

STEM IN THE LAB

innovate. explore. discover.

OUR MISSION

INL's K-12 STEM Program works to inspire Idaho's future STEM workforce, impact students, teachers and families by integrating best practices in STEM education, and empower employees to become STEM mentors to transform K-12 STEM into a driver for innovation.

STEM IN ACTION



GRAPHITE CIRCUIT ART

Discover the conductive properties of graphite and make your own art design light up! At INL, graphite (a form of carbon found in pencil lead) plays a significant role in next generation nuclear technology. For instance, in high-temperature gas-cooled reactors, graphite encapsulates and encloses the fuel. Since graphite is low in electrical conductivity, the achievement of creating a circuit will depend on the length, thickness, and amount of graphite on your paper.

TRY THIS AT HOME

If you enjoyed this STEM activity try extending it at home! After drawing graphite lines, erase part of one of the lines. Will the light bulb still light up? Research on the computer why the graphite line needs to be continuous. Replace the 9V battery with AA batteries. Does it still light up? How does the brightness compare to a 9V?

CAREERS IN STEM

BUILDING STEM SKILLS

A career in STEM could be a part of your future. If you enjoyed this STEM activity, then consider becoming a Material Scientist. At INL, Material Scientists research the properties of graphite to predict the long term performance of graphite components in reactors. They perform all sorts of tests including breaking graphite specimens to determine their strength.

STUDENTS + PARENTS + EDUCATORS

For information on grants, training and student opportunities; curriculum ideas and resources, please visit us at: stem.inl.gov.

