

# Peak Area Leadership in Science

Professional Development Opportunities  
for Secondary Science Teachers

## Three Ways to RSVP:

- o [www.sciencehubs.org](http://www.sciencehubs.org)
- o email: [RSVP@sciencehubs.org](mailto:RSVP@sciencehubs.org)
- o call Tammy Johnnie at  
(719) 337-1552

## “Exploring the Science of Caving with CaveSim” Goes Virtual Physical Science\* Aspects of CAVING !

*\*(Physics, Engineering, and Chemistry)*

### Saturday, December 5, 2020

8:00 am – 12:00 pm

Facilitated by: Dave Jackson,

CaveSim Designer and Lead Educator, CaveSim LLC

### This will be a Virtual Session using ZOOM.

Confirmed participants will receive the link the day before the session.  
Confirmed participants will pick up a materials lab pack  
BEFORE the workshop to use IN the workshop.

### Remember to Join Us Virtually...

- Please register ASAP on or after 11/07. You will need to respond to a confirmation email. Spots are limited !
- Arrange to pick up your materials packet BEFORE the workshop. Details will be provided in the confirmation email.
- Check your technology in advance and hope for a great connection the day of the workshop.
- For the workshop, find a nice quiet and comfortable spot where you can actively engage in the morning's activities.
- Feel free to provide your own beverage and snacks.
- Have your science notebook handy for taking notes !
- Additional participant materials and door prizes will be available for pickup locally following the workshop.

### What will you learn ?

- Physical Science of Vertical Caving - experience the power of friction generated by moving rope and see demos involving the use of rope-ascent and rappel devices on a 12' vertical caving tower. You'll also get to see the role pulley systems play in vertical caving.
- Maker Lab: Sparks, Light, and Ripples - explore a variety of simple electronic components (batteries, capacitors, resistors, LEDs, and a waterproof speaker) and learn how they are used in the waterproof military phones that are used during underground rescue operations. You'll even get to create your own cup phone !
- In Carbide Chemistry, you'll get to explore chemical reactions with simple household powders and an acid. This is in preparation for a more complex acid base reaction that is used to power an older, traditional miner's lamp - the reaction of calcium carbide with water.

This workshop is made possible by  
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**FOUNDATION  
MIKKELSON**

**& Jim Mikkelson**

*Providing Support for Teachers  
to Improve Technical Knowledge and Skills*

Additional Funding by



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Photo at top provided by Rose DiCenso.

In compliance with Colorado School of Mines regulations, children of participants may not attend Hub meetings or activities.