



BEE HEROES

Journal

By Entomologist:

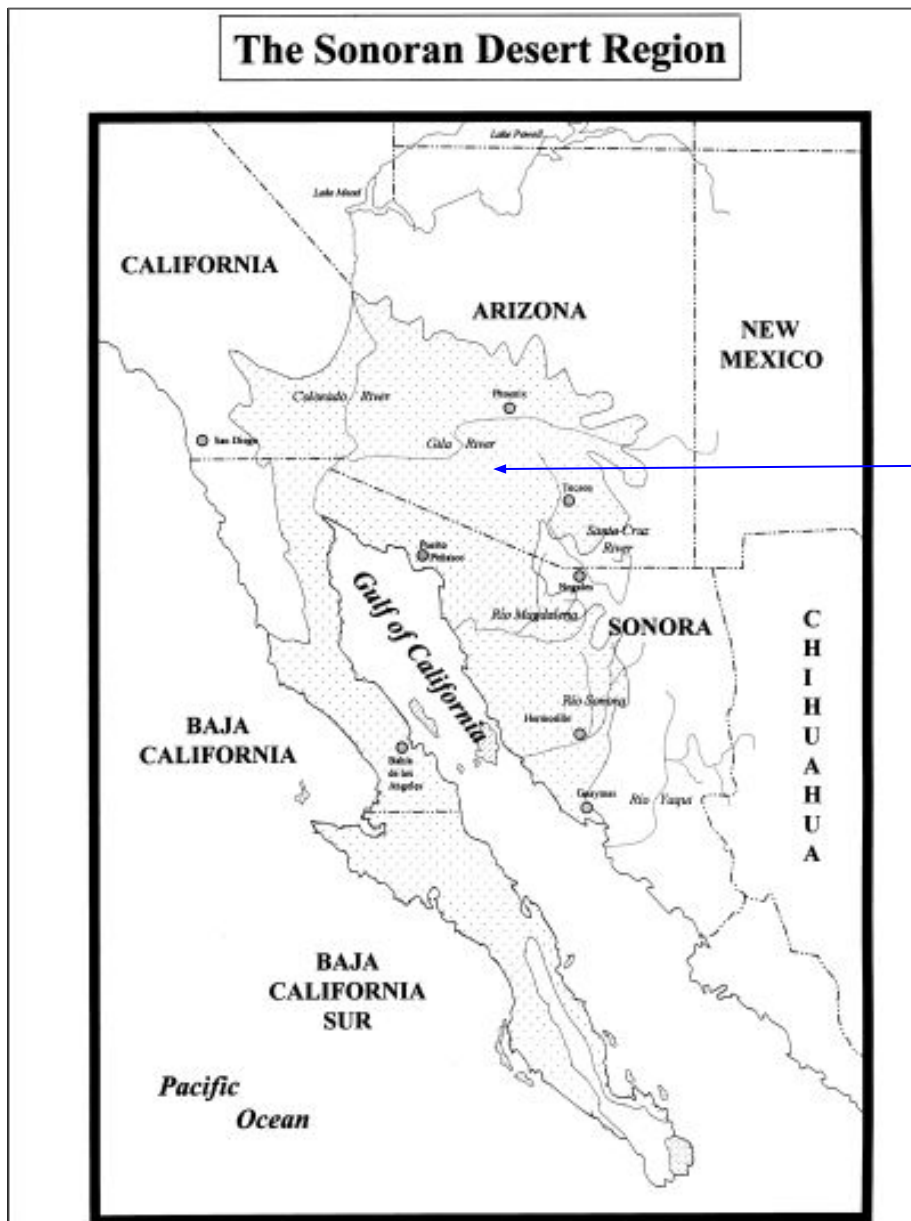
ANSWER KEY

Draw a picture of a bee and all it needs to survive.

Answers may vary.

You will probably see a bee, flowers, hive....and more hopefully!

Color in the map to show the Sonoran Desert.



Students should color/shade in the dotted areas which are the Sonoran Desert.

Circle your city!

Probe

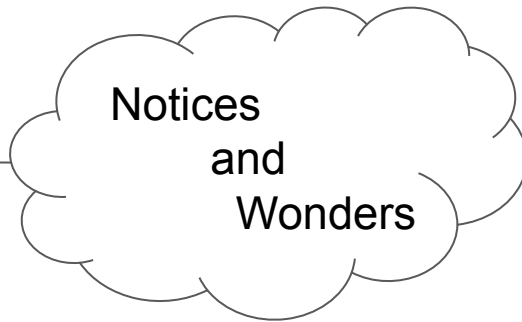
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While watching a bee video, record what you notice and wonder.

Answers may vary.

Possible Notices: Bees go to flowers, plants, the ground, branches, wood, they are one or small groups, pollen is on bee, they are drinking nectar or water, etc....

NOTE: feel free to pause on a part and discuss as a class- what students notice and/or wonder. Encourage kids to share out and record during discussion.



Answers may vary.

Possible Wonders: I wonder if they make honey, do all bees make honey, do they eat pollen, do they need water to survive, why do they go in the ground, what do they do underground, do they sting, do they die after they sting, how do they get/drink nectar, what else do they eat or drink, what do they do when it's snowy or too cold, and more!



Review: Do you know the parts of a bee? Use this word bank!

head	thorax	abdomen
wing	antennae	leg
	eye	



List what a BEE needs to survive.

1. Air _____
2. Food/Energy Source _____
3. Water _____
4. Right Temperature Conditions/Shelter _____

After matching and discussing different bees, list possible food sources and shelters for bees.

Food Sources

Shelters

Carpenter: ANY flower card
Leafcutter: ANY flower card
Cactus: ANY CACTUS flower
Globe Mallow: ONLY Globe Mallow flowers

Carpenter: Agave, Palo Verde OR Mesquite Branch
Leafcutter: Agave, Palo Verde, Mesquite Branch, OR Saguaro
Cactus: Sandy soil/ground
Globe Mallow: ONLY Globe Mallow flowers OR sandy soil/ground

Use the words on the right to fill in the reading passage.

The Sonoran Desert has a very diverse population of bees. There are about 750 kinds of native bees here. All bees use their amazing bodies to collect nectar/pollen and nectar/pollen for their brood. They all need this energy to live and grow. Some even have strong mandibles to make a suitable nest in wood.

nectar

pollen

energy

brood

nest

diverse

mandibles

bees

native

Explain 5

Write where the bee lives/nests and what the bee eats after hearing the story and revisiting certain pages. Discuss and then answer the questions at the bottom.

<p>Globe Mallow</p> <ul style="list-style-type: none"> - Eats globe mallow nectar - Live/nest in holes in the ground near globe mallow 	<p>Carpenter</p> <ul style="list-style-type: none"> - Eats nectar at many different flowers, not picky - Live/nest in wood
<p>Cactus</p> <ul style="list-style-type: none"> - Eats only cactus flower nectar - Live/nest in holes in the ground near cactus 	<p>Leafcutter</p> <ul style="list-style-type: none"> - Eats nectar at many different flowers, not picky - Live/nest in holes they find in wood
<p>Fairy</p> <ul style="list-style-type: none"> - Eats nectar from tiny flowers - Live/nest in holes in the ground near tiny flowers 	<p>Sweat</p> <ul style="list-style-type: none"> - Eats nectar at many different flowers, not picky - Live/nest in the holes in the ground

What do bees need to survive?

See above and page 3.

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Why do we need bees to survive?

Explain

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How can humans help bees survive?

1. Make a pollinator pool or bee bath
2. Plant native flowers/plants for bees to get energy/food source
3. Make Bee Houses
4. Provide bare ground in sunny spot
5. Leave dead branches, tall yucca/agave stalks, don't use heavy gravel
More: Don't use chemicals-pesticides and bug spray, don't fill holes in the ground or wood, spread the word about bees

You will be making a poster of why people should help bees and how!

Elaborate

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Make a poster with how to save bees and why we should.

Posters will vary.

See previous page for how to save bees.

Why? They pollinate so we have many rich foods and different flowers and plants in our desert for people AND other desert animals! If we didn't have bees our grocery stores would have less healthy, fresh food (fruits and vegetables). We wouldn't have as much color and beauty in the desert without bees.

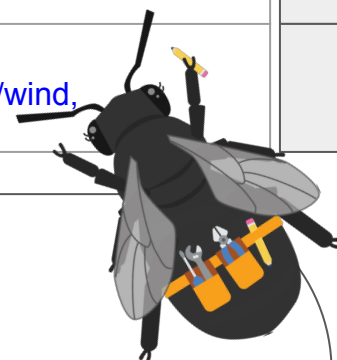
Elaborate

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Make a model of a Bee House!

Follow these criteria and constraints!

Criteria	Constraints
-identify bee type(s) that will use house	Time to make: Could be 2 days or 2 hours
-label materials in model drawing	Size of House: Must fit in given shoebox
-include map where the bee house will be placed, where bees will find water and food, and how temperature will be controlled in all weather. (map)	Materials: Cardboard, 2 pieces of copy paper, 5 paper straws, no plastic, no glue, clear tape if needed, no chemicals
-label nearby water and food sources (map)	Placement: No direct sun, safe from rain/wind, 3-6 ft. above ground, along flat surface



Constraints and Bee Houses may vary, but **NONE** should have plastic, have glue touching the tubes,

Other possible materials: coffee/bean can, cardboard box, toilet paper/paper towel rolls

>>Be ready to explain what kind of bee this house is best for!

Evaluate

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