

Making Real-World Connections

COMPANION GUIDE MODULE 2 INTERDISCIPLINARY LEARNING: MAKING CONNECTIONS



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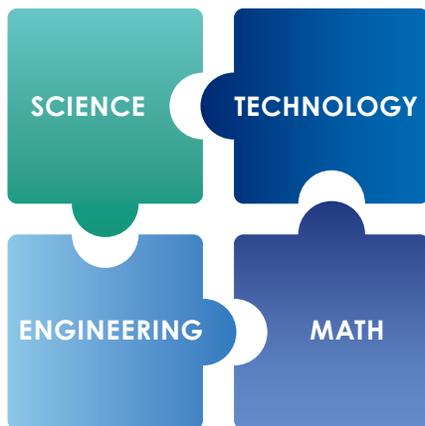
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1. HOW CAN I USE THIS GUIDE?

Interdisciplinary Learning is the second of six e-learning modules that will encompass TGR EDU: Explore's platform delivering teaching strategies that focus on student-centered approaches to learning, with the goal of connecting all students—especially those from underrepresented populations—to success in school and beyond.

Interdisciplinary Learning: Making Connections will establish the need for an updated examination of teaching and planning content. The module will provide clarity of the intended goals and outcomes of high-quality interdisciplinary planning and teaching, establishing a clear path through which all educators can include many subjects within one lesson helping to prepare students for success in the global workforce.

This is the second module and is a great starting point, but all other modules can be enjoyed in any order. Be sure to work through each module at your own pace, reflecting on what resonates most to you and your teaching practice. This guide and the e-learning modules will help you to inspire and motivate your students to reach new heights.

2. WHY DOES THIS TOPIC MATTER FOR EDUCATORS AND STUDENTS?

CURRENT TRENDS

The current workforce requires adept individuals who can rise to the challenge of finding creative and innovative solutions. The interdisciplinary approach to teaching and learning emphasizes design principles and real-world connections. Using integrated technologies, students are given authentic opportunities, to develop critical skills, knowledge, and practices that will help them thrive in postsecondary, workforce, and community environments. STEM is one type of interdisciplinary approach. Educators can use proven strategies and intentional practice to build these critical skills that will help students thrive in a global workforce.

CAREERS

The global workforce demands the critical thinking skills of individuals who can become leaders with innovative solutions to challenging problems. There are currently millions of unfilled STEM jobs in the United States. Professionals, especially in STEM, do not work in subject-matter silos. Much of their work involves multiple disciplines, often at the same time. To prepare students for future careers, they should be given the same opportunities to authentically develop skills via interdisciplinary learning in the classroom.

3. WHAT YOU CAN EXPECT IN THE INTERDISCIPLINARY LEARNING: MAKING CONNECTIONS MODULE

MODULE OBJECTIVES

At the end of the module, the participant should be able to:

- Define interdisciplinary learning and its impact on preparing all students for success in the global workforce
- Explain how to transform a traditional lesson to an interdisciplinary model lesson
- Use tools and methods to bring interdisciplinary learning into your classroom



MODULE LAYOUT

Lesson Highlight	Content	Key Points
Introduction	<ul style="list-style-type: none"> What is interdisciplinary learning and why is it important? 	<ul style="list-style-type: none"> Students have been educated in a very disconnected siloed approach. We can connect multiple disciplines in the classroom in a more meaningful way than the traditional approach.
Planning for Interdisciplinary Connection	<ul style="list-style-type: none"> Developing an Interdisciplinary Learning Lesson 	<ul style="list-style-type: none"> Educators need to take a step-by-step approach to prepare an effective interdisciplinary lesson taking into consideration how they want to evaluate students' learning.
Planning YOUR Interdisciplinary Learning Lesson	<ul style="list-style-type: none"> Interdisciplinary Planning Worksheet Benefits of Interdisciplinary Learning 	<ul style="list-style-type: none"> When you create your own interdisciplinary lesson, it is effective and beneficial to both educators and students. Learning is often siloed, and disciplines should be integrated into one lesson.
Summary & Resources	<ul style="list-style-type: none"> Review of Learning Objectives 	<ul style="list-style-type: none"> How can you take interdisciplinary learning to a new level for ALL students?

4. HOW DO I CONTINUE THE CONVERSATION IN SCHOOLS?

This section of the companion guide provides overviews, pre- and post- activities, discussion questions, and supporting resources that accompany the Interdisciplinary Learning: Making Connections module. This flexible model allows educators to apply the module objectives with school or district goals, such as literacy, culturally responsive instruction, career and college readiness, or cooperative and collaborative classroom structures across disciplines.

PRE-ACTIVITY:

What is your current definition of interdisciplinary learning? What is your current definition of cross-curricular learning? How are they the same? How are they different?

POST-ACTIVITY

STOP-SAVE-START is a strategy that gives students an opportunity to think about their performance and set new goals after learning new content. Use this strategy to summarize your learning from Interdisciplinary Learning: Making Connections module.

For each word, share your corresponding reflection:

As I think about what I learned about interdisciplinary learning, here is one thing I will:

- STOP** – a growth area that you realize is not working for you or your students
- SAVE** – new material or ideas learned that you want to remember
- START** – application of new content into your classroom

DISCUSSION QUESTIONS

- How has your definition of interdisciplinary learning changed after navigating through the Interdisciplinary Learning: Making Connections Module?
- The differences between interdisciplinary learning and cross-curricular learning were highlighted. Which style of teaching do you see happening in your building?
- What are ways you can move more towards an interdisciplinary approach? What are some professional growth areas to focus on at your school to help incorporate more interdisciplinary learning into your instructional practices?



TAKEAWAY ACTIVITY

Now that you have ideas for how you can use interdisciplinary learning in your classroom, you can inspire your colleagues by sharing these resources with them to encourage interdisciplinary teaching. Facilitate the lesson “What does an exemplary interdisciplinary plan look like?”

Learning Objective

Participants analyze an exemplary lesson plan and recognize the components required to create engaging interdisciplinary lessons for their own classrooms.

Activity Procedure

1. Introduce the activity by explaining that participants will analyze an exemplary interdisciplinary lesson plan.
2. Break into small groups of 3–4. Provide each group with a copy of the [“What’s Lurking in your Fast Food?”](#) lesson and a copy of the interdisciplinary lesson plan template.
3. Have each group select one person to be the recorder and use the template to capture the ideas from the team.
4. Ask group members to consider and discuss the lesson plan and analyze it to see how it addresses each step on the interdisciplinary lesson plan template.
5. After 15–20 minutes have each group share their thoughts.
6. Ask participants to reflect on what they saw and heard and to consider how the interdisciplinary lesson plan template can be used in their own classroom.

SUPPORTING RESOURCES FEATURED IN THE INTERDISCIPLINARY LEARNING: MAKING CONNECTIONS MODULE

HOW YOU CAN CONTINUE THE CONVERSATION:

Please consider joining the TGR Foundation Educator Community Forum. This is a great network where educators receive support and learn together to continuously improve and hone their teaching practice.

TGR FOUNDATION EDUCATOR COMMUNITY

Are you an educator looking for inspiration and support? Join our network of passionate professionals committed to building a brighter future for students around the globe.

TGRfoundation.org/educator-community



ADDITIONAL RESOURCES

TGR EDU: EXPLORE CURRICULUM

Use these interactive resources, designed for grades 6–12, to develop problem-solving and decision-making skills with real-world applications in college access and STEM learning.

TGREDUexplore.org/curriculum

WHAT IS LURKING IN YOUR FAST FOOD? LESSON

TGREDUexplore.org/curriculum/whats-lurking-in-your-fast-food

“DIGGING DEEPER”

Jenson Eric, Nickelson LeAnn. (2008) Digging Deeper. Corwin Press.

REFERENCES

2020. *The STEM Imperative*. Smithsonian Science Education Center. Retrieved from: <https://ssec.si.edu/stem-imperative>.

INTERDISCIPLINARY LEARNING LESSON PLAN TEMPLATE

Interdisciplinary learning is a planned approach that integrates multiple disciplines and provides real-world learning opportunities to deepen student learning. Use this guide to plan your own interdisciplinary learning lesson.

6 STEPS FOR DEVELOPING AN INTERDISCIPLINARY LESSON:

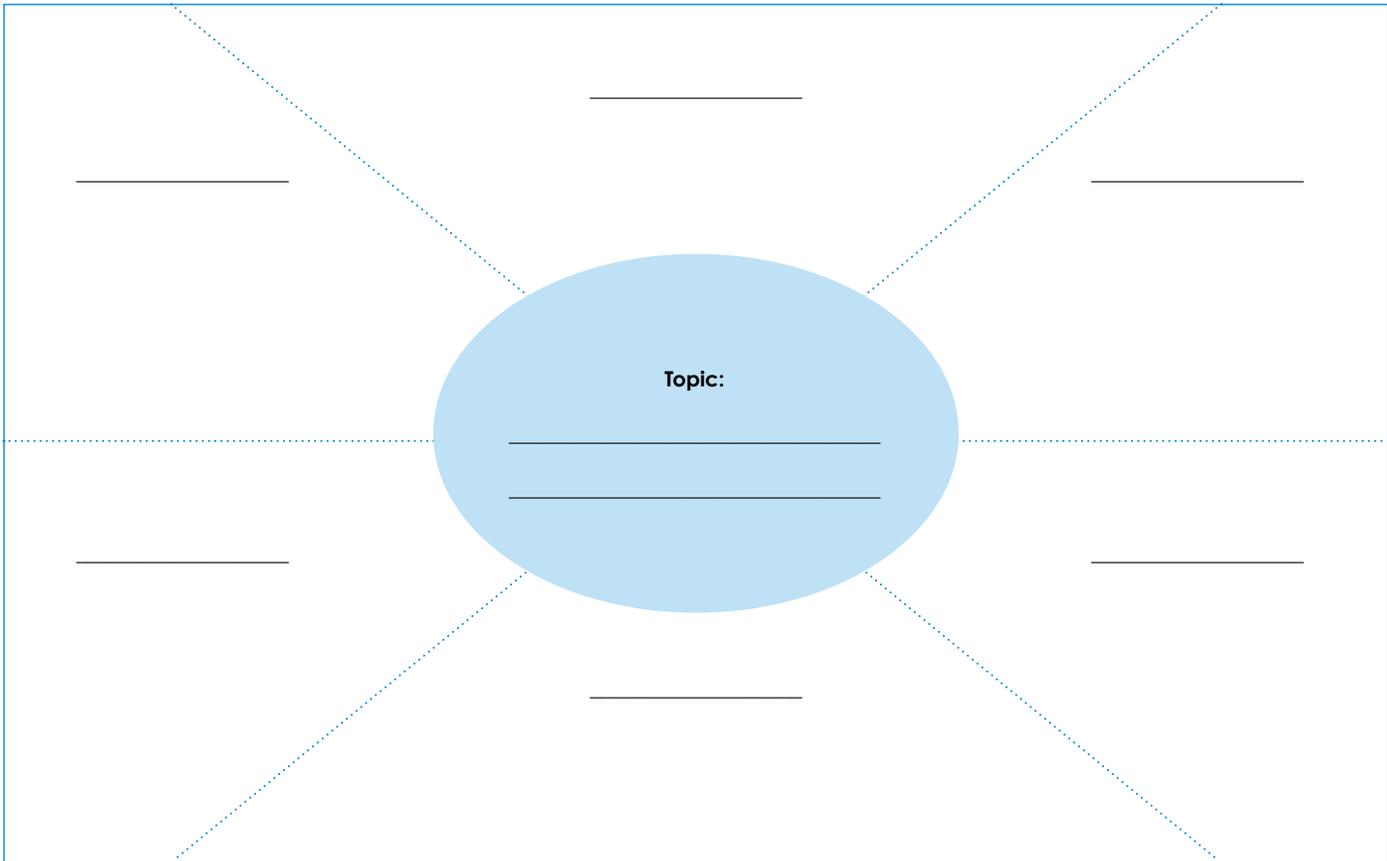
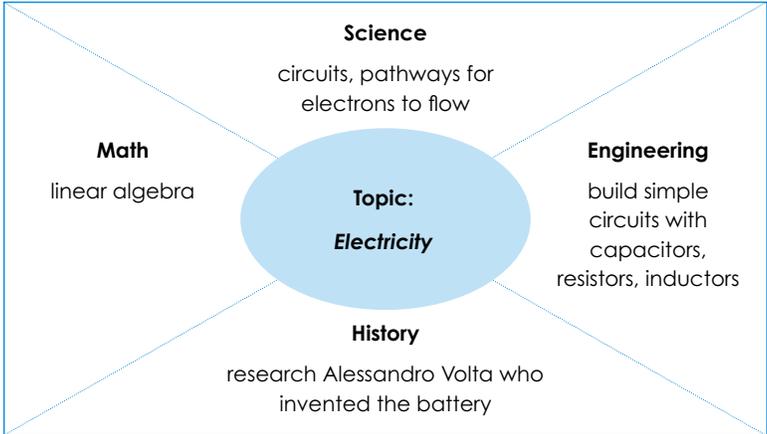
- | | | |
|--------------------------|---------------------------------|-------------------------------|
| 1. Select a topic | 2. Define learning objectives | 3. Consider other disciplines |
| 4. Prioritize activities | 5. Determine evaluation methods | 6. Plan Lesson Sequence |

TOPIC:

LEARNING OBJECTIVES:

DISCIPLINES THAT CAN BE INCLUDED IN THE LESSON:

Use this example to guide you in planning for the disciplines you can include in your lesson. The example includes four disciplines. The template allows for up to six disciplines to be included, based on your topic.



PRIORITIZE ACTIVITIES:

Consider the activities listed in the previous section and prioritize them based on the connection to the established learning objectives.

EVALUATION:

Now consider how you will evaluate students, keeping in mind to measure their application and development of the 4Cs: Critical Thinking, Communication, Collaboration and Creativity.

LESSON SEQUENCE:

Put it all together. Organize your activities based on your students' schema.