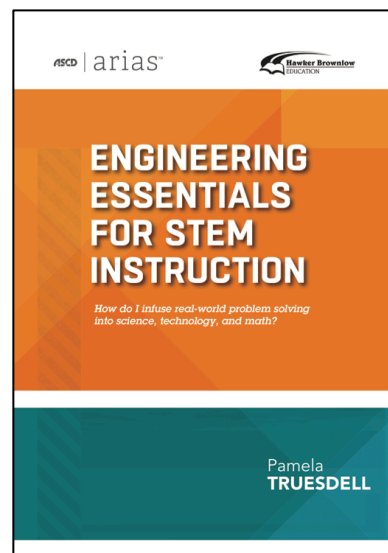


ASCD Arias Publication: Engineering Essentials for STEM Instruction

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Key Learning Area: Mathematics, Science, Technologies



Summary

How do I infuse real-world problem solving into science, technology and mathematics?

Are you looking for ways to incorporate rigorous problem solving in your classroom? Are you struggling with how to include the “E” in your STEM instruction? Here is where to start.

In this practical introduction to engineering for primary to secondary school teacher, you’ll learn how to create effective engineering-infused lessons that break down the barriers between science, maths and technology instruction. Veteran teacher Pamela Truesdell highlights engineering’s connection to 21st century skills and university and career readiness, addresses the Next Generation Science Standards, and walks you through each step of the simple but powerful *engineering design process*. It’s a crucial tool for professional engineers and the key to engaging students in hands-on, collaborative projects that ask them to apply content-area knowledge to find solutions for real-world problems. A sample lesson, links to additional resources and guidelines for assessment ensure you’ll have the essentials you need to kick off your students’ exploration of engineering.

Supporting Resources

- *ASCD Arias Publication (Set of 21)* (SF113004)
- *Integrating Engineering and Science in Your Classroom* (NST0904)
- *Gears: Science, Technology, Engineering & Mathematics Activities, Years F–2* (6110)
- *Gear up! Science, Technology, Engineering & Mathematics Activities, Years 3–6* (6137)
- *Connecting Students STEM Careers to Social Networking Strategies* (IST0688)
- *Getting Started with Lego Robotics* (IST7779)