

THE EMERALD TRAP

Name: _____



Direction: Follow the steps below to design a solution to a Pennsylvania invasive species problem, the *Agrilus Planipennis*~ (**Emerald Ash Borer**). The goal is to create a **Emerald Ash Borer decoy** and then design a **trap** involving the decoy to help stop the spread of E.A.B.'s!

PART A

<p>1 Step A. Brainstorm with your team about the physical traits of the Emerald Ash Borer.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p>Step B. Now sketch a model of the Emerald Ash Borer.</p>
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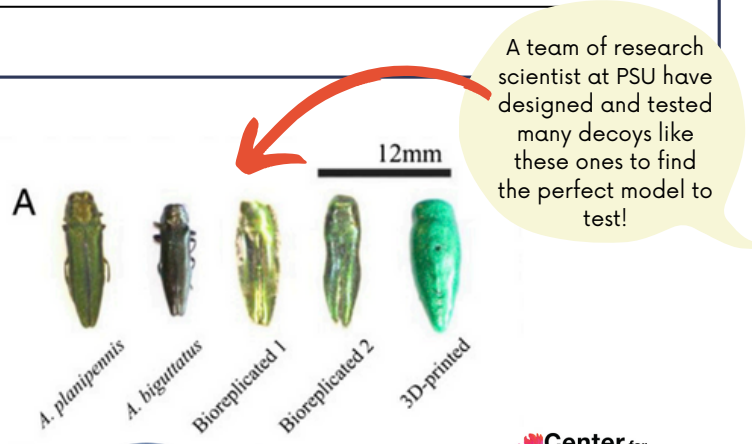
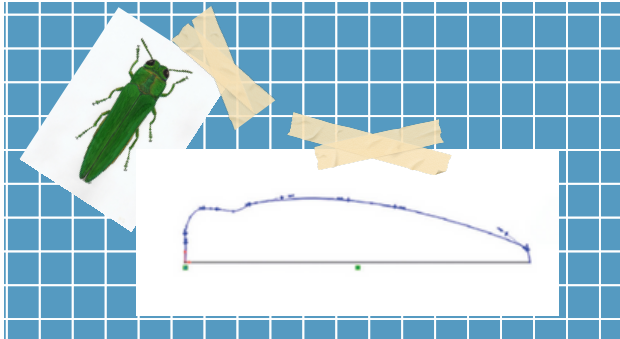
2 Step C. Take your sketch and create your model decoy. You can use the following materials to design your decoy!

Materials:

- Styrofoam peanuts
- Color markers
- Scissors
- Chenille sticks
- Pants
- Chenille sticks
- Pants
- Glitter Glue

PART B

3 Step D. Collaborate with your team ways to trap a Emerald Ash Borer.



A team of research scientist at PSU have designed and tested many decoys like these ones to find the perfect model to test!



Images by Domingue, M. J., Lakhtakia, A., Pulsifer, D. P., Hall, L. P., Badding, J. V., Bischof, J. L., & Baker, T. C. (2014). Bioreplicated visual features of nanofabricated buprestid beetle decoys evoke stereotypical male mating flights. *Proceedings of the National Academy of Sciences*, 111(39), 14106-14111.

4 Step E. Now design a trap. Use the blank space below to draw out your idea!



Be A Detective!

For notable signs of EAB feeding on an ash tree! Look for marks that these larvae pests leave as they exit the bark as an adult.



5 Step F. Choose from the following materials, take your design and create your trap. Test your trap to make sure it will trap an Emerald Ash Borer!

Materials:

- Cardboard
- Paper cups
- Color markers
- Paper plates
- Scissors
- Toothpicks
- Chenille sticks
- string

6 Step G: After setting up the decoy and trap, observe what happens! Record your data below.

Day	# of E.A.B.	Observation/Notes



PART C