

Hello Everyone!

The topic for today's class, April 1, is **"Save the Bees"**

Our classmate Khin has been studying climate change and the environment. She has learned that bees are essential to a healthy environment. She would like to share with us the the amazing contribution that bees make to our world.

"SAVE THE BEES"

We will participate in three activities:

1. Small Groups: Read the article and discuss questions
2. Large Group: Review discussions
3. Large Group: Learn some bee Idioms



Many thanks to Khin for today's presentation!

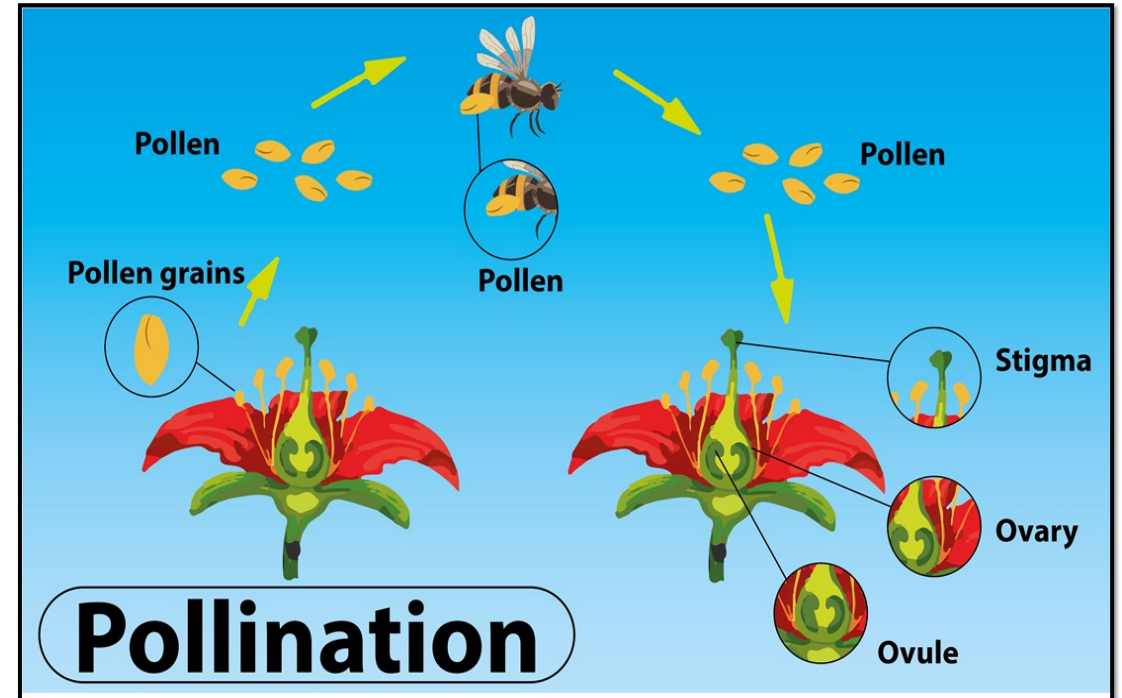
SAVE THE BEES

Why Are Bees Important?

Bees are essential for the health of people and the planet. Honey and other products have medicinal properties.

- Bees perform about 80 percent of all pollination worldwide.
- 70 out of the top 100 human food crops which supply about 90 percent of the world's nutrition are pollinated by bees.
- Melittin, a component in honeybee venom, has been found to kill cancer cells.
- A single bee colony can pollinate 300 million flowers each day.

Believe it or not, you have a bee to thank for every one in three bites of food you eat.



If all the bees went extinct, it would destroy the delicate balance of the Earth's ecosystem and affect global food supplies.

SAVE THE BEES

What is Killing the Bees?

- **Bee Diseases & Parasites**

In the US, varroa mites are the #1 parasites killing commercially managed honey bees. Pesticide usage and the other stressors make treatment for the bees own diseases less effective.

Varroa mites (*Varroa destructor*)- tiny red-brown external parasites of honey bees.

- **Habitat Loss**

Global warming and development of new land destroys natural environments, food and water resources that pollinators require to survive.



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SAVE THE BEES

What is Killing the Bees?

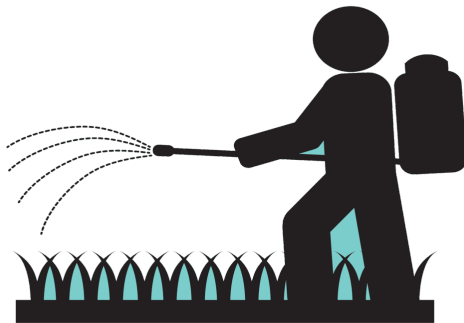
In the United States, beekeepers are still currently experiencing 10%-50% losses in their managed 2.8 million honey bee colonies. These beehives are migrated throughout the nation to pollinate the food we eat. Listed below are several of the key stressors to pollinator health:

- **Bee-Killing Pesticides**

Insecticides are chemicals designed to kill insects that eat and destroy crops. Unfortunately, they are commonly used, the neonicotinoid class paralyzes the neural system of the bees, resulting in impaired movement and eventually death.

- **Electromagnetic Radiation**

Electromagnetic Radiation (EMF) clashes with bees by destructing their navigation skill causing them not to return home. Cell phone towers are the leading polluters for EMF.



SAVE THE BEES

10 Ways to Save the Bees

1. Plant a Bee Garden

2. Go Chemical-Free for Bees

3. Become a Citizen Scientist

-Join a global movement to collect data on our favorite pollinators! Gather photos and other information about native bees and upload them.

4. Provide Trees for Bees



SAVE THE BEES

10 Ways to Save the Bees

5. Create a Bee Bath

Bees need water:

- to dilute honey
- to help with digestion
- to keep the hive cool
- to feed the babies

6. Build Homes for Native Bees

7. Give Beehives and Native Bee Homes



SAVE THE BEES

10 Ways to Save the Bees

8. Teach Tomorrow's "Bee Stewards"

BEE-STEWARD is a computer software tool designed to help farmers and land managers see how pollinator-friendly management on their farms could affect bee survival and pollination rates.

9. Host a Fundraiser

Start a "save the bees campaign" and collect donations for environmental charities and organizations that help save bee populations.

10. Support Local Beekeepers and Organizations

Gifts for Beekeepers



Buy the bee products



SAVE THE BEES

Questions for Small Group Conversation:

1. Did you already know that bees are important to people and the environment?
2. Do you love or fear bees? Why?
3. Have you ever gone to a bee yard (Apiary)?
4. Do you know how many beekeepers are in California?
5. What are bees-friendly plants? Does your home have any bees-friendly plants?
6. Are you interested in beekeeping at your home?
7. Do you want to support the beekeepers? If so, How would you support them?
8. Have you ever used bee products? What are they? Why do you use them?
9. Is there any seed library near your home?



SAVE THE BEES

Bee Idioms

- As busy as a bee: very busy and active

*My mother's as busy as a bee around Christmas.
Yesterday, I cleaned the whole house. I was busy as a bee.*

- The bee's knee: to be excellent or of an extremely high standard

*The latest iPhone is the bee's knees, I want to buy one soon.
Have you tried this ice cream? It's the bee's knees, it really is.*

- Have a bee in one's bonnet: a single idea or a thought that remains in one's mind; an obsession, to talk and think a lot about something, to talk about it excitedly, angrily.

*I have a bee in my bonnet over that cool new car I saw, and I can't stop thinking about it.
She's got a bee in her bonnet since she started her new business.
Eric has a bee in his bonnet about odors. They drive him crazy and he can't rest until he's found the source and made the smell go away.*



SAVE THE BEES

Bee Idioms

- Queen bee: a woman who has a certain amount of authority in a group of people

Marie is the queen bee around here. She makes all the decisions.

- Make a beeline: to move quickly to your desired location

*Once we enter the front door, Tom made a beeline to the bathroom.
Billy came into the kitchen and made a beeline for the cookies.*

- Honey trap: using an attractive person to get someone to reveal confidential information

He fell for the honey trap and told her where he kept his money safe.

Beyonce "Queen Bey"



SAVE THE BEES Meanings

melittin - the major pain-producing substance of honeybee venom, a basic peptide consisting of 26 amino acids

venom- a poisonous substance secreted by animals such as snakes, spiders, and scorpions and typically injected into prey or aggressors by biting or stinging

pollination - the act of transferring pollen grains from the male anther of a flower to the female stigma

ecosystem- community or group of living organisms that live in and interact with each other in a specific environment

stressor- something that causes a state of strain or tension

neonicotinoid- a systemic agricultural insecticide resembling nicotine (toxic liquid)

impaired - weakened or damaged

electromagnetic radiation - a kind of radiation including visible light, radio waves, gamma rays, and X-rays, in which electric and magnetic fields vary simultaneously

destructing - to be damaging (destroying)

habitat - natural home or environment of an animal, plant, or other organisms

#1 - (cyber speak) number one

parasite -an organism that lives on or in a host organism and gets its food from or at the expense of its host. A few examples of parasites are tapeworms, fleas, and barnacles.