



LABS

# The Makerspace Playbook

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## SPONSOR:

IDAHO STEM ACTION CENTER

Having wonderfully supportive partners is fundamental to any successful program and within Idaho, our Think Make Create Labs has the Idaho STEM Action Center. Created in 2015 by the Idaho Legislature, they work to recognize disparities in Idaho: access and awareness gaps for students, inconsistencies in training and support resources for educators, and economic inequalities within Idaho's communities – and providing opportunities for Idahoans to realize their full potential by overcoming these barriers.

As a major supporter of TMC in Idaho, they have worked tirelessly to promote our program with educators across the state, recruit industry partners for TMC financial support, as well as provide their own matching dollars to the TMC program.

The Idaho STEM Action Center works tirelessly to expand access and resources to STEM education throughout Idaho and has become a stable educational partner for many underserved communities.

~ Claire Sponseller, Area Extension Educator,  
University of Idaho Extension 4-H



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## Spotlight on: Ensuring Quality STEM Learning – an Online Course

Have new seasonal or full-time staff and need some professional development to help on-board them sooner rather than later? The South Dakota and Idaho Think Make Create Lab programs have created an on-line course to help offer professional development opportunities for more frequent training access.

Visit Extension Foundation at <https://campus.extension.org/>, where they have created a course called Ensuring Quality STEM Learning. This course is aimed at helping out-of-school professionals create a quality STEM learning environment. Through the course, educators will become more familiar and comfortable with the best practices of STEM programming with a focus on Positive Youth Development. There is both a long and short version of the course to accommodate different needs and can be completed at the learner's individual pace. The five modules cover:

1. Safe Trailer Practices (safety protocol and measures)
2. Successful STEM Programming (selecting activities, putting it into practice, getting ready to make)
3. Developing STEM Practices and Mindset (active STEM learning, modeling STEM practices, asking questions)
4. Positive Youth Development (what is positive youth development, panel discussion)
5. Wrap-up (summary of course)

The course is free and can be accessed by creating a free profile when visiting the Extension Foundation. Once the course has been completed, we encourage an in-person hands-on training to support the course work by contacting your state's TMC program: **South Dakota** or **Idaho**.

~ Claire Sponseller, Area Extension Educator, University of Idaho Extension 4-H

# Give It a Try: Water Striders

Summer is a great time to play with water and learn about the creatures that live in it. Learn about the unique properties of water by studying a critter that can literally walk on water: the water strider!

Water molecules have a positive end and a negative end that are attracted to each other. These two ends stick together much like two magnets. When water molecules stick together, they create surface tension. Surface tension is a force that makes water behave as if it has a very thin skin. Water striders have water repellent hairs and spread their weight out over a wide area, which allows them to walk on top of this "skin."

Follow this lesson plan [HERE](#) to create your own water strider with only thin copper wire, a pair of scissors and a bowl of water. You can add some character to your wire water striders by adding a tape body and googly eyes.



~ Amy Post, TMC Labs Coordinator, Idaho Out-of-School Network

## Put it Into Practice: Careers

"You can't be what you can't see" means kids need to know about careers and jobs in order to aspire to fill them one day. Here are two resources for STEM career exploration.

### Learning Blade

Learning Blade's Mission Challenges engage students in real-world problem solving, from dolphin rescue to car manufacturing. Each Mission Challenge includes hands-on activities and introduces the careers involved in these real-world situations. Each Mission Challenge is accompanied by Papercraft printables, which are cut-and-fold figurines, featuring STEM professionals, that kids can make and play with. This resource is available for free to Idaho educators through support from the STEM Action Center at this link: [www.learningblade.com/ID](http://www.learningblade.com/ID). Contact [joshua@learningblade.com](mailto:joshua@learningblade.com) for more information.

### Skype a Scientist

Skype a Scientist connects real-world STEM professionals directly with students for free. This network connects classrooms, groups and families with a volunteer scientist or STEM specialist on video-conferencing calls. Students can then speak directly with the professional, who can show them their work, tell them about their career and background, and answer questions. Learn more at [skypeascientist.com](http://skypeascientist.com).

~Amy Post, TMC Labs Coordinator, Idaho Out-of-School Network

## Tips and Tricks: Engaging Community Partners

How to connect with local industry leaders and community partners:

- Attend an open house, search their webpage for the HR/PR person, or reach out to them directly.
- Reach out to explain who you are and what your mission is by email, phone call, or even in person.
- Invite them to an event and provide as many details as possible. Explain what the event is, the target audience, and why they should be involved.
- Be patient and understanding! They are often very busy, and it may be difficult to get on their schedules right away.
- Be persistent! Keep in contact, keep them updated on your events, and try again in a few months.

~Lillie Carnell, 4-H Program Coordinator, University of Idaho Extension 4-H

## Produced in Collaboration by:



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