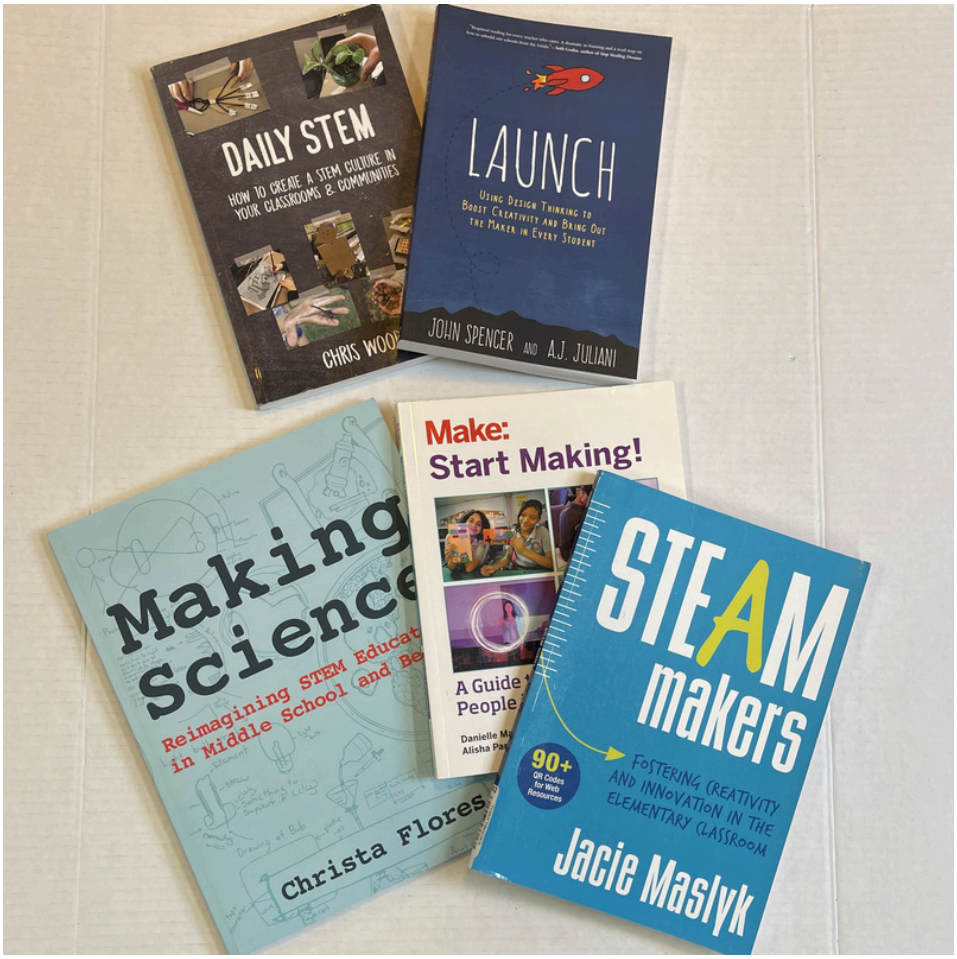
Teacher Professional Development STEM Book Collection



Mid-Valley
STEM-CTE HUB

www.midvalleystem.org
midvalleystemctehub@linnbenton.edu
Linn-Benton Community College
Albany Campus - CC-212

Mid-Valley
STEM-CTE HUB

Teacher Professional Development Collection

This professional development book collection provides educators with invaluable resources for integrating STEM and STEAM education into their classrooms. Through practical strategies, creative frameworks, and hands-on projects, each book in the collection encourages teachers to foster a culture of innovation, critical thinking, and problem-solving. From Daily STEM, which emphasizes building a STEM culture within classrooms and communities, to STEAM Makers, which provides elementary educators with actionable techniques for fostering creativity, this collection empowers teachers to bring making, design thinking, and collaborative learning to the forefront of their teaching. Whether you are a new teacher or an experienced educator, these books will inspire and guide you in creating engaging, student-centered learning experiences that promote creativity, curiosity, and the development of essential 21st-century skills.

Audience

PreK - 12 educators

Learning Objectives:

- Integrate STEM and STEAM concepts into daily teaching by adopting strategies from Daily STEM to create a culture of STEM within classrooms and communities.
- Implement design thinking in the classroom by utilizing frameworks from Launch to boost creativity, problem-solving, and innovation among students.
- Reimagine science education with hands-on, inquiry-based approaches, as outlined in Making Science, to foster student engagement and real-world application of scientific concepts.
- Incorporate maker-based learning into the curriculum using ideas from Make: Start Making, inspiring teachers to engage students in hands-on projects that promote creativity and critical thinking.
- Foster creativity and innovation in elementary classrooms through STEAM projects in STEAM Makers, helping educators provide dynamic, cross-disciplinary learning experiences that encourage collaboration and student-driven exploration.

Mid-Valley
STEM-CTE HUB

Contents of Kit

- **Daily STEM: How To Create a STEM Culture In Your Classrooms & Communities by Chris Woods -** This book offers educators practical strategies for fostering a STEM culture in classrooms and communities. It emphasizes integrating STEM into daily learning activities, highlighting how educators can support student engagement, creativity, and critical thinking. Through real-world examples and best practices, it encourages teachers to build a supportive environment for STEM education that extends beyond the classroom walls.

- **Launch: Using Design Thinking To Boost Creativity And Bring Out The Maker In Every Student by John Spencer and A.J. Jacobs -** Launch introduces educators to design thinking as a framework for encouraging creativity and innovation in students. The authors explore practical techniques for implementing design thinking in the classroom, focusing on how teachers can guide students through problem-solving, prototyping, and refining their ideas. The book offers step-by-step strategies for fostering a “maker” mindset, helping students engage with real-world challenges through creative, hands-on learning experiences.

- **Making Science: Reimagining STEM Education in Middle School and Beyond by Christa Flores -** This book challenges educators to rethink how STEM education is approached, especially in middle school and beyond. It argues for a hands-on, inquiry-based approach to science learning, where students engage with real-world issues and apply their learning through projects. The authors provide practical methods for integrating creativity, collaboration, and experimentation into science education, making it more dynamic and relevant to students' lives.

- **Make: Start Making by Danielle_Martin, Alisha Panjwani -** Make: Start Making serves as an introduction to the world of “making” in education. This book guides teachers through the process of incorporating DIY projects and maker-based learning into their curriculum. It emphasizes hands-on activities that empower students to build, create, and innovate. The book provides useful ideas, materials lists, and project steps to inspire teachers to start integrating making into their classrooms, no matter their level of experience.

- **STEAM Makers: Fostering Creativity and Innovation in the Elementary Classroom by Jacie Maslyk -** STEAM Makers offers elementary educators practical strategies for incorporating the principles of STEAM (Science, Technology, Engineering, Arts, and Mathematics) into their classrooms. The book features a variety of creative and hands-on projects that encourage students to think critically, collaborate, and apply their learning to real-world challenges. It offers a comprehensive approach to building a STEAM culture in elementary education, providing teachers with tools and resources to foster innovation and creativity among young learners.

Mid-Valley
STEM-CTE HUB

Resources and Accessibility

Safety Guidelines

- **Avoid Food and Drinks Near Books -** Encourage clean, dry reading areas to prevent spills, stains, or water damage.
- **Handle Books Gently -** Model how to turn pages carefully, avoid bending spines, and store books upright or flat.
- **Use Clean Hands -** Have students wash or sanitize hands before handling shared books to keep materials in good condition.
- **Designate a Safe Storage Spot -** Store books in a sturdy, dry, and clearly labeled bin or tote to protect them from wear and tear between uses.

Accessibility

- **Use Book Stands or Holders -** Provide angled book holders or clipboards to support independent reading for students with mobility or motor challenges.
- **Pair Audio with Print -** Use audiobooks or teacher-read recordings when available to support students with reading disabilities or visual impairments.
- **Incorporate Read-Alouds and Peer Reading -** Offer opportunities for shared or buddy reading to help students who benefit from auditory learning or support with decoding.
- **Offer Visual Aids and Discussion Prompts -** Supplement books with images, models, or key vocabulary cards to reinforce understanding and engagement.

Library Catalog

Library Resources

Feedback

QR to feedback survey