Technological Problem-Solving with Picture Books

Tracey O’Toole
Finally the farmer and his family pull the potato from the ground.

Use the materials provided to make a trophy to support the potato on your table?
Smarter Science provides teachers, particularly elementary teachers, who are often less comfortable with their own knowledge of science—an effective framework for teaching science.
What does Smarter Science mean for the students I teach?

Student engagement blossoms

Science is something that they do, not just something that they learn

Develop critical literacy and problem-solving skills

Cross-curricular connections come alive

Deeper understanding as they explore, apply and create
An excellent source for technological problem-solving is literature.

After reading a story challenge students to come up with solutions to problems encountered by the characters in the story.
After reading this series, students used the steps to inquiry to design and construct their own alligator retrieval systems.
Initiate and Plan: Develop Questions

My Design
A Method of Removing the Baby Alligators from Ms. O'Malley's Yard

- The R truck
- BOX
- wheeS

A Surprise for Mrs. O'Malley

Please write Mrs. O'Malley a letter telling her how she should solve her problem.

Dear Mrs. O'Malley,

I heard you had a problem the best way to get the Alligators out is to call the Saver.

The Saver only costs 99.00.

Itucci up the alligators and puts them in a cage. I can only come at night so call at night. We came at night because at night they think it is the day.

From,

The Alligator Saver
Perform and Record: Design, Construct, Experiment
A Surprise for Mrs. O'Malley

Please write Mrs. O'Malley a letter telling her how she should solve her problem.

Dear Mrs. O'Malley,

I heard you had a problem with the Alligators. The best way to get the Alligators out is to call 911. The service only costs $900.00. It sends up the Alligators and puts them in a cage. It can only come at night, so call at night. We came at night because it is dark. From,

"The Alligator Alley"
Technological Problem-Solving with Big Books

Communicate: Discuss, Explain and Write

The Display Includes:
- Photos of Student Work
- Student Quotes
- Questioning Process
- Design Process
- Persuasive Letter
- Success Criteria
The Napping House...students design and construct a bed to support the weight of all of the characters.

The White Stone in the Castle Wall...students design and construct a means of transporting the white stone to Casa Loma.
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Stanley’s Party... students investigate a way for Stanley to be notified once his owners approach the house.

Grandma and the Pirates... students design and build an appropriate shelter for the pirates.

The Gingerbread Man... students investigate how the gingerbread man will cross the river.
How do you involve families in inquiry and technological problem-solving?

Take home fairytale science kits which include all the materials needed and a disposable camera.
Just Remember…

The most important factor in getting started is… to get started.
For great demonstrations and resources be sure to visit...

The Smarter Science Booth in the Exhibit Hall

For a chance to relax, mingle and share ideas visit...

“Next Steps” Suite Room 1230
Today 6:30 – 8:30
Tomorrow 12:00 – 8:00
Saturday 12:00 – 2:00
Scan this QR code to give feedback on this workshop or complete a feedback form at your table