



# StarrMatica

## CROSS-CURRICULAR CONNECTIONS KIT



Hello Fellow Educator,

Thank you for your interest in StarrMatica's K-5 cross-curricular connections kit! We developed this kit because we are passionate about providing *every* student the opportunity to think scientifically *every single day*. So if you have limited time for science professional learning or science instruction, we're here to help you!

Designed by elementary teachers for elementary teachers, the kit is laser-focused on research-based, high impact teaching practices. Bottom line: We know you have a lot on your plate, so our resources target strategies that will make the greatest positive impact on your students.

The kit was created to help you:

- bring more scientific thinking and an engineering mindset into reading and other small blocks of time
- improve your science pedagogy over time with targeted teaching moves
- use high-quality materials with minimal preparation
- have *fun* teaching science

The following pages give an overview of the kit contents and take a deep dive into each of the components. Along with the kit, we offer the opportunity to schedule in-person or virtual professional learning. In our live classes, teachers establish a foundation in science best-practices and co-construct a structured plan for using kit resources throughout the year. Plus, our professional learning includes a year of sustained virtual support (online community, monthly webinars, weekly teaching tips, etc.).

Please contact us to discuss your specific science needs or to request a quote. We look forward to partnering with you to give every student the opportunity for a bright future in STEM!

Thank you,



Emily Stan

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# STARRMATICA'S CROSS-CURRICULAR CONNECTIONS KIT

“ This program was an amazing resource!  
It not only helped me to enhance and  
supplement my current science curriculum  
but also provided additional engaging lessons  
to help me be a better teacher. ”

Jaime, K-5 Teacher, UT



1

**OVER 600 PICTURE BOOK GUIDES**  
EXPLORE THE  
CROSSCUTTING CONCEPTS  
AND  
SCIENCE & ENGINEERING PRACTICES  
IN NONFICTION SCIENCE PICTURE BOOKS

**VIRTUAL SCIENCE COACH  
BITE-SIZED  
PROFESSIONAL LEARNING**

2

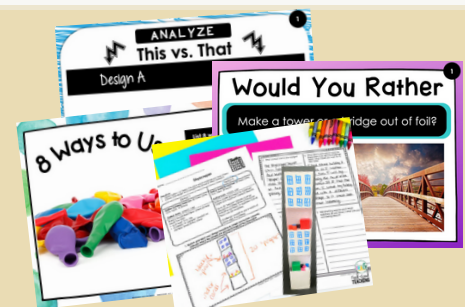


3

**K-5 LEVELED SCIENCE, STEM  
CAREER AND SOCIAL STUDIES  
NONFICTION TEXTS**

**STEM BELLRINGER  
AND CENTER ACTIVITIES  
BY FEEL GOOD TEACHING®**

4



LIMITED SCIENCE TIME?

StarrMatica's K-5  
Cross-curricular Connections Kit  
helps you develop  
the scientific thinking and  
engineering mindset of every  
student every day.

Easy-to-use 5-15 minute activities address science and ELA standards simultaneously, so you can integrate scientific thinking into reading and small blocks of time.

The kit's one-of-a-kind dual focus on engaging content for students and research-based professional learning for educators provides everything you need to become a rock-star science teacher.

For a demo and free resources:  
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[WWW.STARRMATICA.COM](http://WWW.STARRMATICA.COM)





# CROSS-CURRICULAR CONNECTIONS KIT

**Over 600 Picture Book Guides:**  
*Exploring the Crosscutting Concepts*  
 AND  
*Science & Engineering Practices*  
*in Nonfiction Science Picture Books*

## Purpose

Integrate science and reading and help students “think like scientists” by focusing on the crosscutting concepts and science and engineering practices – two of the three dimensions of the Next Generation Science Standards (NGSS).

### **This is important for educators because:**

Cross-curricular lesson plans make it easy to focus on science concepts during reading.

### **This is important for students because:**

Students need to understand how to use the crosscutting concepts as lenses to make sense of new phenomena they encounter, and students benefit from seeing the science and engineering practices modeled by real life scientists and engineers.

## Description

The crosscutting concepts eBook contains 600+ STEM picture book guides organized by grade level.

Each guide features:

- a phenomenon introduction (a science instruction best practice)
- crosscutting concept and science focused discussion questions
- a STEM activity

The science and engineering practices eBook contains 150+ STEM picture book biography lesson plans.

Each plan features:

- a phenomenon or problem introduction
- reading and science focused discussion questions
- a writing activity


These guides are designed to encourage scientific thinking during short blocks of time.

## Professional Development

During in-person PL, educators will participate in the Crosscutting Concepts Station Rotation and the Science and Engineering Practices Circus – activities from the California Academy of Sciences that familiarize educators with these two dimensions of the NGSS.

They will learn how to emphasize each CCC and S&EP using picture book examples and will receive questioning quick reference notecards. Educators will have time to explore the eBooks and practice developing their own picture book CCC and S&EP questions.

Educators will engage in a collaborative brainstorming effort to identify instances throughout the day when students can practice using their scientific lenses.



# CROSS-CURRICULAR CONNECTIONS KIT

## Virtual Science Coach Professional Development Platform

### Purpose

The Virtual Science Coach helps educators learn HOW to teach science by mastering the most impactful research-based teaching strategies.

With bite-sized coaching (20 minutes or less) educators can fit professional development into their schedules.

**This is important for educators because:** Effective professional learning helps teachers feel confident in their ability to teach science.

**This is important for students because:** Research shows that teachers need science pedagogy professional learning in order to use curriculum materials in a way that impacts student learning long-term.

**This is important for administrators because:** Curriculum investments are ineffective unless there is pedagogy focused professional learning.

### Description

300+ on-demand video, audio and text files created by university professors help educators to improve their science pedagogy over an extended period of time.

Engaging, animated videos focus on the skills research has shown will have the greatest impact on student achievement and interest in science, particularly for under-represented populations.

Requiring 20 minutes or less, each resource focuses on an essential topic such as asking productive questions, using “talk moves” to guide student discussions, or increasing knowledge of a specific science concept. This continually growing library of PD resources both support and expand the in-person training as well as increase the effectiveness of the kit’s materials.

### Professional Development

During in-person PL, educators will be introduced to the platform and given time to browse the content.

Then, they will be invited to a monthly online study group with scheduled topics chosen by the group’s members at the in-person PD. Topics will be based on the PD platform’s content and individualized to meet the needs of participating educators.

This opportunity allows educators to add structure and accountability to their plans to improve their science instruction without a large time commitment. The group will meet online for 30 minutes once a month and communicate through an online Facebook group.



# CROSS-CURRICULAR CONNECTIONS KIT

## StarrMatica Science Your Way Texts

### Purpose

Science Your Way nonfiction texts: 1) help educators to integrate reading and science instruction in authentic and effective ways; 2) emphasize STEM careers; and 3) make science content accessible to all students regardless of their independent reading levels.

**This is important for educators because:** Leveled texts and customizable quizzes make it easy for educators to provide content at each student's individual reading level. Graphic organizers and writing prompts save time. Texts featuring science topics aligned to the NGSS make integrating reading and science simple.

**This is important for students because:** Leveled texts allow students to access important science content without struggling to read. Graphic organizers help them to comprehend the text and writing prompts provide the opportunity to share their thinking.

### Description

500+ science informational texts aligned to the Next Generation Science Standards help educators integrate reading and science.

Each text is written at six different reading levels so all students can learn the same content. Half of the 500 texts focus on STEM Careers to expose students to a variety of career pathways.

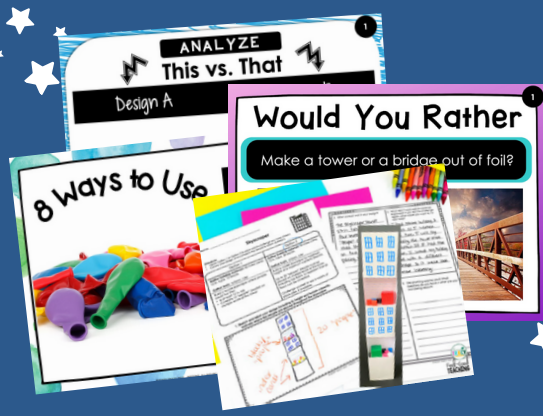
Each text includes a writing prompt, a graphic organizer, and a comprehension quiz. Educators can customize the quiz to meet specific Common Core ELA standards and can track individual student progress with specific comprehension skills in an online score report.

### Professional Development

During in-person PD, educators will learn research-based techniques for integrating science into reading instruction and reading into science instruction including:

- when to use picture books and informational texts in your science instruction
- how to use phenomena to enrich your reading instruction
- how to connect science writing to your English Language Arts instruction

Educators will explore the Science Your Way Texts and discuss how to use the texts to meet both science and ELA standards as well as how to use the career texts to inspire STEM career dreams.



# CROSS-CURRICULAR CONNECTIONS KIT

## STEM Bellringer and Center Activities

### Purpose

STEM Bellringer and Center Activities provide educators with 5 - 15 minute activities designed to help students develop their scientific thinking and an engineering mindset every single day.

#### **This is important for educators because:**

Educators can repurpose short blocks of time during the day to be focused on building skills necessary for success in future STEM careers.

#### **This is important for students because:**

Instead of practicing STEM career skills only during inconsistent and isolated science time, students have the opportunity to build 21st century skills, scientific thinking, and an engineering mindset over a sustained period of time - just like real scientists and engineers!

### Description

100 engaging activities make it easy for educators to emphasize scientific thinking and an engineering mindset every day because they:

- require only 5 to 15 minutes
- can be completed with minimal to no supplies
- develop writing skills
- are perfect for small blocks of time
- can be used to foster the 21st century skills of communication, collaboration, critical thinking, and creativity

Activities including STEM challenges, notice and wonder prompts, and engineering design tasks are provided in partnership with Kerry Tracy at [Feel-Good Teaching®](http://Feel-Good Teaching®).

### Professional Development

During in-person PD, educators will:

- participate in each activity type as a student
- be introduced to how the activities can be utilized to develop scientific thinking and an engineering mindset
- discuss how the activities can be integrated into their classroom instruction or informal education setting during small blocks of time
- learn to develop similar activities to expand their collections