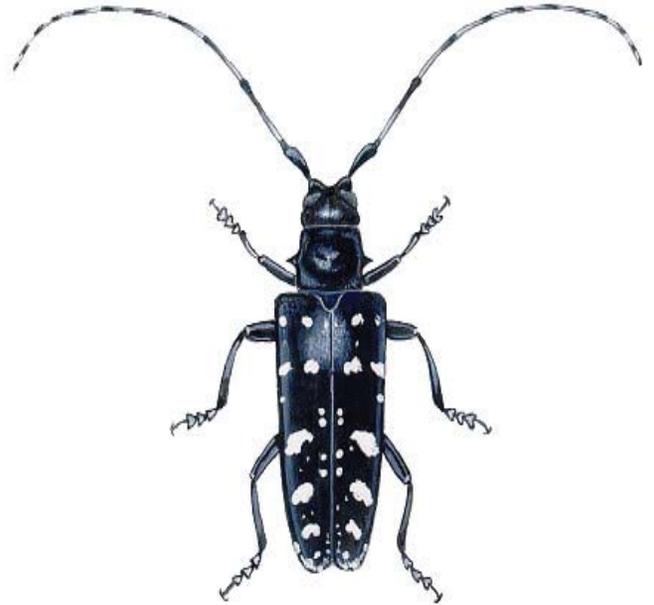


# Beetle Busting 101

## Survey Vermont Trees for Alien Invaders

Vermont's forests are threatened by two alien invaders from Asia — the Emerald Ash Borer (EAB) and the Asian Longhorned Beetle (ALB). The EAB attacks ash trees and the ALB destroys maple trees in our urban and wild forests. We need your class's help to survey the trees on Vermont school grounds and protect our trees from these pesky insects. These beetles haven't been detected in Vermont yet, but they have been found in surrounding states and Canada.



The more people we have looking for these insects, the better our chances of a quick response if and when they move into Vermont. Not only will students learn about tree identification, conservation and general ecology, they will also contribute to real science by putting their survey results into an online database maintained by the USDA. The database records the presence and absence of EAB and ALB, allowing professionals to assess which areas have been surveyed and where further surveys need to be conducted.

The survey is pretty simple. After reviewing the signs and symptoms of beetle-infested trees, the class will go outside and look at maple and ash trees on the school grounds. They will record how many ash trees and maple trees they observe. Once they have recorded their data, they will enter those results at [www.beetledetectives.com](http://www.beetledetectives.com) under Vermont Schools. Detailed information on how to survey and where to find more information on the Emerald Ash Borer and the Asian Longhorned Beetle is provided in the curricula listed on the following page.

In recognition of the students' participation in the tree survey, your school will receive a certificate verifying that your school grounds have been surveyed for the Asian Longhorned Beetle and the Emerald Ash Borer, and each student who participates will receive a certificate of appreciation and temporary tattoos of the invasive insects. In addition, as a thank-you we would like to post a class picture on the website to show that the students at your school have helped in the conservation efforts for Vermont's trees.

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### Curricula and activities available to help with this project:

#### Asian Longhorned Beetle information and activity guide:

Outstanding curriculum guide and great information about the Asian Longhorned Beetle:  
[www.beetlebusters.info](http://www.beetlebusters.info)

#### Emerald Ash Borer information and activity guides:

In depth curriculum guide for 5th grade: [extension.entm.purdue.edu/EAB/index.php?page=resources](http://extension.entm.purdue.edu/EAB/index.php?page=resources)

Website with resources and activity guide for younger students: [www.stopthebeetle.info](http://www.stopthebeetle.info)

Emerald Ash Borer education packet from the USDA Forest Service: [www.emeraldashborer.info/edpacket.cfm](http://www.emeraldashborer.info/edpacket.cfm)

### Vital Results Standards (Grades 1-8)

#### Reading:

Reading Strategies 1.1 (a, b, c, g, o)

#### Writing:

Writing conventions 1.6 (a, aa)

Narratives 1.9 (a, b, c, d, f)

#### Information Literacy:

Research 1.19 (a, b, c, f)

#### Change:

Continuity and Change 4.5 (a, b)

Understanding Place 4.6 (a, b, c)

### Fields of Knowledge Standards (Grades 1-8)

#### Mathematical Understanding:

Arithmetic, Number and Operational Concepts 7.6 (a, aa, bb, g, h)

Applications 7.10 (a, b, c, d, cc)

#### Design and Technology:

Natural Resources 7.16 (a, b, c, bb, cc)

Natural Resources 7.16 (a, b, c, bb, cc)



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## Survey Vermont Trees for Alien Invaders

### Entering Survey Data on Beetle Detective Website

1. Go to [www.beetledetectives.com](http://www.beetledetectives.com)
2. Click on **'Report Your Findings'**
3. Check the circle to indicate which insect pests your class surveyed for: emerald ash borer (EAB), Asian longhorned beetle (ALB), or both insects
4. Click on **'Organization'**, scroll down, select option **'Vermont Schools'**
5. Type name of school in **'First Name'** field and classroom teacher and grade in **'Last Name'** field
6. Fill in all fields, including email, so that we can award participating classrooms and schools accordingly
7. Under the observations fields for both EAB and ALB, please fill in all fields even if they are the same - *the database will not accept incomplete reports*
8. Be sure to click the **'Did you find any signs of an ALB/EAB'** circle
9. When the report is complete, click on the **'Submit Findings'** button
10. When your report has been correctly submitted, you will receive the following message:  
*Thank you for reporting and helping to protect America's trees. See where your organization stands on the Ace Beetle Detective rankings: <http://beetledetectives.com/index.php#detectives-tab>*

