

SLED PERSPECTIVES

SLED Partnership Newsletter

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Project Ending

The SLED project, at least as it is currently supported by the National Science Foundation, is coming to an end. We are planning a one-day summer follow-up for all teachers on June 14th, but that will be the final professional development activity of the project. Since its inception, SLED has reached nearly 200 in-service teachers, more than 100 pre-service teachers, and about 5,000 students in more than 30 schools across Indiana. We will expend the remaining funds we have received to complete the goals and activities of the project during the coming school year, but we will not be starting anything new. We will be focusing on completing analyses of the research data collected, disseminating findings, and wrapping up project activities.

We appreciate your participation in the project, and we hope that you found it worthwhile! We believe SLED has made a difference in the teaching of science and kids' learning in schools all over the state. We are counting on you to keep using SLED activities and keep making a difference for your kids!



Grade 5-6 teachers at the 2015 SLED Summer Institute

In This Issue

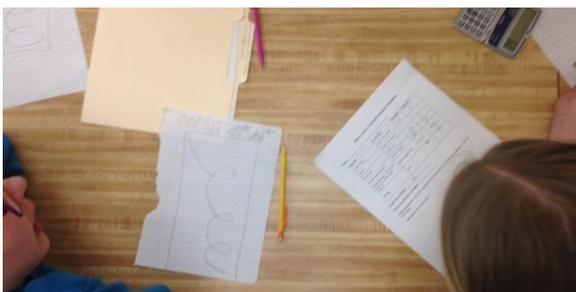
- Project Ending
- SLED in Salem
- Roller Coaster
- Roller Coaster and Literacy
- Triton Takes on SLED
- Summer Follow-Up Session
- Reflections and Surveys
- NSF Video Showcase

SLED in Salem

Aaron Pickett

This was my first year doing SLED activities. Throughout the year, I incorporated Candy Bag, Prosthetic Leg, Yucky Water, Solar Tracker, and the Roller Coaster activities. Many of the activities were tied into my language arts activities. With Prosthetic Leg, I tied that to our reading series story *Winter's Tale* about the dolphin who gets the artificial fin. I also had one of our aides come in and talk about her young grandson who was born without a leg. She showed us pictures of the different prosthetics he's had over the years. Yucky Water was tied into our novel unit of *Tuck Everlasting*. Every year I have students write a persuasive piece on convincing others to buy the "magical" water. This year, before they could sell it, they had to clean it up from the spring from which it came. We also read *The City of Ember* this year. Along with our science studies about the sun and planets, this was our introduction into the solar tracker project. For the Roller Coaster activity, students read the story *Science of Fun Stuff: Thrills and Chills of Amusement Parks* that talked about the science that goes into rides, games, and the food of theme parks. The story was used to give them a little insight on what they need to do to make a successful...and safe...ride. For next year, I have ordered another *Science of Fun Stuff* about the process of making candy that I will include with the Candy Bag activity.

The SLED activities were a success. The students thoroughly enjoyed them. As the year progressed, their individual and group designs improved in detail. The students especially excelled with Yucky Water and Prosthetic Leg. Both of those projects really showcased their attention to detail, and their abilities to fix a problem when it came time to redesign. Only the Solar Tracker project gave them some trouble. They totally understood that the sun moves in different directions. However, when it came time to make the tracker move, many groups had it going up and down, but they were not as successful at giving it a mechanical way to turn left and right other than just picking it up and turning it with their hands. Overall, I was pleased with the progress the students showed and how excited they became when I announced a new project each week. I look forward to continuing with these project next year.



Salem students work on project designs

Roller Coaster

Jon-David Wade-Swift

My sixth graders at Salem Middle School did the Roller Coaster project. The students were really excited about designing their coasters. I added a \$150 budget that they needed to try to stay within while creating it. I also added a \$10 penalty if they needed an extra 5 minutes to construct their project. What students noticed is that their designs typically weren't what they ended up with. This was due to physics or because they were running out of money. The concepts of kinetic and potential energy were well established in this project.



Roller Coaster and Literacy

Elizabeth Hittle

In January we did Roller Coaster at Lafayette Sunnyside We read a nonfiction book titled *Roller Coasters* that highlighted the vocabulary from the lesson. This book gave the students a visual and more in-depth understanding of the vocabulary needed in order to effectively design a roller coaster. After students finished the design task, they wrote a narrative in third person using vocabulary words depicting their experience riding the roller coaster they designed.



Salem students work on a roller coaster



Roller coasters built by Salem students



Triton students develop their designs



Triton students work on a design activity

Triton Takes on SLED

Cathy Stryker

Third graders at Triton Elementary school have been busy this year in Mrs. Stryker's classroom participating in many SLED activities. Students have thoroughly enjoyed these activities while they learned about scientific tools, the engineering design process (Lifeguard Chair), sound (Musical Instrument and Sound Absorbing Wall), heat and light (Save the Penguin), along with rocks and natural resources (Earthen Dam). During the final weeks of school, our learners will investigate plants before designing "Bio-Inspired Flowers," and finish our scientific studies with simple machines by engineering wolf traps for "Save the Wolf." Students have worked to solve potential "real world" problems, after learning the science behind each concept. They have kept scientific notebooks with detailed sketches, notes, and ideas to help guide them as they built, and then tested their artifacts. Drawing is a difficult task for all third graders to do neatly, but continued practice has helped students to get better with each new entry. These efforts have led to the creation of models that are always unique with varied outcomes, but everyone has been able to learn what was successful about their design and what could have been done differently to create more positive outcomes. This has allowed each student to learn how to reflect on their results and note findings in their notebooks. Every student has developed a new love for science, and the ability to look at problems in everything they do in different ways before they plan a solution.

Summer Follow-Up Session

SLED will hold a final one-day follow-up session, a mini summer institute, for all participating teachers on June 14, 2016, from 9:00am—3:00pm at the Hall for Discovery and Learning Learning Research at Purdue. Teachers will receive PGP points for participation, and teachers who attend will also receive payment for the day and be reimbursed for mileage. The aim of the day is to provide you with a chance to reflect on what you've done in the past year, engage in a final activity or two, and look forward to what you can do in the future. More detail will be forthcoming.

Reflections and Surveys

This time in the year is when we ask you for different kinds of feedback regarding your participation in the partnership, including surveys and reflections. You received a survey request from Patricia Muller, who is the project's external evaluator. You also received a survey request from Jim Lehman on behalf of the research team. There may be some overlap in the kinds of questions asked on the two surveys, but we know there are some differences. *Please complete both of these surveys to the best of your ability.* Also, please remember to complete and upload your final reflection, which is due May 23rd. Recall that reflections should be uploaded to the SLEDteach group at <https://stemedhub.org/groups/sledteach>.

NSF Video Showcase

On May 17-23, 2016, the National Science Foundation will sponsor STEM for ALL, a video showcase of more than 150 projects doing innovative work in broadening participation and access to STEM. Each project will be featured in a three-minute video. SLED will participate in the video showcase, and you're invited to see the SLED video as well as videos from many other outstanding NSF-supported projects. You can access the video showcase online at: <http://stemforall2016.videohall.com>.

Enjoy Your Summer!

Thanks for all of your hard work making SLED a success! Have a wonderful and relaxing summer break!

