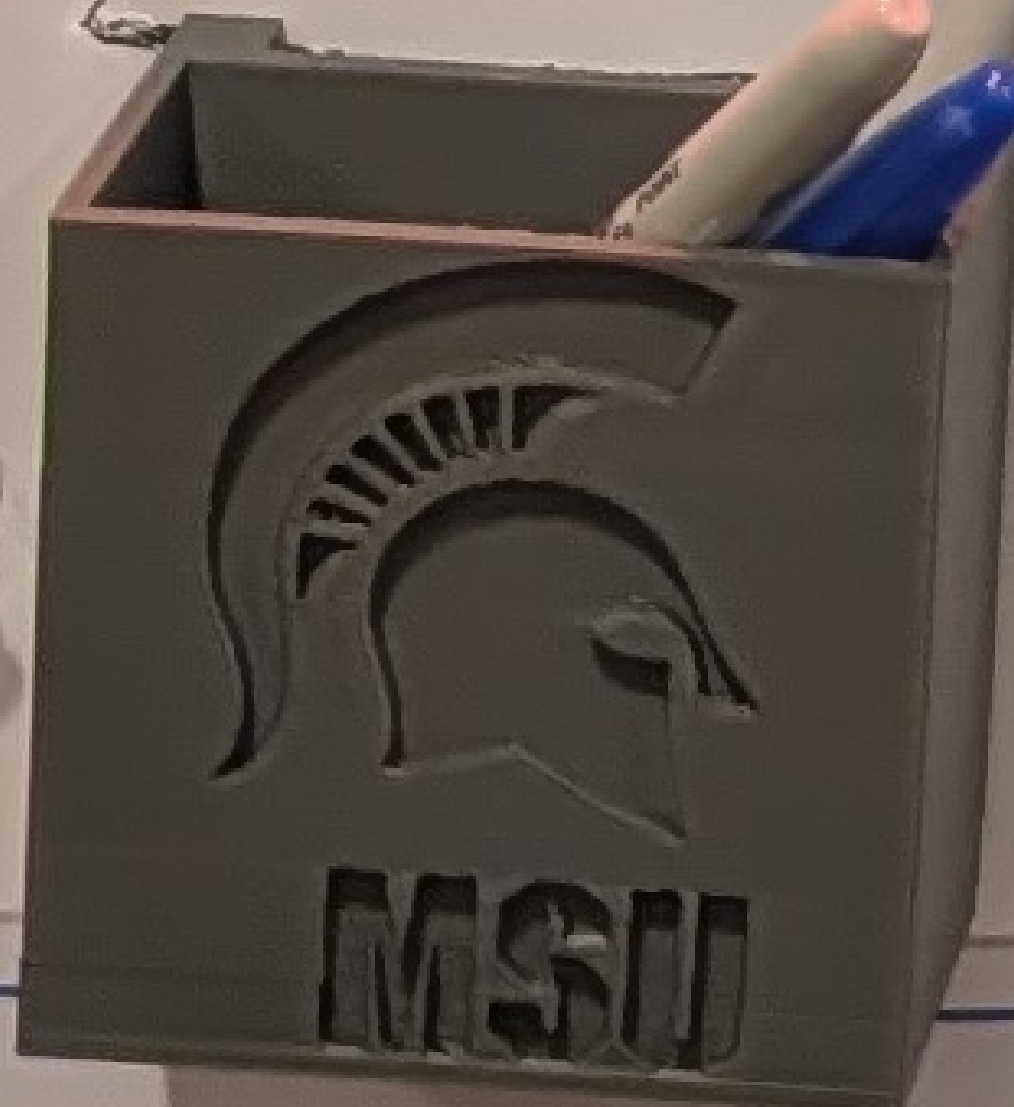
Tin Can Mosquito
oviposition traps

We could sow our wheat, oat,
rye and triticale in plastic
bottles or takeout containers!

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2. PUBLIC OUTREACH EVENT

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