



WE CAN'T HELP POLLEN IN LOVE

HELPING STUDENTS CULTIVATE A PASSION FOR POLLINATORS



Illinois
AGRICULTURE
*in the Classroom*SM

ABOUT ME



CHRIS WYANT

ILAG IN THE CLASSROOM-EDUCATION MANAGER

SPECIALTY CROP GROWER

AMATEUR BEEKEEPER

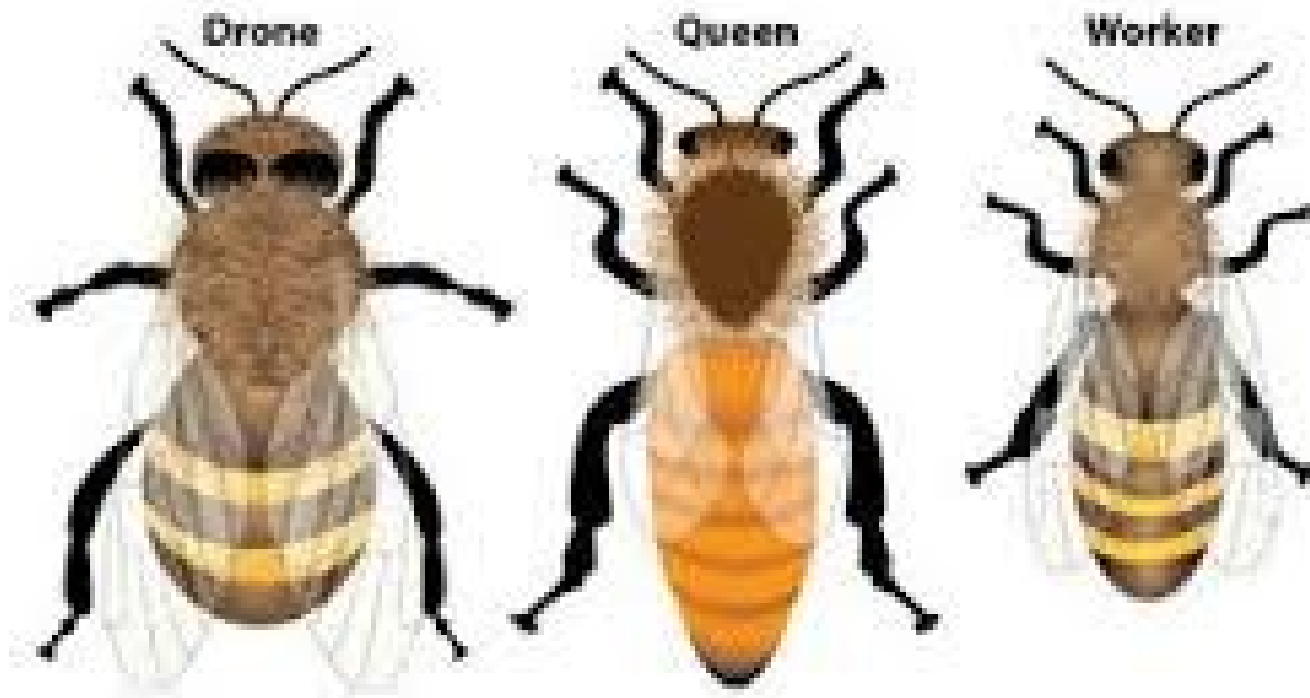


HONEYBEES

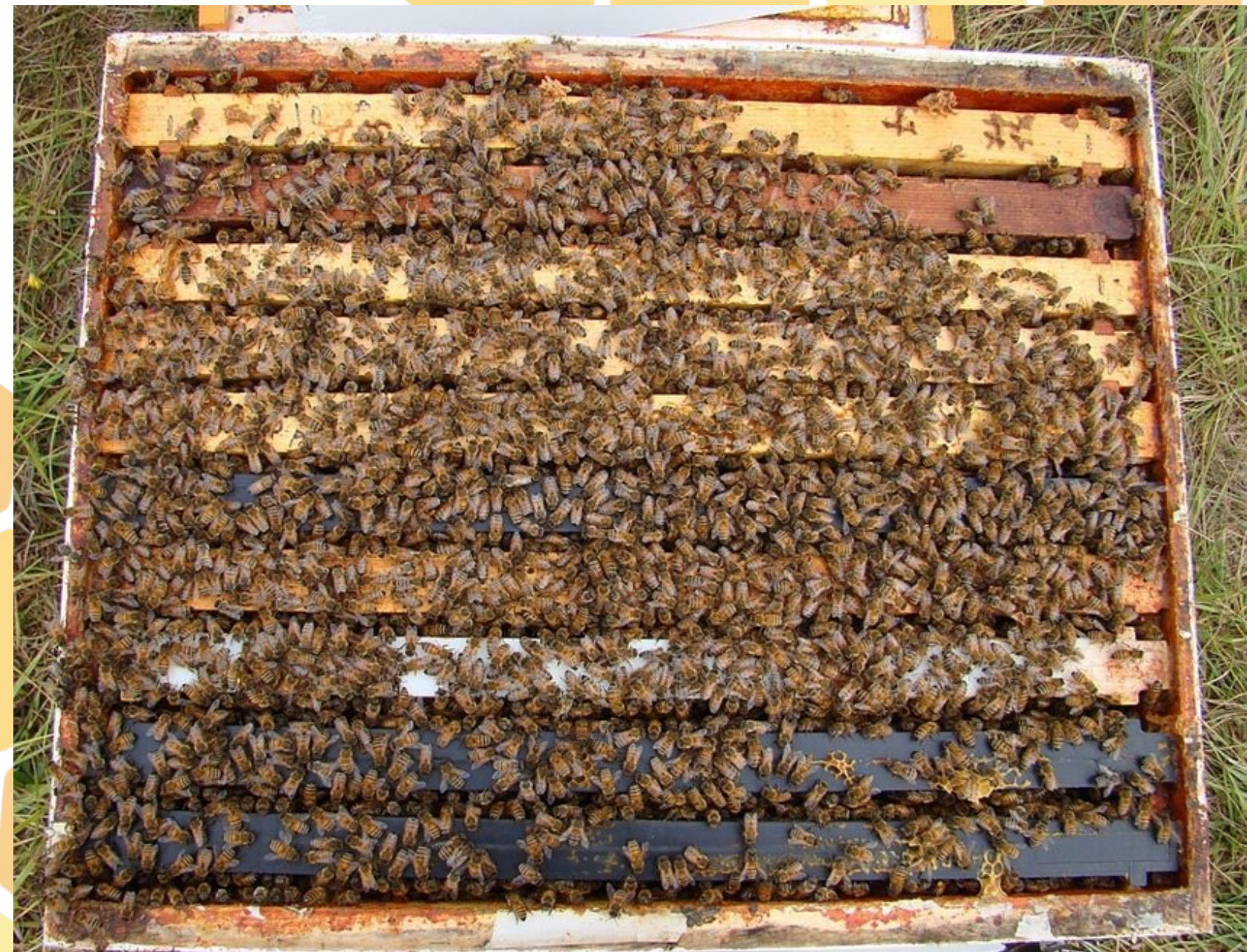


FUN FACTS:

- 1 IN 3 BITES OF FOOD ARE POLLINATED BY HONEYBEES
- QUEENS LAY UP TO 2,000 EGGS/DAY
- WINTER HIVES ARE 100% FEMALE
- BEES FLY APPR. 90,000 MILES TO MAKE 1 LB. OF HONEY
- BEES MUST CONSUME 17+ LBS. OF HONEY TO PRODUCE 1 LB. OF BEESWAX



HONEYBEES



BEE SCHOOL VIDEOS



NATIVE BEES



NATIVE BEES



FUN FACTS:

- POLLINATE OVER \$3 BILLION IN CROPS/YEAR
- 4,000+ SPECIES IN NORTH AMERICA ALONE
- MOST LIVE SOLITARY LIVES
- MOST ARE UNLIKELY TO STING
- HELP MAKE HONEYBEES MORE EFFICIENT POLLINATORS
- ABOUT 70% NEST IN THE GROUND, WHILE OTHERS NEST IN TUNNELS IN WOOD
- IN MANY WAYS, THEY ARE MORE EFFECTIVE POLLINATORS THAN HONEYBEES

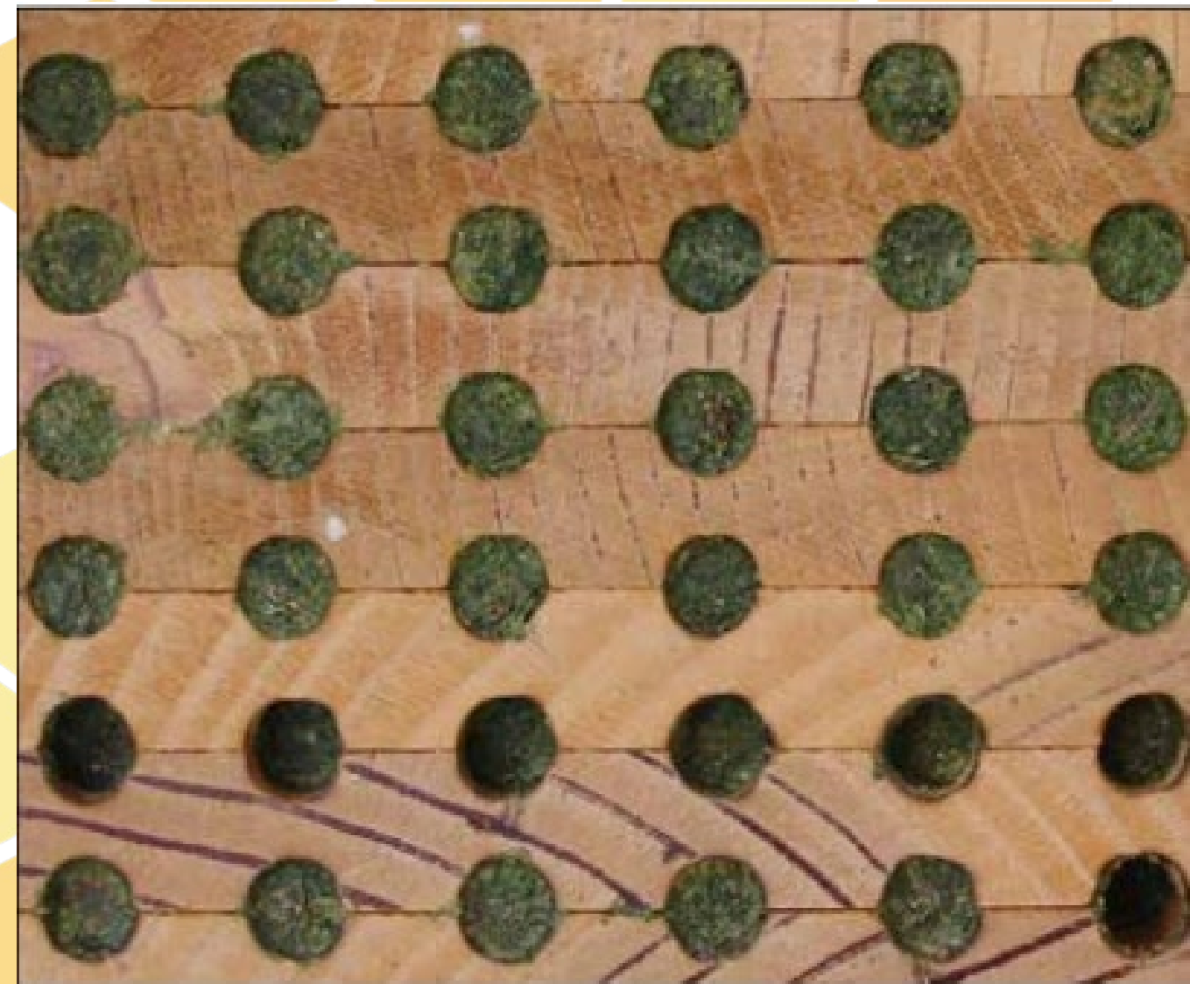


Image: USGS Bee Inventory

NATIVE BEES



GROUND DWELLING BEE NESTS



CAPPED NESTS IN A BEE HOTEL

IMAGES: XERCES SOCIETY

NATIVE BEES



CROSS-SECTION OF BAMBOO TUBE SHOWING BROOD CELLS



IMAGE: XERCES SOCIETY

BUTTERFLIES



FUN FACTS:

- NOT AS EFFECTIVE, BUT STILL IMPORTANT POLLINATORS
- NEED LANDING PLATFORMS ON BRIGHT FLOWERS WITH LOTS OF NECTAR
- MANY MILKWEED PLANTING PROJECTS ACROSS THE NATION FOR MONARCHS
- ONLY ABOUT 4% OF WORLD'S BUTTERFLIES ARE FOUND IN U.S.



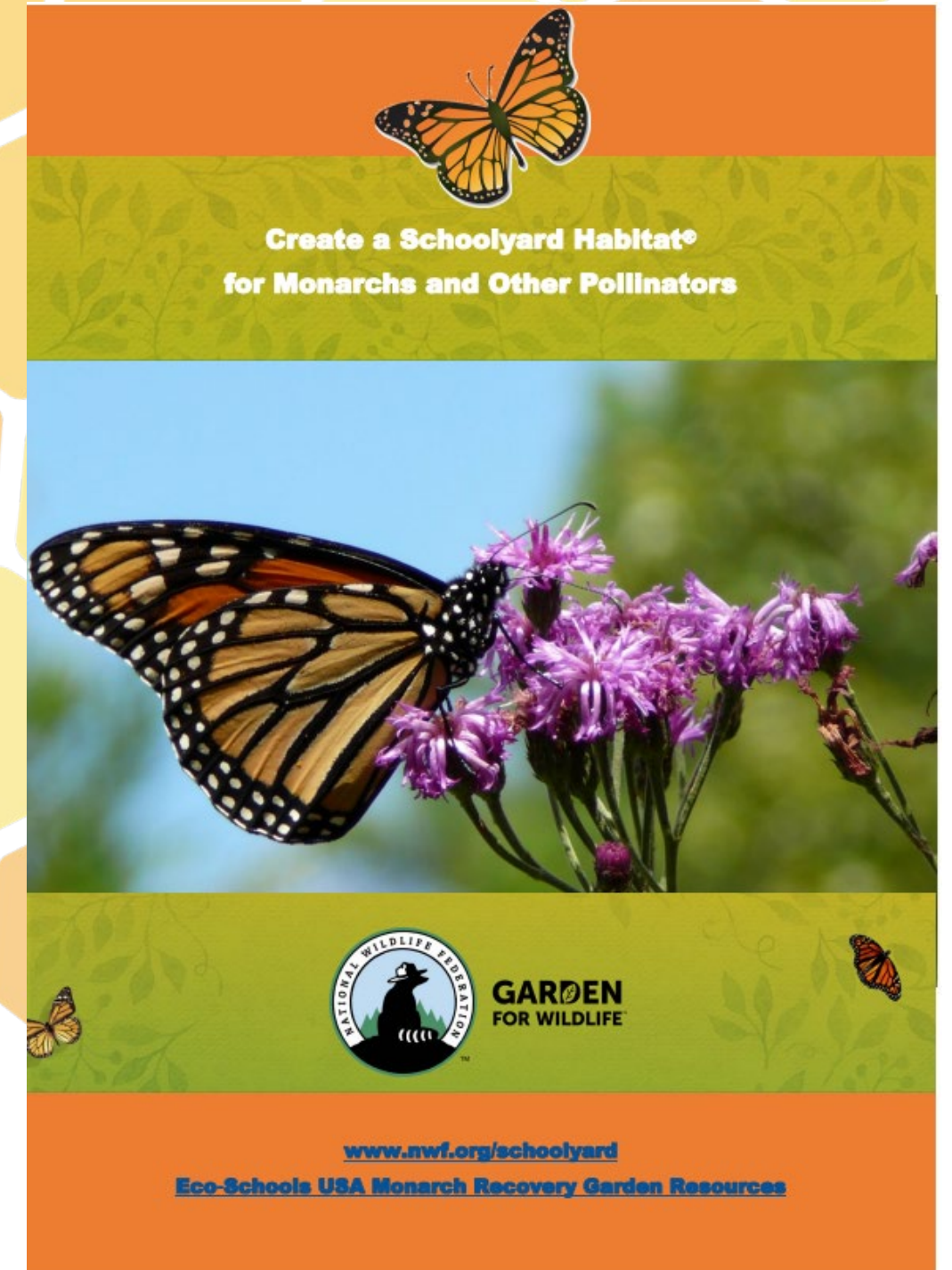
HABITAT EFFORTS AT SCHOOL



Monarch Waystation Program



*Create, Conserve, & Protect
Monarch Habitats*
monarchwatch.org



HABITAT EFFORTS AT SCHOOL

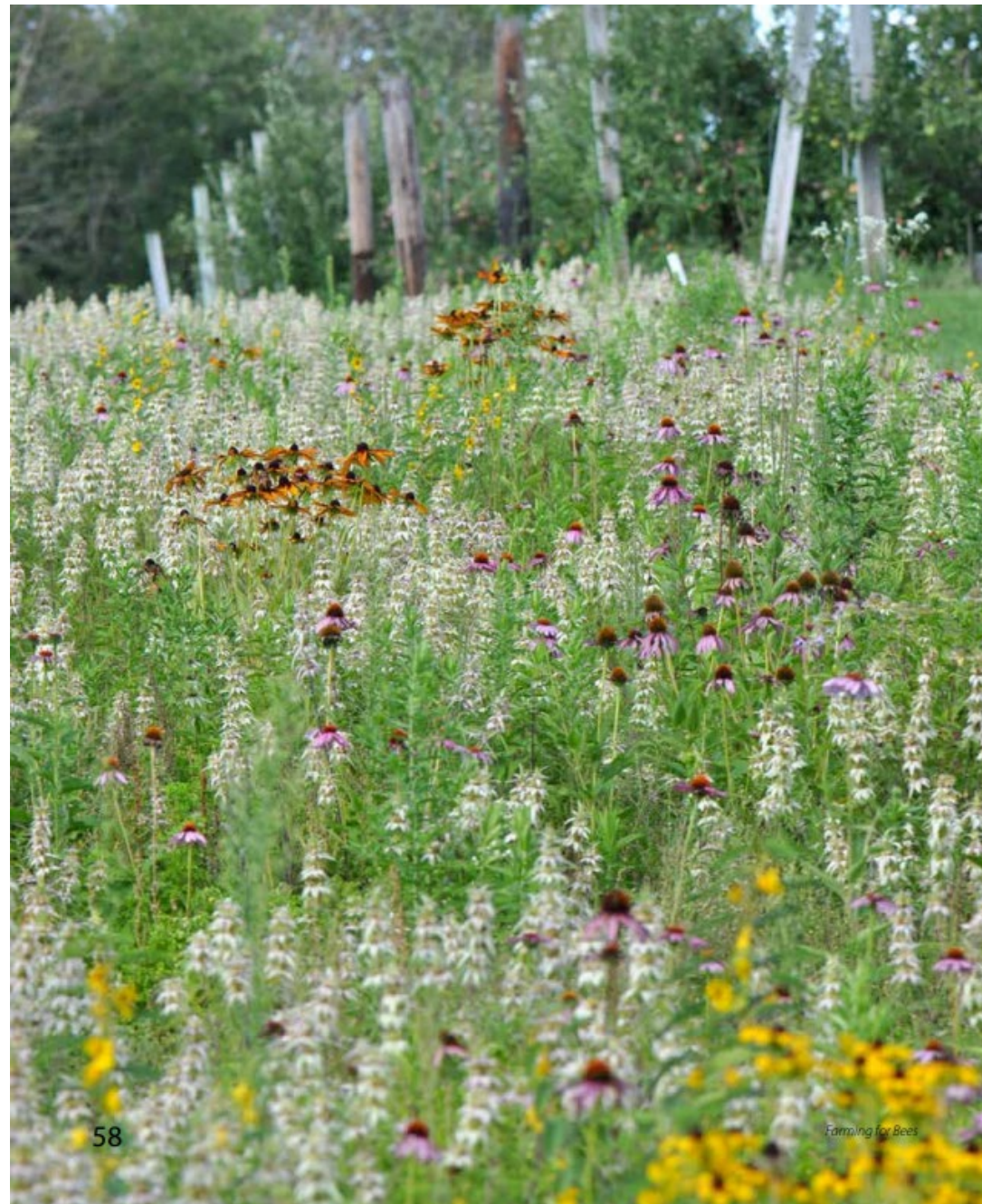


GUIDELINES:

- NEED TO CLEAN REGULARLY
- FACE ENTRANCES TO SOUTHEAST
- MOUNT SECURELY ABOUT 4' HIGH



HABITAT EFFORTS AT SCHOOL



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Farming for Bees

IMAGE: XERCES SOCIETY

Planning your garden – think like a pollinator.

Go Native. Pollinators are "best" adapted to local, native plants, which often need less water than ornamentals.

Bee Bountiful. Plant big patches of each plant species (better foraging efficiency.)

Bee Showy. Flowers should bloom in your garden throughout the growing season. Plant willow, currant, and Oregon grape for spring and aster, rabbit brush and goldenrod for fall flowers.

Bee Patient. It takes time for native plants to grow and for pollinators to find your garden, especially if you live far from wild lands.

Bee Gentle. Most bees will avoid stinging and use that behavior only in self-defense. Male bees do not sting.



Bee Chemical Free. Pesticides and herbicides kill pollinators.

Bee Sunny. Provide areas with sunny, bare soil that's dry and well-drained, preferably with south-facing slopes.

Bee Homey. Make small piles of branches to attach chrysalis or cocoons. Provide hollow twigs, rotten logs with wood-boring beetle holes and bunchgrasses and leave stumps, old rodent burrows, and fallen plant material for nesting bees. Leave dead or dying trees for woodpeckers.

Bee a little messy. Most of our native bee species (70%) nest underground so avoid using weed cloth or heavy mulch.

Bee Aware. Observe pollinators when you walk outside in nature. Notice which flowers attract bumble bees or solitary bees, and which attract butterflies.

Bee Friendly. Create pollinator-friendly gardens both at home, at schools and in public parks. Help people learn more about pollinators and native plants.

Bee Diverse. Plant a diversity of flowering species with abundant pollen and nectar and specific plants for feeding butterfly and moth caterpillars.

IMAGE: US FOREST SERVICE

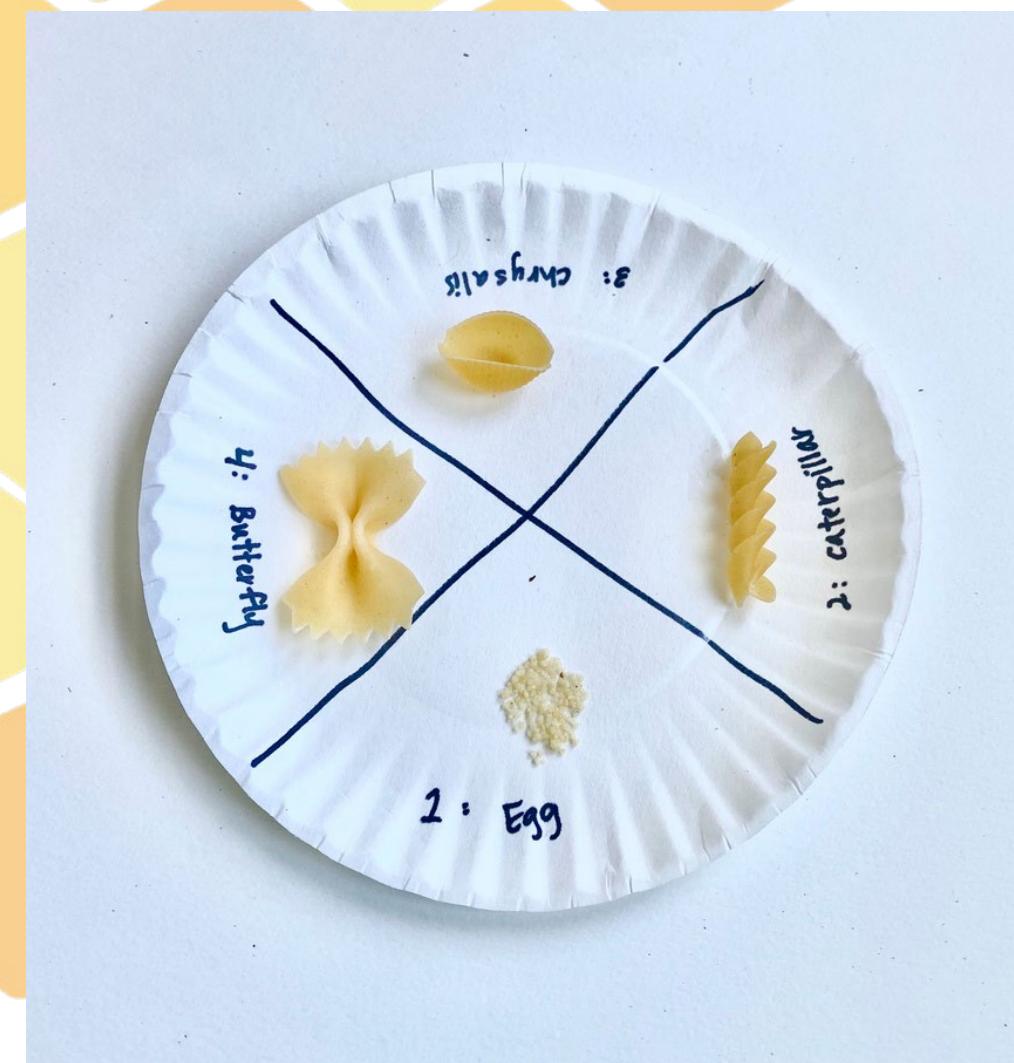
LESSONS AND ACTIVITIES



THROW & GROW



APPLE CHAIN



BUTTERFLY LIFE CYCLE

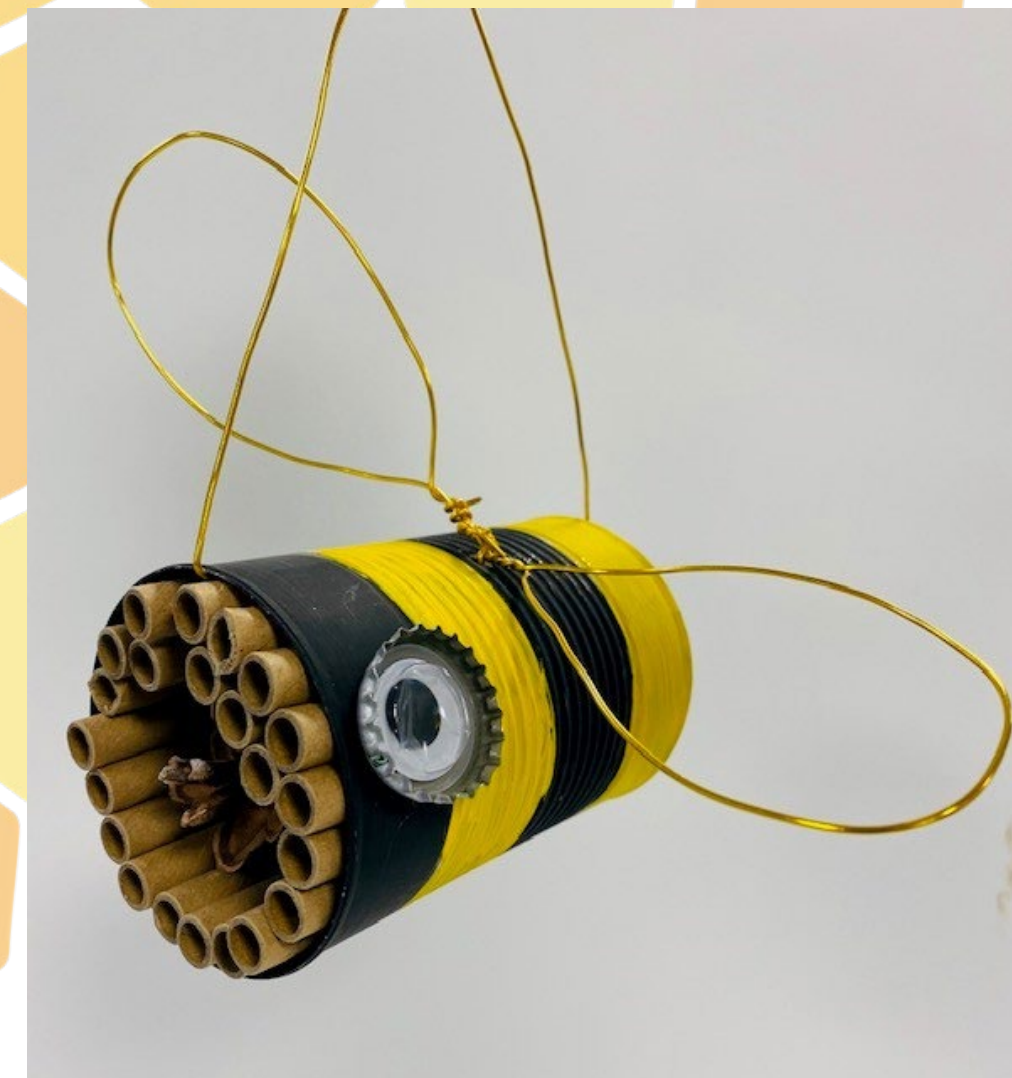
LESSONS AND ACTIVITIES



**POWDER-POWERED
POLLINATION**

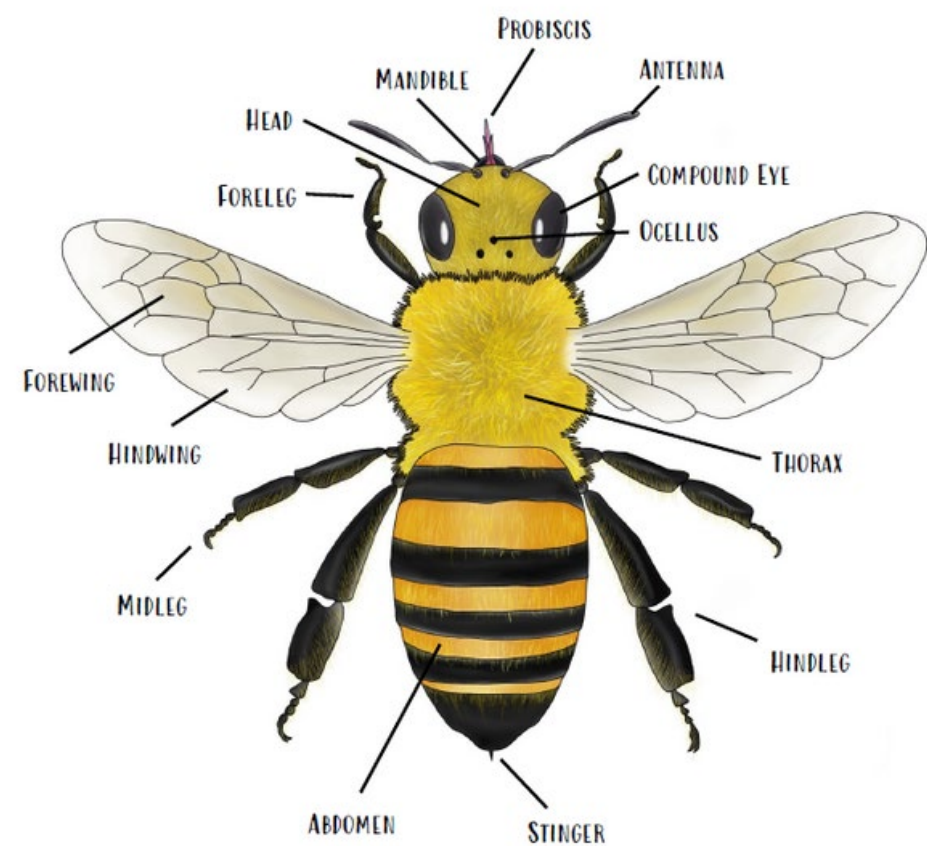


BAG BUTTERFLY



BUILD A BEE HOTEL

LESSONS AND ACTIVITIES



THE BEES KNEES AND MORE

AG-VENTURE WITH POLLINATOR

Use the IATC Pollinator Ag Mag to help you work through this worksheet!

Science Math

In your own words, describe the process of pollination and explain why it's important for humans to help increase pollinator populations.

Can you figure out the number value of each symbol? Make sure you keep the order of operations in mind!

Butterfly + Butterfly = 10

Butterfly + Bee = 7

Flower + Flower + Flower = 18

Butterfly x Bee - Sunflower = 6

Worm + Bee = 5

Butterfly = Bee = Sunflower =

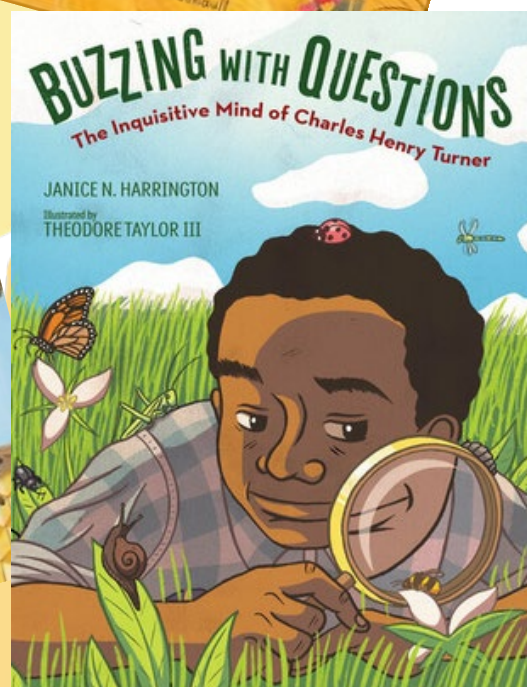
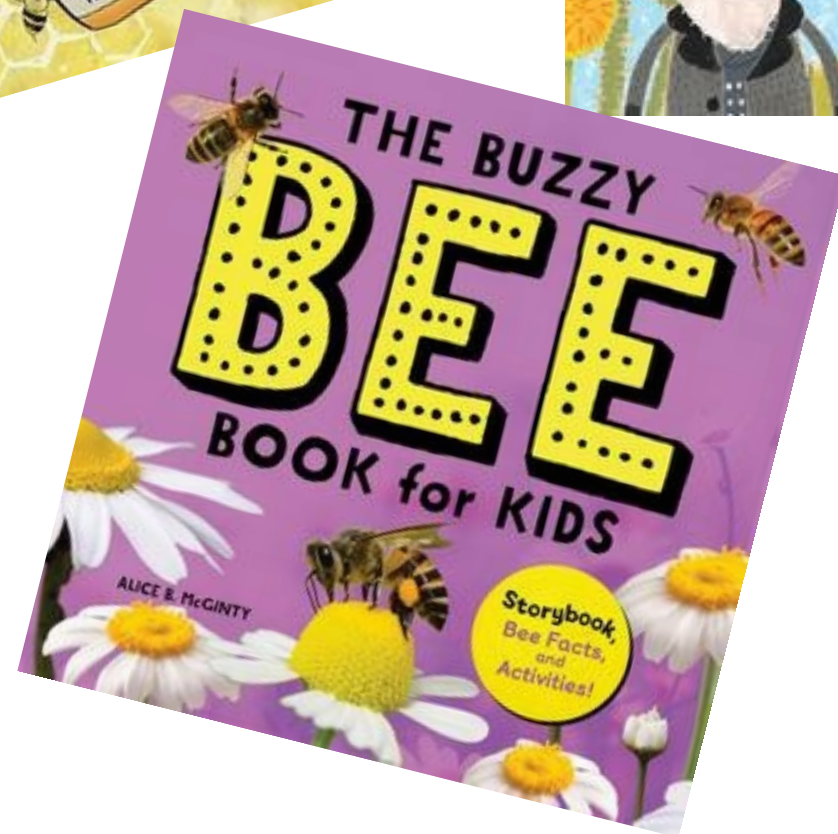
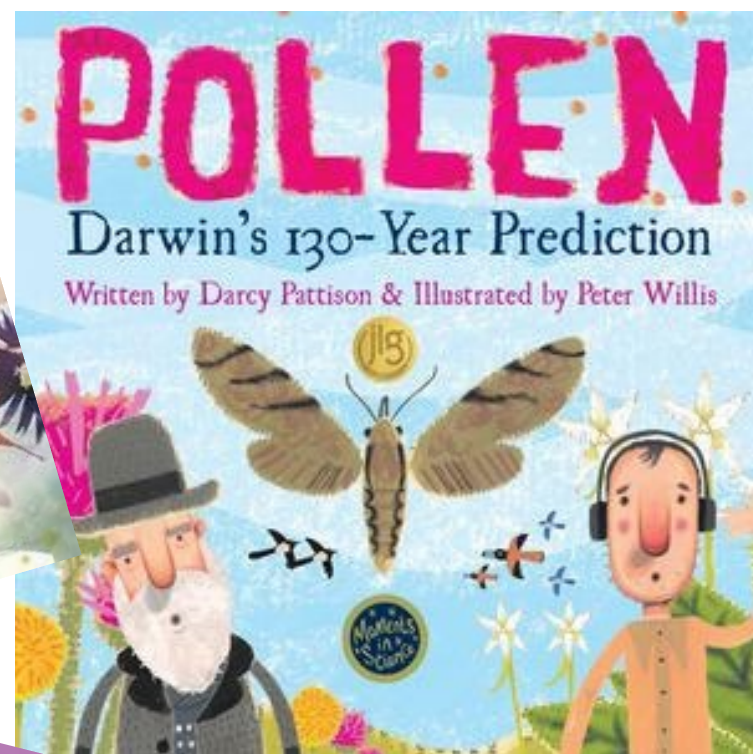
Worm = Flower =

Label this flower diagram with the different parts of a flower! Then, circle the parts that are involved with pollination.

Illinois AGRICULTURE in the Classroom. For more great educational agriculture resources, visit: agintheclassroom.org

AG-VENTURE WITH POLLINATOR AG MAG

BOOK RECOMMENDATIONS

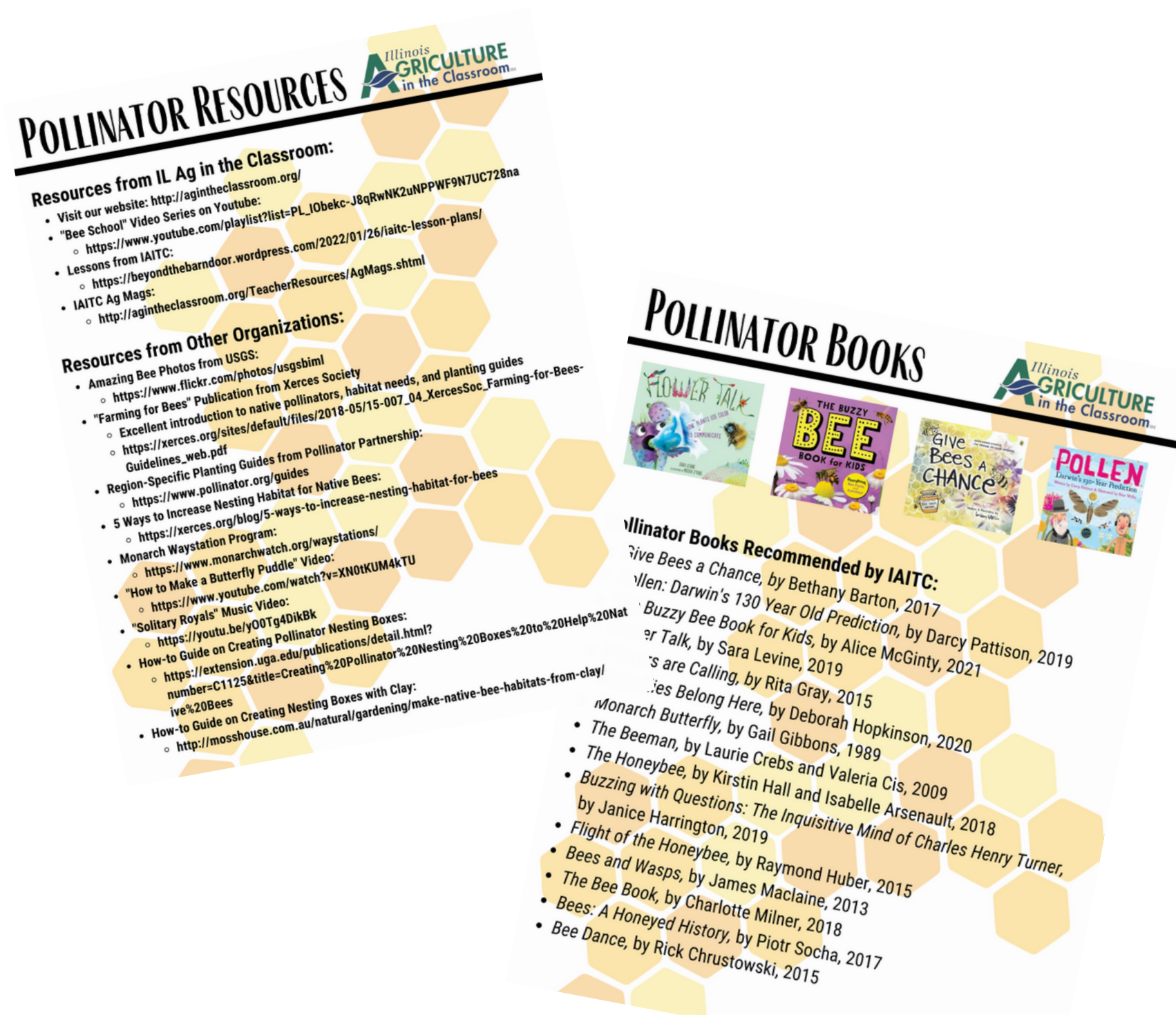


ADDITIONAL RESOURCES



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