



SWENextEd Newsletter Vol. 5 – Apr. 2017

Dear Educators,

We know you've covered STEM basics, but are your students spatially literate? In this issue we introduce just how easy it is to pick up spatial skills, how to use space weather to introduce engineering, and an offer to get your own STEM training this summer. Want to spread the word to your fellow teachers? Invite SWE into your next conference, join our advisory board, or simply sign them up for their free newsletter subscription. SWE is for everyone.

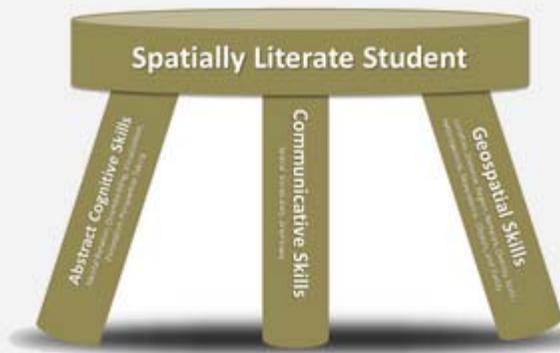
Space Weather and Magnetism



Ready to get students excited about solar activity and its impacts on Earth? The National Geographic [Engineers In The Classroom](#) (EITC) makes engineering easy to introduce whether you're the classroom teacher or a visiting engineer. EITC has educational STEM activities for all levels complete with the resources, tutorials and presentations to highlight science and many different types of engineers. This [Space Weather and Magnetism](#) lesson plan for middle school students explores how scientists monitor solar activity and how the sun's magnetic field impacts

the Earth's living and technological systems.

"S" is for "Spatial": Add Spatial Skills to STEM Curriculum



"I find it empowering to know that something like spatial-visualization skills that are often considered to be innate can actually be learned with not too much effort."

AAUW

Have you noticed that some students seem to grasp STEM problems quicker while others struggle? Students with the ability to visualize and mentally rotate an object in different positions and settings are much more likely to grasp the STEM problem statements easier and persist. This form of spatial literacy is called Spatial Visualization Skills (SVS).

Yet not all students have had the same life experiences; SVS are frequently developed through childhood play using construction toys, some video games or even drawing. The good news, research shows that spatial skills can be easily taught. Check in on your students' SVS development through a quick quiz or brainteaser. Watch your students STEM confidence grow as you build spatial skills into your core STEM curriculum.

IMAGE: An Elemental Journey to NGSS

Summer Research Training

Educators and teachers can gain hands-on STEM research experience through this summer training grant at participating Army Laboratories. Hurry, AEOP Applications are due April



14, 2017.

STEM Conferences: Advancing SWENext



Did you see our SWE exhibit at the [SXSW Edu Expo](#) (Austin, TX) and [NSTA National Conference](#) (Los Angeles, CA)? We had a wonderful time talking with teachers about [SWE K-12 Educator Resources](#) and [SWENext](#), our free program for students.

Join us April 29 as we present "[SWENext: Inspiring the Next Generation of Engineers](#)" at the San Diego Science Education Conference. Better yet, invite SWE to your next STEM educator conference. [Post your ideas](#) or email swenexted@swe.org

Be the Future: Join the Advisory Board

Got a passion for closing the engineering gender gap, building an inclusive student learning environment, and advocating for educators? We are seeking SWE members to join the Advisory Board to help guide the future direction of the SWE Outreach K-12 Educators Workgroup.



The Advisory Board is responsible for strategic advice, feedback and

suggestions to best serve K-12 educators including society services, newsletter and work plan. Members will actively participate via regular teleconference meetings. [For more information, email swenexted@swe.org](mailto:swenexted@swe.org).



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