



<b>Subject</b>	Contributing to My Community	<b>Grade Level</b>	2nd
<b>Unit Title</b>	Thomas Say: What I can do to make a difference in my community		
 			
<b>Learning Outcomes</b>			
List 1 to 2 outcomes/objectives addressed in this lesson and the Indiana College and Career Ready Academic Standards to which each objective is aligned. Indiana Standards are available at <a href="http://www.doe.in.gov/standards">http://www.doe.in.gov/standards</a> .			
<b>Teacher-Developed Outcomes/Objectives</b>		<b>Indiana College and Career Ready Academic Standards</b>	
1. I can think of several ways I can make a big difference in my community.		2.2.4 Describe how people of different ages, cultural backgrounds and traditions contribute to the community and how all citizens can respect these differences.	
2. Thomas Say made a difference in his community by discovering the firefly and students my age helped to make it be Indiana's state insect.		2.1.3 Identify actions and individuals who had a positive impact on the local community.	
<b>Assessment</b>	Students will create their own firefly and on it they will write one way they can improve their community.		
<b>Time Frame</b>	30 minutes		
<b>Introduction</b>	Has anyone ever seen a firefly or lightening bug at night? Come gather, lets read a book for those who have not. (Teacher reads Fireflies by Julie Brinkloe) Who is going to keep their eyes out for fireflies on warm summer evenings? Let us go back to our seats.		
<b>Lesson Body</b>	<p>Can anyone tell me why the firefly is important to Indiana? A long time ago, a man named Thomas Say who studied insects, or entomology, discovered the firefly in New Harmony, Indiana. (Show a picture of New Harmony in relationship to Evansville. Be sure to point out the Wabash and Ohio Rivers. She shows the website, <a href="https://xerces.org/blog/meet-indianas-official-state-insect">https://xerces.org/blog/meet-indianas-official-state-insect</a> on the projector. She points out Thomas Say's picture and reads highlights from the article. She tells them about the class of second graders in Lafayette, IN, who realized Indiana did not have a state insect and got the idea to make Say's firefly become the official state's insect. Be sure to show students the Lafayette classes artwork they posted on Facebook and read bits from their letters to Governor Holcomb. Hint at the idea that people of all ages can make a difference in their community and even in their state.)</p> <p>It took a long time for Say's firefly to become Indiana's state insect. What does that tell you about Mrs. Samudio and her students? Good. They were patient and persistent. We already know about ways to make our classroom a positive place. What are those? What are some ways we could make our community a better place? Great. We have some of the same ideas in our classroom as in our community!</p> <p>Our project today is to create a firefly (she holds one up that she has previously made). I wrote on the body of my firefly one way I can contribute to my community. One way I contribute to my community is by donating used baby clothes and supplies to charity. On the outside of your firefly, I want you to write one way you can contribute to your community. Think about this and paper passers can you help me distribute the supplies? Oh, yes, and the exciting part is that each of your fireflies will glow! I will hand out glow sticks to put inside your bottle when we're finished. (Students first write in black marker a way they will make a difference in their community on tissue paper and then continue to follow steps--written on the board--to make their firefly. Teacher demonstrates each step showing them her display. She walks around the room and observes, complimenting, and helping when necessary. In the background, patriotic music for children plays. Students work for about 10 minutes.</p> <p>Steps (written on board):</p> <ol style="list-style-type: none"> <li>1. Write on tissue paper a way you can contribute to your community.</li> <li>2. Fit 3 pipe cleaners around your water bottle for the legs.</li> </ol>		

	<ol style="list-style-type: none"> <li>3. Twist one pipe cleaner around the neck of the bottle for antennas.</li> <li>4. With glue stick, glue tissue paper to bottle.</li> <li>5. Use construction paper to cut out wings for your firefly and eyes. Write your name on one of the wings.</li> <li>6. Glue wings on the bottle and eyes on the bottle cap.</li> </ol> <p>When you are finished, please sit quietly. When you are sitting quiet, I will give you your glow stick and you may break it and put it inside your bottle. (When all students are finished and their glowsticks are inside their fireflies, the teacher lets everyone know she will turn out the lights so they can watch them glow!)</p>
<b>Closure</b>	<p><i>Tell me something you have learned about fireflies today. Would you say that Thomas Say contributed to his community? Would anyone like to share your firefly with us and a way you would like to make a difference in our community?</i></p> <p><i>(Teacher can display fireflies by hanging them from strings from the ceiling or displaying them on an art display table. Also, do not forget to turn out the lights, close the blinds and watch them glow!)</i></p>
<b>Planned Modifications</b>	
<b>Materials, Resources, and Technology</b>	<p>Book, "Fireflies" by Julie Brinkloe</p> <p>Previously made firefly to show to class. 25 water bottles and 25 glow sticks (can be different colors), tissue paper, pipe cleaners, scissors, glue stick, black marker.</p> <p>A projector to show website <a href="https://xerces.org/blog/meet-indianas-official-state-insect">https://xerces.org/blog/meet-indianas-official-state-insect</a></p> <p>Children's patriotic music on youtube.com</p>
<b>Research or Theoretical Base</b>	<p><i>Classroom Management—Teach with enthusiasm and use real-life, hands-on approach.</i></p> <p><i>Ten Mistakes—Make real-life connections and use many different methods to teach...writing, art, music, reading, discussing, and hearing.</i></p>

Additional Resource attached:



Above the fireflies the students will make. Will have a couple modifications: Written on the tissue paper will be the students' individual ideas of a way they can contribute to his/her community and will have students draw eyes on fireflies rather than the googly eyes.

Map of Evansville in comparison to New Harmony.



Website to pull up for students to see how students their age have made a difference in Indiana. Important parts highlighted.

### Meet Indiana's Official State Insect

By Justin Wheeler on 26 March 2018

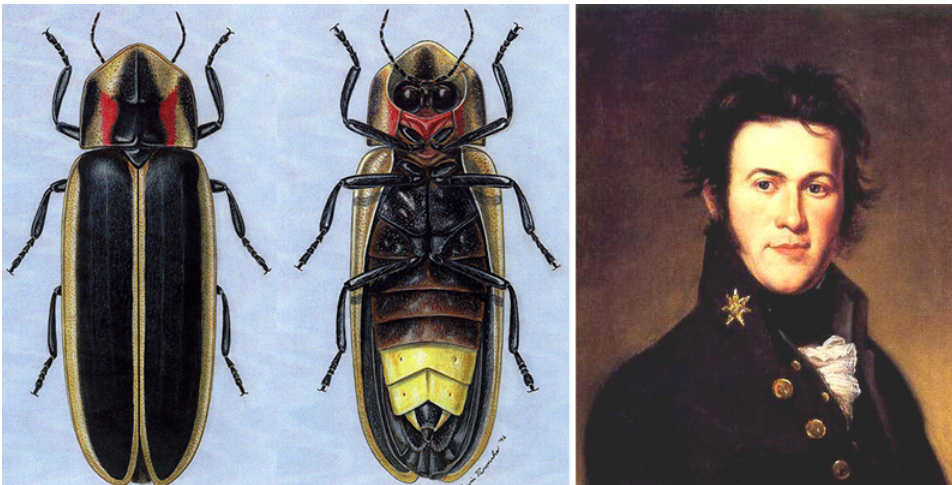
What began as a geography lesson for students of Maggie Samudio's second grade class at Cumberland Elementary School in West Lafayette, Indiana, took a detour to subjects of entomology, politics, and perseverance. After four years of lobbying, letter writing, and campaigning, Say's firefly has become Indiana's first state insect.

Four years ago, Kayla Xu made a discovery while researching the 50 states for a class assignment. Noting other official state designations, Kayla observed that Indiana was one of only four states not to have designated an official state insect. Kayla asked Mrs. Samudio, "A lot of these states have state insects, why can't we have one?"

Mrs. Samudio could have easily shrugged her shoulders, but instead she turned her student's question into a class project. "That's what teacher's do. We take advantage of the teachable moment," said Samudio.

Mrs. Samudio's class focused on Say's firefly (*Pyroctomena angulata*) – which had been proposed for listing as the official state insect as early as 1998 by entomologist Tom Turpin of Purdue University. Say's firefly was named by naturalist Thomas Say of Posey County in southern Indiana in 1824.

While there are more than 40 species of firefly present in Indiana, Turpin believed the Say's firefly held special significance to the state. "This is the only one we have in Indiana that was named by Thomas Say. So that was the connection. If we wanted it to be a state symbol: it's here in Indiana; it was named by a well-known Indiana naturalist who really was considered the father of North American entomology by many people," said Turpin.



It should be noted that Thomas Say was himself a life-long student. A self-taught naturalist, Say helped to found the Academy of Natural Sciences of Philadelphia, and was the great-grandson of John Bartram, a self-taught botanist who contributed greatly to the collection and cataloging of North American native plants. In his lifetime, Say described more than 1,000 new species of beetles, more than 400 species of insects of other orders, and seven well-known species of snakes amongst other animals.

The class tapped into efforts already made by Professor Turpin and Arwin Provonsha of Purdue's entomology department and wrote letters to every state official the class could find. Turpin visited Mrs. Samudio's class to teach the students about fireflies, further illuminating their knowledge of the beetle and sparking an interest in insects in general. And that's the whole idea behind official state insects in the first place.

### **Why a State Insect?**

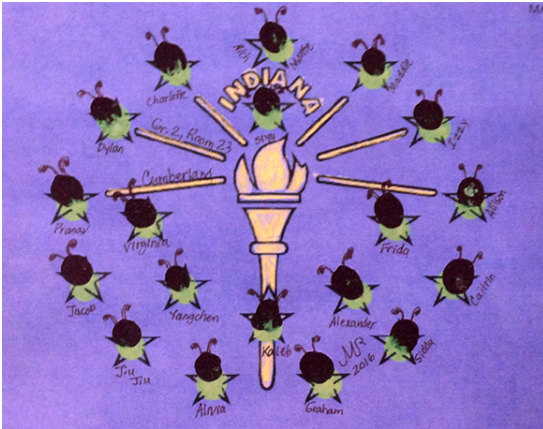
California was the first of the United States to select a state insect. The California dogface butterfly (*Zerene eurydice*) was officially adopted as its state insect in 1929, the result of a statewide poll of all the active entomologists in the state in an effort to elevate the field and increase public interest in entomology.

In the intervening years nearly, every state has adopted a state insect. Indiana joins Pennsylvania and Tennessee in recognizing fireflies (*Photuris pennsylvanica* and *Photinus pyralis*, respectively). Many other states recognize bees, butterflies, dragonflies, and lady beetles – though some, such as Rhode Island (the American burying beetle) and South Carolina (the Carolina mantis) favor more unusual insects. Fellow firefly fan Tennessee is the most entomologically exuberant – recognizing a total of 4 state insects!

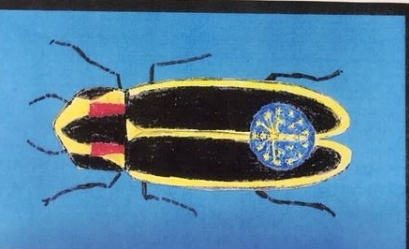
### **But meanwhile, back in Indiana...**

After an extensive letter-writing campaign by Mrs. Samudio's students, State Senator Ron Alting (a Republican) took up the student's cause, introducing a Senate version of the bill. Representative Sally Siegrist, (Republican) authored the house version of the bill and Representative Sheila Klinker (Democrat) co-authored. Rep. Klinker also visited the class to let the students know she would be backing the bill. The student's had gained rare, bipartisan support in both chambers.

Mrs. Samudio's class went to work, lobbying on behalf of their bill. Her students created a Facebook page and even testified before the House Natural Resources Policy Committee to make the case for Say's.




**Say's Firefly for Indiana's Official State Insect**  
 A firefly's a lightning bug, a beetle and a bug,  
 Its light production system is marvelous and fun!  
 Say's firefly is native to our own great state,  
 A very special **state insect** it would surely make!



Firefly Flag Created by the students in Room 23 from Cumberland Elementary School in West Lafayette, IN. and other materials used to promote Say's as Indiana's state insect from the students' Facebook page.

Unfortunately, the help of government officials, and the students' own lobbying efforts were not enough to make passage of the bill a slam-dunk. Over the years the bill was referred to various committees but never came up for a vote.

"After having 5 pieces of legislation in the Senate and House over the past two years, that never made it out of committee, we had to try a new approach," said Mrs. Samudio. In May 2017, the students wrote directly to Governor Eric Holcomb, who took up the students' cause and initiated a letter-writing campaign, encouraging students to send letters of support to his office, promising to share them with the General Assembly. Mrs. Samudio's class were joined by hundreds of students from across the state in writing letters to Governor Holcomb outlining the finer points as to why Indiana needed a state insect, and why the Say's firefly should be it.



Please!!! I want to be the State Insect!!!

Mrs. Samudio's Second Grade, Cumberland Elementary  
 600 Cumberland Ave.  
 West Lafayette, IN 47906  
 May 17, 2017

Dear Governor Holcomb,

We are writing to you because we would like to share our idea with you. We hope that you will see the merit of our project and want to help us. (Angel)

We are second graders in Room 13 at Cumberland Elementary school in West Lafayette. This year some of the second graders asked our teachers when they were reading about our 50

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states, why most of the states had a state insect, but Indiana did not. The same students asked, "How can we get ours?" The second graders from Room 13 have been working on this quest ever since. (Sam L.)

Did you know that Indiana is one of two other states without an official insect? Did you also know that some states have more than one official state insect? Michigan and Iowa don't have a state insect either. The same students said that we don't want Indiana

True to his word, Gov. Holcomb shared these letters with lawmakers and the bill finally cleared the General Assembly with near-unanimous support.

Gov. Holcomb honored the students of Cumberland Elementary by holding the signing ceremony at their school on March 23rd, 2018. During a special assembly, students and teachers wore day-glow green and yellow and the “Firefly Kids” – those who are or have been students of Mrs. Samudio – wore special Say’s Firefly t-shirts.

To greet Governor Holcomb, the gym lights were turned off and, in the darkness, students flashed hand-held lights like their insect kin while a soundtrack of crickets played in the background. When the lights came up, Governor Holcomb made his way to the center of the gym, along with other elected and school officials including State Representatives Siegrist and Klinker, State Senator Alting, and of course, the original “Firefly Kid” – Kayla Xu. During the signing, Gov. Holcomb held the pen along with Kayla, the two of them signing the bill together.



The students’ bill becoming law.

Pictured (from left, seated wearing gray) Rep Sally Siegrist, Kayla Xu, Gov. Holcomb, Rep. Klinker (at left, behind Rep. Siegrist), Sen. Alting on far right, and (standing on the right), West Lafayette Mayor, John Dennis, and to his right, in a gold jacket, (Maggie Samudio, Teacher Gr. 2) Photo: Xerces Society / Stephanie Frischie

On Facebook, Gov. Holcomb said of the achievement, “This is a big deal to young students around the state who have reached out to us in support,” adding “this has taught students a great deal about how our lawmaking process works—and that if they are engaged, they can make a real difference.”

For Mrs. Samudio, it’s the culmination of her “teachable moment” from years prior, and a real win for her students. “This was and has been a student-driven project initiated by Kayla when she was 7 years old in my 2nd grade class. She’s in 5th grade now. She is so proud and excited.”



Having caught the bug – Kayla and Mrs. Samudio aren't stopping with Indiana. When asked "What's next?" Mrs. Samudio has replied: "Kayla and I plan to pursue asking that the monarch be named as national insect. We would also like for it to be added to the logo for the North American Leadership Summit. We wrote to the three leaders [of the summit] in 2016 and promptly received a response from Mexico. They loved the idea and referred to the monarch in their letters as '*the wings that unite us*'."