

STOP THE BEETLE: NOW!

Dear Leader,

Our forests are under attack – and USDA needs your help.

From local neighborhoods and campgrounds to lowland fishing areas, our ash trees are under threat of being destroyed by the Emerald Ash Borer (EAB) beetle.

As a respected leader and educator, **you can help** prevent more destruction by implementing *Stop the Beetle: NOW!* activities in your outdoor, scouting, school or summer program!

- The enclosed materials are **ready-to-use** and make it easy to engage young people at your camp or other venue.
- Kids will learn all about the EAB through **fun, hands-on activities** ... and will become partners in preventing the spread of EAB in your state.

The majority of EAB infestations are a result of human behavior ... people unknowingly moving infested ash materials, such as firewood, to new areas and locations. When people move firewood, they can spread the beetle — and devastation — to your trees, forests, fishing spots, campgrounds, and neighborhoods.

Young people can play a special role by learning about the EAB and how it spreads, and then sharing this knowledge with their parents, grandparents, friends, and neighbors. As you use these materials with your campers, scouts and students, you will be protecting our ash trees by inspiring kids to ***Stop the Beetle: NOW!***

We thank you for your help.

Sincerely,

U.S. Department of Agriculture



Visit www.StopTheBeetle.info to see how the EAB is impacting your state.

STOP THE BEETLE: NOW!

Leader's Folio

For Summer Camps, Scouts, and
Environmental Education Organizations
Working with Youth Ages 8 – 12

Help USDA Stop the Emerald Ash Borer Beetle (EAB)

- ✓ Educate campers, scouts, and students about ash trees, EAB and not moving firewood.
- ✓ Encourage them to spread the word to families, friends, and neighbors.
- ✓ Be a role model. Never move firewood; burn it where you buy it.

Follow us on Facebook: www.facebook.com/StopTheBeetle

Learn more about the EAB and how to stop its spread at www.StopTheBeetle.info.

Tools at a Glance

The Great EAB Escapade
Outdoor Activity

EAB Investigator
do-it-yourself origami

Background Information
for you to share/post

More Activity Ideas
on the back cover!



Look Online!

Don't miss the online components at www.StopTheBeetle.info:

- "The Nature Walk" animated video, exploring the EAB lifecycle
- Printable activities and games
- The EAB Memory Game
- Flickr, Twitter, and Facebook links
- Infestation signs and symptoms
- How to report an EAB sighting
- TV and radio commercials



Thank you for joining our
campaign to **STOP THE BEETLE: NOW!**

STOP THE BEETLE: NOW!

The EAB is an invasive beetle that is destroying our ash trees. Since it first appeared in Michigan less than a decade ago, the EAB has killed tens of millions of trees in the United States. But together, we can work to protect our precious ash trees.

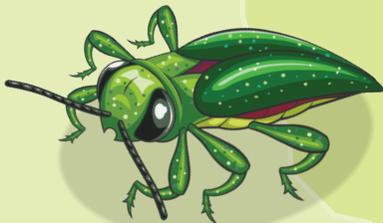


Look for Ash Trees

- Stems have 5 to 11 leaflets each
- Branches are directly across from each other, not staggered like other trees.
- Young: Smooth bark
- Mature: tight, diamond shape bark

Nature Can't Defend Against EAB

Because the EAB isn't native to the U.S., our ash trees don't have any defenses against this invasive insect. Woodpeckers eat the larvae ... but there are no natural predators that specifically target EAB to control populations.



We ♥ Ash Trees

Let's protect our ash trees! Their loss may mean...

- a risk to public safety caused by dead or dying ash trees.
- decreased property values.
- increased electricity use during hot weather.
- cultural losses – like for Native Americans, who use ash for traditional crafts and ceremonies.
- economic losses in the forestry and tourism industries.
- Fewer Beautiful Trees!

How the EAB Kills Ash Trees

- Female EAB lays eggs on ash tree bark
- Eggs hatch and larvae tunnel into the tree
- The larvae make s-shaped tunnels as they feed, disrupting the systems that transport food and water to the tree
- Eventually, the tree dies.

If an infested tree is cut for firewood and the firewood is moved to a new location, the beetle essentially relocates to a new home. When that happens, more trees and forests are now at risk.



WHAT YOU CAN'T SEE CAN HURT . . . YOUR ASH TREES.



EAB: Where It's From

The EAB is native to Asia. No one knows exactly how it got to the U.S., but we believe that it "hitched a ride" in wood packing materials used to ship products. The EAB was first detected in ash trees in Michigan, then in Ohio and Indiana. Today the EAB has been detected in 15 States!*



- Illinois
- Indiana
- Iowa
- Kentucky
- Maryland
- Michigan
- Minnesota
- Missouri
- New York
- Ohio
- Pennsylvania
- Tennessee
- Virginia
- West Virginia
- Wisconsin

The EAB has the potential to infest trees in other states—if we keep helping it move.

Ash Trees Are Important to Us All

Ash trees are important to our environment and our economy. They ...

- Fill gaps in the forest and provide shade for the forest floor.
- Colonize and stabilize disturbed areas.
- Out-compete weeds that prevent most other species from becoming established.
- Beautify communities by thriving in difficult conditions, like urban areas.



Did You Know? Ash wood is used to make...

- baseball bats
- boat oars
- flooring and furniture
- guitars
- hockey sticks
- tool handles



Support Purple Traps

In the spring and summer months, you may see triangular purple traps in areas with ash trees.

- USDA uses these structures to survey for the presence of the EAB.
- The traps are coated with glue to capture EABs; however, they pose no risk to humans, pets or wildlife.
- If you see them, don't disturb them.



**Help Protect Our Ash Trees!
Don't Move Firewood.
Burn it where you buy it.**

*List of states where EAB has been detected was current as of publication date: April 2011.

Protect Our Trees from the EAB

Creative Activity Ideas

Leaders, use these activity ideas to inspire your campers and kids to help spread the message to

STOP THE BEETLE: NOW!

Time Needed: 1 hour per activity

Process: Children work in teams of two to four. You may choose to have all groups do the same activity, or invite each group to select their own.

Materials: creativity, imagination, pens, paper, pencils, markers, poster-board, and other art supplies



Depending on the time you have available, "Bonus" extension ideas offer additional creative options/outreach for each activity. Consider a camp-wide EAB event, fair or competition to showcase activity results!

Develop an Ad Campaign

Brainstorm a cool way to share the message about the EAB with family and friends. If you were in charge, what kind of ads would you have? Where would they be displayed? Would there be a logo? A slogan? A jingle? A text message? Use your imagination and your team's varied skills to plot out your campaign strategy.

BONUS



Develop and share your ad campaign.

Compose a Short Story

Storytelling is a powerful way to get a message across! Work together to compose a short story about the EAB. The storyline can be factual, such as what EAB looks like ... or fictional, like a story about a family of ash trees that receive unwanted guests. Include a call-to-action to **Stop the Beetle: Now!**

BONUS



Read your story aloud to the whole camp at lunchtime.

Design a Poster

Use your artistic abilities to draw, paint, or design a poster or collage to tell people about the EAB and how to stop it. Add an action message, and share what the beetle looks like ... the purple traps to catch it ... or the damage it can do to ash trees.

BONUS



Mount a Poster Exhibit in the dining area, cabins or building office.

Act it Out

Be a star! Do you love to act? Create a skit with your team and act it out for the other groups. Be dramatic or humorous and remember to have fun with it. How can your short skit teach others about EAB?

BONUS



Perform skits for other campers/groups or on Family Day!

Write a Song or Rap

Do you have a great voice, or just love to sing? Work with a partner to write an original song, rap or jingle about protecting our ash trees from the EAB. Putting words together with a tune is fun. "Small, metallic, and emerald green, this little bug might never be seen."

BONUS



Stage a performance or conduct a sing-along.

Create a Comic Book

Tell the story of the EAB in your own graphic novel! What's the storyline? Who are the characters? What is the setting? Experiment with cutting pages into individual scenes and making a flip book that shows the EAB and the damage it can do to ash trees.

BONUS



Use a cell phone or digital camera to "film" your flip book by creating a themed "slide show" or photo gallery of your pages.

Share Your
STOP THE BEETLE: NOW!
Strategies on Facebook

You're encouraged to share your campers'/kids' ideas and creative solutions by posting a comment at www.facebook.com/StopTheBeetle. You'll be helping to inspire others to stop the EAB in its tracks.
Child Privacy Note: Be sure not to post names, photos or videos of your campers/kids.

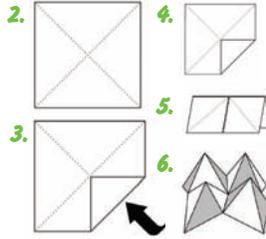
EAB Investigator

www.StopTheBeetle.info

You now know about the Emerald Ash Borer (EAB) beetle: how it hides under bark and destroys ash trees. You've discovered how important it is to stop it, so now you can share this news with others, too! Use this *EAB Investigator* to alert your family, friends, and neighbors. First, try to stump them with the EAB "investigation questions." Then, share what you've learned through your own *Stop the Beetle: Now!* exploration: EAB larvae can be hidden under the bark, so you should **never move firewood**. You never know what could be lurking inside!

Folding Instructions

1. Cut along the dotted line.
2. Place the *EAB Investigator* image-side down. Fold 2 opposite corners together to form a triangle. Crease and unfold. Now fold the other 2 corners together; crease and unfold. You'll see the "center point."
3. Fold each corner to the center point.
4. Turn the folded paper over and fold each corner into the center.
5. Fold the square in half. Unfold it and fold it in half the other way.
6. Using both hands, place your thumbs and index fingers under the bark flaps.



How to Play

- Have a player pick a number between 1 and 5. Open/close the EAB Investigator that many times.
- Now have the player choose a number on a bark flap (noted by EAB eggs), from 1 to 4.
- Ask the question under the chosen flap.
- Invite the player to answer, then lift the flap to see if correct.
- Be sure to show the player the EAB larvae hidden under the bark!

The EAB is only 1/2 inch long. What is the smallest coin an EAB can fit on?

A penny

The Emerald Ash Borer Beetle (EAB)

Ash trees

Ash wood

Guitars, most baseball bats, and some furniture are made of what kind of wood?

What's metallic green and flies?

What species of tree does EAB love to eat?

What spreads EAB?

People moving firewood

On the bark of ash trees

Where does EAB lay its eggs?

How can you stop EAB from spreading?

Don't move firewood!

EAB larvae kill a tree by disrupting the systems that transport food and water.

How does the EAB larvae kill a tree?

The Great EAB Escapade

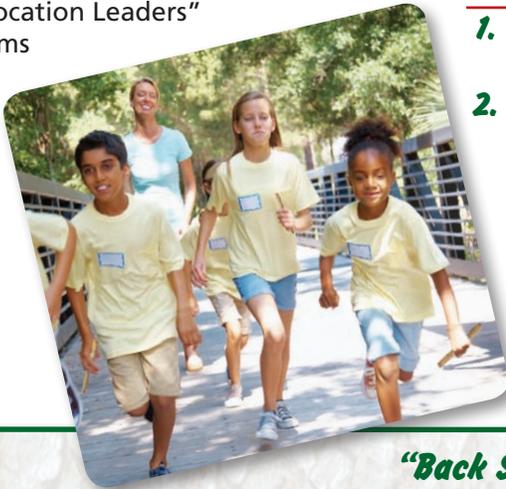
Outdoor Activity

Primary Objective:

Kids will test their knowledge about the Emerald Ash Borer (EAB) beetle. At the conclusion of the activity, kids will also discover how the movement of firewood may or may not spread the pest and therefore, you should never move it.

Overview:

Use this activity to introduce your campers/scouts/students to the EAB. You can alert them to the EAB's destructive habits, and how they can take action and **Stop The Beetle!** The activity is fun to play outside ... but it can work inside on a rainy day, too! "Location Leaders" will challenge teams with EAB trivia questions during the activity.



Supplies Needed:

- Bundles of sticks, one for each team or individual (5 sticks of *long* and *short* lengths per bundle. Be sure the sticks are easily distinguishable as long or short; quantities of long versus short should vary per bundle.)
- 5 Copies of the *EAB Investigator* (one per "location"), assembled. Circle a different question on each *Investigator*. (This will be the question asked at a specific location.)



Getting Ready:

1. Familiarize yourself with the EAB information in the Leader's Folio, to be able to answer questions.
2. Choose 5 separate spots to serve as imaginary "locations" (they can be outside or inside, but should be within sight distance of each other):
Note: you may choose to invite Team Leaders to designate their own locations in Activity Step 1; see back page.

- Forest
- Campground
- Fishing area
- Backyard
- Neighborhood Park

"Back Story"

Introducing the Activity

Gather your group together and tell them: *There's something happening to the ash trees in our state. They're dying! Ash trees are important to both our environment and our economy.*

A beetle called the Emerald Ash Borer beetle (EAB for short) is killing these trees. It's called "Emerald" because it's a beautiful metallic green color. But it's so small that it can fit on a penny – so in fact, you probably won't ever see one. The EAB lays its eggs on the bark of the tree, and when the eggs hatch, the larvae eat into the tree. They hide inside the tree where they develop and grow, disrupting the systems that transport food and water to the tree and eventually killing it.



We think the EAB got to the U.S. from Asia by "hitchhiking" in shipping materials. It was first detected in Michigan in 2002. Now, it has spread to 14 other states (IL, IN, IA, KY, MD, MN, MO, NY, OH, PA, TN, VA, WV, WI). So we have to wonder: How has it gotten to so many states in just nine years?



Today, we'll visit fictional "locations" like the ones we have around our state. These are the types of places that may have ash trees that could be destroyed by the beetle. We're going to learn more about ash trees and the EABs that can harm them!

Activity Steps

1. Choose five kids to serve as Location Leaders, one for each fictional location. Give each Leader an assembled *EAB Investigator* (be sure a question is circled), and have him/her go to their "location."
2. Divide the remaining kids into teams of two or three (or, kids can work individually).
3. Give each team (or individual) a bundle of five (long and short) sticks.
4. As fast as they can, each team must go to each "location." (Encourage them to start in different directions, to avoid "crowding" in the closest location.) Once there, the Location Leader will pose his/her circled question from the *EAB Investigator*.
If answered correctly: The team (or individual) will leave any stick from their bundle at the location, and move on to another location.
If answered incorrectly: The team/individual can move on, but they can't leave a stick.
5. The winning team (or individual) is the first to visit every location and have no sticks (or the fewest number) left.



Extra copies of the *EAB Investigator* may be downloaded FREE at www.StopTheBeetle.info

Wrap-Up

Once all teams have returned to the starting point, explain to them that sticks they were carrying were "firewood." The long sticks represented EAB-infested firewood, while the short sticks were healthy logs. Where did the EAB firewood end up?

Walk with the group back to each location, and see how much EAB firewood was left behind. Ask the group:

- Which locations had firewood moved to them? (probably, all of them)
- Could you tell whether the firewood had the EAB hidden inside? (NO!!)
- What do you think will happen to the ash trees in the locations if the firewood is infested with the EAB? (The trees in the area will become infested with the EAB)
- Who put the infested firewood in the location? (The kids did ... but they didn't know which firewood was infested!)
- What does this tell you about how the EAB has moved from state to state? (People helped the beetle move, by moving firewood from one place to another. Just as the kids didn't know which sticks may be infested with EAB larvae, people can't tell if actual firewood may have EAB larvae in it.)

Closure Message:

Even though they may not realize it, *people* are moving the beetle by moving firewood. If you move infested firewood to a new location, you can cause that location to become infested and ash trees will die. Since you can't tell if firewood is infested, the simple rule is to never move it.



Bottom Line: **Stop the Beetle . . . Now!**
Everyone shouts: **Don't Move Firewood!**