# Wisdom in Action: Crafting Authentic Real-World Learning

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**Time Frame** 90 minutes

## Essential Question(s)

How can students translate content to real-world application?

## Summary

During this professional learning session, participants will explore the principles of authenticity and real-world connections. They will apply academic knowledge to solve and illustrate authentic problems that students may encounter both inside and outside of the classroom. Additionally, they will investigate college and career readiness skills can be embedded into lessons through strategies aimed at improving students' academic and career preparedness. By integrating these connections into their teaching practices, educators will enhance student engagement, deepen understanding, and better prepare students for future opportunities.

## Learning Goals

- Identify skills that students gain from connecting real-world experiences to their learning.
- Relate real-word scenarios to content and college and career readiness lessons.

## Standards

*InTASC Model Core Teaching Standards (K-12th)*

**2j:** The teacher understands that learners bring assets for learning based on their individual experiences, abilities, talents, prior learning, and peer and social group interactions, as well as language, culture, family, and community values.
**2k:** The teacher knows how to access information about the values of diverse cultures and communities and how to incorporate learners' experiences, cultures, and community resources into instruction.
**2m:** The teacher respects learners as individuals with differing personal and family backgrounds and various skills, abilities, perspectives, talents, and interests
**4m:** The teacher knows how to integrate culturally relevant content to build on learners' background knowledge.
**5g:** The teacher facilitates learners' ability to develop diverse social and cultural perspectives that expand their understanding of local and global issues and create novel approaches to solving problems.

## Attachments

- Chain Notes—Wisdom in Action.docx
- Chain Notes—Wisdom in Action.pdf
- Frayer Model—Wisdom in Action.docx
- Frayer Model—Wisdom in Action.pdf
- Instructional Strategy Note Catcher—Wisdom In Action.docx
- Instructional Strategy Note Catcher—Wisdom In Action.pdf
- Math—Car Activity—Wisdom in Action.docx
- Math—Car Activity—Wisdom in Action.pdf
- Presentation Slides—Wisdom in Action.pptx
- Social Studies—Honeycomb Harvest—Wisdom in Action.docx
- Social Studies—Honeycomb Harvest—Wisdom in Action.pdf

## Materials

- Presentation Slides (attached)
- Chain Notes handout (attached, one per participant)
- Car Activity Facilitator Resource (attached, use for math content area, one per facilitator)
- Honeycomb Harvest handout (attached, use for social studies content area, one per pair of participants)
- Components of Authenticity: Real-World Connections practitioner's brief (linked, one per participant, print two-sided)
- Frayer Model handout (attached, one per participant)
- Authentic Lesson Reflection Tool handout (linked, one per participant, print front only)
- Model lesson handouts (linked, see Extend section)
- Instructional Strategy Note Catcher handout (attached, one per participant)

15 minutes

# Engage

### Facilitator's Note: Session Preparation

This professional learning experience includes customization to meet the needs of your audience. In the **Explore** phase, there are different activities depending on the content-area expertise of your participants. The **Extend** phase also includes different lesson materials depending on your participants' content area.

### Facilitator's Note: Slide Preparation

For the **Engage** portion of this session, use **slides 3-7**. **Slide 3** is currently unhidden and can be used for general discussion in any subject area, while slides 4-6 are hidden and are specific to English language arts, math, science, and social studies respectively. Hide or unhide those slides as needed.

Use the attached **Presentation Slides** to facilitate this professional learning session. Display **slide 2** and begin by introducing yourself and the topic of this session.

Display one of **slides 3-7** depending on your content area. Organize the participants into groups of four and pass out the **Chain Notes handout.**

Invite participants to read the prompt displayed on the slide. The prompt will vary based on content area as follows:

- **All subjects (slide 3):** Where do students see the importance of skills in your content area in the real world?
- **ELA (slide 4):** Where do students see the importance of reading and writing skills in the real world?
- **Math (slide 5):** Where do students use math skills in the real world?
- **Science (slide 6):** Where do students see science skills or science and engineering practices in the real world?
- **Social Studies (slide 7):** Where do students see or make use of social studies content in the real world?

Start the two-minute timer on the slide and allow participants time to answer the prompt on their own papers. Once time is up, display **slide 8** and instruct participants to pass their papers clockwise. Ask participants to read the notes written by their peer and add an additional fact, idea, or connection to their ideas using words or a drawing. Start the two-minute timer on the slide and allow participants to work until time is up. Repeat the process until the papers return to their original writers, changing between **slides 9-10** as needed to indicate the round.

Change to **slide 11** once the original writers have received their notes. Allow time for participants to review the comments written by their peers, then ask each group to discuss their notes, summarize their thoughts, and select a spokesperson for their group. Invite each spokesperson to share out a summary of their group's discussion.

Elaborate on the Chain Notes instructional strategy and explain to participants that they could use this strategy in their classrooms to evaluate students' prior knowledge and personal experiences in relation to a topic. Students can also learn from their peers as the notes are passed around.

Change to **slides 12–13** and briefly highlight the essential question and learning goals for the session.

20 minutes

# Explore - English Language Arts

**Facilitator's Note: Subject Area**

Before beginning this portion of the session, determine the content area group you are facilitating to determine the activity from those provided below. Be sure to hide the slides of the content areas you are not using.

Arrange participants into groups of three and transition to **slide 14**. Number off participants in each group one to three. Each number will correspond to one of the articles on AI in the classroom linked below:

1. Embracing Artificial Intelligence in the Classroom
2. ChatGPT & Writing in the Secondary ELA Classroom
3. ChatGPT: Is AI Beneficial or Dangerous in the ELA Classroom?

Introduce participants to the Wakelet tech tool and instruct them to scan the QR code present on the slide or enter the listed URL on their devices. The code and URL will take participants to the AI in the Classroom: Friend or Foe? Wakelet which includes links to each of the above listed articles. Invite participants to click on the link that corresponds with their assigned article.

Move to **slide 15**. Use the Jigsaw strategy to explain to participants that they will read their assigned article then share out key takeaways with other members of their group. Allow participants an adequate amount of time to read their articles. Once everyone has finished reading, invite each group member to take turns sharing out what they learned from their articles. Ask each group member to discuss the following topics related to their article:

- What are the main points the article makes?
- What is a feature or strategy the article discusses that you are interested in?
- What are your thoughts/opinions on the main points of the article?

Once every group has had a chance to discuss the readings, invite groups to share out some of the most important points they discussed.

20 minutes

# Explore - Math

**Facilitator's Note: Subject Area**

Before beginning the activity, hide the slides of the content areas you are not using.

**Facilitator's Note: Car Activity Facilitator Resource**

Ensure that you have one copy of the **Car Activity Facilitator Resource,** either printed or digital, to reference throughout this portion of the session. As participants ask questions, offer them answers based on the information on the handout.

Sort participants into groups of three and transition to **slide 16**. Inform participants that they are going to work together to solve a real-world problem. Read aloud the question present on the slide but do not give participants any more information.

Inform participants that they will need to ask questions in order to get all information necessary to answer the question. Allow the whole group to ask a total of five questions before breaking out into smaller groups. Once the initial five questions have been answered, allow between five to seven minutes for participants to work and ask questions in their smaller group. While they work, circulate the room and answer questions from individual groups.

**Facilitator's Note: Participant Questions**

The point of the activity is for the participants to ask questions about the details of the problem until they think they have enough to find a solution. Therefore, groups will likely come up with different solutions that are correct based on the information they gleaned from the answers to their questions. Participants may need to be prompted to ask additional questions, but answer each one individually, do not offer them the Car Activity Facilitator Resource or give them answers they did not ask for.

After every group has found a solution, ask one person from each group to share their answer and the information they took into account. Discuss aspects they may have forgotten (taxes, insurance, money already saved, etc.). Discuss the different approaches taken, the details that go into a seemingly simple question, and any other insights participants may have.

20 minutes

# Explore - Science

**Facilitator's Note: Subject Area**

Before beginning the activity, hide the slides of the content areas you are not using.

Move to **slide 17** and introduce participants to the Wakelet tech tool by instructing them to scan the QR code or enter the short URL on their device to access the Science Phenomena Deep Dive Wakelet. The Wakelet includes links to the following three websites where participants can explore different phenomena:

- The Wonder of Science
  - bit.ly/WonderPhenom
- NGSS Phenomena
  - ngssphenomena.com/
- Actively Learn
  - activelylearn.com/

Direct participants to find a phenomenon from one of these sites or another site of their choosing that contains a phenomenon associated with a standard that they teach. Move to **slide 18** and ask them to consider the following prompts as they are exploring the phenomenon:

- What standard did you choose?
- What is the significance of using a phenomenon to start a unit?
- Based on this information, how well does your chosen real-world phenomenon support student learning?

Allow participants five to ten minutes to review the sites and respond to the prompts. When a majority of participants have finished, ask for a few volunteers to share out their phenomenon and how it will help support students' learning.

20 minutes

# Explore - Social Studies

**Facilitator's Note: Handout Preparation**

Prior to the session, print out the **Honeycomb Harvest** handout. Print one copy for every two to four people attending the session, as participants will be using the cards in small groups. Cut apart each set along the dashed lines then place each set of cards into a small container like a zip-top bag.

**Facilitator's Note: Subject Area**

Before beginning the activity, hide the slides of the content areas you are not using.

Display **slide 19** and instruct participants to get into small groups of two to four people. Next, distribute one set of hexagons to each small group. Give participants one to two minutes to read through all of the cards within their groups.

Instruct participants to organize the hexagons using the Honeycomb Harvest strategy so that related topics are able to touch or connect. Tell participants to be prepared to justify and explain their reasoning and process for their card organization.

Allow participants to work on the activity for five to seven minutes. When most groups are finished, ask for a few volunteers to share how they organized their hexagons and explain their reasoning. Invite them to also share how their card organization differs from another group's organization.

20 minutes

# Explain

Transition to **slide 20** and place participants into new or existing groups of four. Give each participant a copy of the **Components of Authenticity: Real-World Connections** practitioner's brief and a copy of the attached **Frayer Model** handout.

Invite participants to read the Components of Authenticity: Real-World Connections practitioner's brief and allow them time to do so.

Once participants have finished reading, transition to **slide 21**. Share the Frayer Model instructional strategy with participants, then invite them to complete their Frayer Model handouts to demonstrate their understanding of inquiry-based learning. Explain that they will complete each section as follows:

- **Define:** Write a definition for real-world connections in your own words.
- **List the Characteristics:** List three to five characteristics that are essential to this component.
- **Draw a Visual Representation:** Sketch a scene or symbol that represents real-world connections.
- **Reflect:** Give an example of what this component looks like in the classroom.

Provide approximately fifteen minutes for participants to fill in their Frayer Models. Once participants have completed their models, invite each group to share out the information from one quadrant of their models.

25 minutes

# Extend

**Facilitator's Note: ICAP Lessons**

Before beginning the activity, determine which ICAP lesson corresponds with your content area using the list below:

- English Language Arts lesson: A Way with Words
- Math lesson: Stats on the Sideline
- Science lesson: Feelin' the Phenomena
- Social Studies lesson: Impacts of Industrialization on Workers

Prior to the session, download and print copies of each model lesson. However, you may choose a different model lesson to fit your participant needs if you are working with a group of teachers that specialize in different content areas, teach different grade levels, have previously used these lessons, or are working under different time constraints.

Pass out a copy of the model lesson and the linked Authentic Lesson Reflection Tool. Display **slide 22** and invite participants to read the model lesson and use the Authentic Lesson Reflection Tool to determine how they see real-world connection principles implemented in the lesson. Ask participants to take approximately ten minutes to skim through the summary, 5E snapshot, and narrative.

After participants have reviewed the lesson, display the slide with the **ICAP video** that corresponds to the subject area of your participants. Play the video and invite participants to consider real-world connection principles as they watch. The slide numbers and corresponding videos for each content area are listed below:

**Slide 23**: English Language Arts lesson: *A Way with Words*

**Embedded video**
https://youtube.com/watch?v=QAn9e5s8AMM

After playing the video, display **slide 27** and invite participants to discuss the following prompts in small groups:

- Why is it valuable for students to understand how their education can be relevant to their future professions?
- In what ways can you help students relate what they learn in class to real-life situations?
- How are real-world connections relevant to the development of knowledge?

Allow participants three to five minutes to discuss the prompts, then ask a member of each group to share out what they discussed.

10 minutes

# Evaluate

**Facilitator's Note: Additional Strategies**

Add any additional strategies used during this session to **slide 28.** For example, if facilitating the session for the social studies content area, you may add the Honeycomb Harvest instructional strategy here. Invite participants to add the additional strategies to the blank spaces on their handouts.

Transition to **slide 28** and pass out the **Instructional Strategy Note Catcher** handout. Ask participants to reflect on how they saw the strategies used during the session. Invite them to consider the impact that these strategies had on their understanding of the session and add those thoughts to the first column.

Next, have participants outline how they plan to integrate this strategy into their teaching practices into the second column. Once participants have had time to complete their handouts, ask individual participants to share out their responses.

# Research Rationale

Real-world connections reinforce the relevance of learning experiences by acknowledging and incorporating the diverse personal, community, and cultural backgrounds of students into the lesson. Projects and problems designed with real-world connections in mind reflect the professional world in ways that are developmentally appropriate for learners (Burgin, 2020; Kruse et al., 2021; Roach et al., 2018). Authentic experiences equip students with professional tools and integrate realism into their learning. This approach enhances students' intrinsic motivation (Burgin, 2020; Nachtigall et al., 2022). When learning is connected to real-world contexts, students can see its future applications and are motivated to use their knowledge meaningfully in the present (Darling-Hammond et al., 2021).

## Resources


- Actively Learn. (n.d.). *Actively learn*. https://www.activelylearn.com/
- Burgin, S. R. (2020). A three-dimensional conceptualization of authentic inquiry-based practices: A reflective tool for science educators. *International Journal of Science Education, 42*(9), 1465–1484.
- Carman, H. (2023, October 3). *ChatGPT: Is AI beneficial or dangerous in the ELA classroom?*. New York State English Council. https://www.nysecteach.org/chatgpt-is-ai-beneficial-or-dangerous-in-the-ela-classroom-hailee-carman-october-2023/
- Darling-Hammond, L., Cantor, P., Hernandez, L. E., Theokas, C., Schachner, A., Tijerina, E., & Plasencia, S. (2021). Design principles for schools: Putting the science of learning and development into action. *Learning Policy Institute*.
- Hammond, K. (n.d.). *ChatGPT and writing in the secondary ELA classroom*. Center for Professional Education of Teachers. https://cpet.tc.columbia.edu/news-press/chatgpt-writing-in-the-secondary-ela-classroom
- Kruse, J., Kent-Schneider, I., Voss, S., Zacharski, K., & Rockefeller, M. (2021). Investigating student nature of science views as reflections of authentic science. *Science & Education, 30*(5), 1211–1231. https://doi.org/10.1007/s11191-021-00231-0
- K20 Center. (n.d.). Chain notes. Strategies. https://learn.k20center.ou.edu/strategy/52
- K20 Center. (n.d.). Frayer model. Strategies. https://learn.k20center.ou.edu/strategy/126
- K20 Center. (n.d.). Honeycomb harvest. Strategies. https://learn.k20center.ou.edu/strategy/61
- K20 Center. (n.d.). Jigsaw. Strategies. https://learn.k20center.ou.edu/strategy/179
- K20 Center. (n.d.). Wakelet. Tech tools. https://learn.k20center.ou.edu/tech-tool/2180
- K20 Center. (2020, February 24). ICAP - A way with words [Video]. YouTube. https://www.youtube.com/watch?v=QAn9e5s8AMM
- K20 Center. (2020, April 22). ICAP - Feelin' the phenomena - Lesson content [Video]. YouTube. https://www.youtube.com/watch?v=2arUwaluIV8
- K20 Center. (2020, March 3). ICAP - Impacts of industrialization on workers [Video]. YouTube. https://www.youtube.com/watch?v=XPpiKKsClTY
- K20 Center (2021, September 21). K20 Center 2 minute timer [Video]. YouTube. https://www.youtube.com/watch?v=HcEEAnwOt2c
- K20 Center. (2023, April 12). ICAP - Sports statistician - Real-time stats in sports [Video]. YouTube. https://www.youtube.com/watch?v=rGI8PX4UbNI
- K20 Center. (2023). Components of authenticity: Construction of knowledge—K20 IDEALS. K20 Center. https://k20center.ou.edu/wp-content/uploads/2023/07/Construction-of-Knowledge_COA.pdf
- Nachtigall, V., Shaffer, D. W., & Rummel, N. (2022). Stirring a secret sauce: A literature review on the conditions and effects of authentic learning. *Educational Psychology Review, 34*(3), 1,479–1,516. https://doi.org/10.1007/s10648-022-09676-3
- Phenomena for NGSS. (n.d.). https://www.ngssphenomena.com/
- Phenomenon. The Wonder of Science. (n.d.). https://paul-andersen-xw6e.squarespace.com/phenomenal
- Roach, K., Tiley, E., & Mitchell, J. (2018). How authentic does authentic learning have to be? *Higher Education Pedagogies, 3*(1), 495–509. https://doi.org/10.1080/23752696.2018.1462099
- Ross, E. M. (2023, July 20). Embracing artificial intelligence in the classroom. Harvard Graduate School of Education. https://www.gse.harvard.edu/ideas/usable-knowledge/23/07/embracing-artificial-intelligence-classroom