

# Best Practices Information Request Form

## Sections and Branches

The Leader Training Committee (LTC) is continuously expanding their Best Practices Guide to document successful activities and practices in our Sections and Branches. Please use this form (MS Word Format) to document your Region's successful activity so we can share it with other leaders. We strongly encourage you to attach relevant graphics and photos (either embedded in the MS Word document or attachments as PDF, jpg, tif, or other formats). We will incorporate the new Best Practice in the Guide and post to the web site. *Please return your completed form to Brian Pawula at [blpawula@hornershifrin.com](mailto:blpawula@hornershifrin.com), or Nancy Berson at [nberson@asce.org](mailto:nberson@asce.org).*

<b>PROJECT TITLE</b>	<b>Asphalt Cookies</b>
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<b>1. Section/Branch</b>	Wisconsin Section – Northwest Branch
<b>2. Section/Branch Size</b>	1,800 people in the Wisconsin Section
<b>3. Project Contact</b>	
Name	Dan Borchardt, PE, ENV SP, M.ASCE Andy Walters, PE, M.ASCE
Phone Number	O: 715-304-0448 or C: 715-216-3601
Email	Dan Borchardt <a href="mailto:Dborchardt@msa-ps.com">Dborchardt@msa-ps.com</a> or <a href="mailto:danborchardt83@gmail.com">danborchardt83@gmail.com</a> Andrew Walters <a href="mailto:awalters@teamaet.com">awalters@teamaet.com</a>
<b>4. Project Category</b>	K-12 Student Outreach  Please choose one: Communication, Continuing Education, Government Relations, Membership Development, Section Operations, K-12 Student Outreach, College Student Outreach, Public Outreach.
<b>5. Project Description</b>	Asphalt is a key building material used primarily for constructing our transportation system. Making real asphalt uses a type of “recipe” like what is used for baking cookies with ingredients including a binder and a combination of aggregate materials such as gravel and sand. Well...you won't be eating sand, but you can eat asphalt today — sort of!  <i>Allergy note: some ingredients may include gluten, milk, nuts, and soy. Eating the mixture is optional.</i>

	<p><i>Purpose:</i> The process of making these cookies parallels the method used to produce asphalt pavement. Asphalt is a black sticky substance used in road construction to hold rocks together. When heated, asphalt liquefies; as it cools, it hardens and becomes solid. Mixing asphalt with rocks creates a durable roadway material after it hardens, which is perfect for constructing roads in our communities. The similarities between making cookies and preparing pavement include starting with a hot liquid, then adding it to a variety of dry ingredients and mixing it all together, which when cooled, hardens and gains strength!</p>
<p><b>6. The Process</b> (What you did, When and How)</p>	<p>STEM outreach events 2 times a year at the University of Wisconsin – Stevens Point as part of STEAM Point Days. The process works well for lines of kids or stationary hands-on activities at booths.</p>
<p><b>7. Those in Charge</b> (Committee, Task Committee, Etc.)</p>	<p>ASCE NW Branch STEAM outreach</p>
<p><b>8. Time Frame</b> (When Started, When Completed)</p>	<p>We have been doing this activity since 2015.</p>
<p><b>9. Success Factors</b> (The Parts that Worked Really Well)</p>	<p>Melt chocolate chips vs. a big block of chocolate – the smell of the melted chocolate mixture allures the audience.</p> <p>Mix peanut butter and vegetable oil/almond milk/sweetened condensed milk with chocolate in a crock pot the night before the event.</p> <p>Use a food processor to grind the Oreos, graham crackers, instant oats, and Reese’s Pieces the night before the activity.</p> <p>Prep parchment paper by cutting it into pieces based on the anticipated crowd size.</p> <p>Have an adult add the chocolate liquid to the mixing cups.</p> <p>Freeze left-over ingredients for the next event so they don’t get stale.</p>
<p><b>10. Setback Factors</b> (The Parts that did Not Work Well)</p>	<p>Don’t forget an extension cord for the crock pot, have a garbage can for the used materials, have baby wipes, paper towels and a broom to clean up. This activity can make a mess.</p>
<p><b>11. Creativity</b> (This is something off the wall that we did)</p>	<p>Have asphalt concrete samples to allow the kids to inspect/interact with and see what the final product should look like. Ask the students questions about what they know about concrete and asphalt.</p> <p>Try to use compostable products to eliminate waste.</p> <p>Use a miniature matchbox roller to simulate placing the pavement and compacting it on the parchment paper.</p>

<b>12. Administration</b> (What was most Important?)	Getting the correct amount of ingredients prepped.
<b>13. Follow-Up</b> (What was most important?)	<ul style="list-style-type: none"> <li>• Introduce the civil engineering topic of paving and materials to fourth through seventh-grade students.</li> <li>• Create a hands-on activity for groups of 5 to 10 students that lasts approximately 15 minutes.</li> <li>• Explain the physical properties of asphalt and discuss road construction techniques.</li> <li>• Use an easy-to-prepare cookie recipe as an analogy for making asphalt.</li> <li>• Illustrate how engineering affects our daily lives but often goes unnoticed.</li> </ul>
<b>14. Recommendations</b> (What you should ALWAYS do with this project?)	Have fun and enjoy eating a cookie made with an asphalt mix design.
<b>15. Cautions</b> (What you should NEVER do with this project?)	Burn the chocolate in the crock pot.
<b>16. The Outcome</b>	Fun, tasty cookies while learning about math and engineering principles.
<b>17. Ongoing Activity</b> (Would you do it again?)	We have repeated this exhibit at multiple different types of events.
<b>18. Speaker Contact Information</b> (person from your Region who would be willing to speak about the Best Practice)	Dan Borchardt  Andy Walters
Name	Dan Borchardt
Phone Number	715-216-3601
Email	dborchardt@msa-ps.com
<b>19. Additional Comments</b> (We strongly recommend attaching relevant photos and graphics)	Attachment 1 = Activity Instructions / Lesson Plan document Attachments 2-8 = 7 pictures from an asphalt cookie event