
FIELD STUDY 1A Data Sheet: TOOLBOX
Aurora University OEDT-5101 • Technical Mathematics: Math-in-CTE

Name _____

School _____

Grade/Course/Program _____

Date(s) Conducted _____

Audience _____

Foci: Check all that apply. CCSS mathematics
 Content-specific mathematics problems
 Assessment items (Achieve, ACT, ISBE, NAEP, PARCC, SAT,
 TIMSS, WorkKeys, etc.)

A. Research Methods: Check all that apply.

- Journals (online and offline)
- Internet (include each URL)
- Phone calls, interviews, onsite visits
- Books, texts
- OTHER: _____

B. Research Results: Compile content- or topic-specific Technical Mathematics: MCTE *Toolbox* with a bibliography targeted to a selected student audience (e.g., by grade/subject/topic/group) and/or for teacher use. FOR EXAMPLE: Electronics instructor toolbox, Electronics student toolbox, CAD instructor toolbox, CAD student toolbox, Early Childhood instructor toolbox, Early Childhood student toolbox (including lesson plans for preschoolers, etc. (A bibliography template is provided.)

1. **Include a minimum of 15 targeted, mathematics content-specific resources** for use in the classroom and laboratory that support content-specific activities, assessment item development, and/or your Culminating Project, such as:
 - a. Websites, apps, etc.
 - b. Social media tools
 - c. Audio, video, photographic tools
 - d. Print materials
2. **Attach** this Field Study (FS) Data Sheet to the Toolbox.
3. **Attach** the “Toolbox and Bibliography” forms to this FS Data Sheet and upload to your DropBox Assignment Folder.

FIELD STUDY 1B Data Sheet: SCOPE & SEQUENCE MAP
Aurora University OEDT-5101 • Technical Mathematics: Math-in-CTE

Name _____

School _____

Grade/Subject/Program _____

Dates Conducted _____

PROCEDURE:

- A. Review the Scope and Sequence Map.**
- B. Create a draft Scope and Sequence Map** with a mathematics instructor. The map addresses the embedded mathematics concepts for a selected course.
1. Select a CTE course.
 2. Interrogate the CTE curriculum to identify the embedded mathematics concepts.
 3. Develop the map for up to 10 Math-in-CTE Lessons.
 4. Identify a minimum of 6 math concepts.
 5. Use the supplied forms and protocols.
- C. Construct the Scope and Sequence Map.**
- D. Write a 1-page Executive Summary** of the mapping process. At a minimum, include the following information in your Executive Summary:
1. Describe the Scope and Sequence process in which you participated (strengths of the process; improvements you would recommend, etc.).
 2. Explain the rationale for the selection of the math concepts.
 3. Summarize highlights and insights gained during the mapping process.
- E. Attach** the FS Data Sheet to the Scope and Sequence Map and the Executive Summary and upload to your DropBox Assignment Folder.

FIELD STUDY 2A Data Sheet: LESSON PLAN with Trial
Aurora University OEDT-5101 • Technical Mathematics: Math-in-CTE

Name _____

School _____

Grade/Subject/Program _____

Lesson Plan Title _____

Math Concepts _____

Number of Students Participating _____

Date(s) Delivered _____

PROCEDURE:

- A. Research and write** one Math-in-CTE lesson plan using the NRCCTE format. Select the lesson plan from the Scope and Sequence Map. Attach any original lesson plan to this Data Sheet.
- B. Debrief** the lesson plan with course colleagues. Add their feedback to this FS Data Sheet. **Deliver the lesson to class colleagues for feedback.** Make modifications prior to delivering the lesson to the field Study audience. Attach a copy of the edited Lesson Plan to this FS Data Sheet. (See F-1 and 2 below.)
- C. Deliver the lesson** to the FS audience using NRCCTE protocols. (See F-3 below.)
- D. Debrief the lesson** with your FS audience. **Write 3 to 5 questions to guide the debrief process.** Attach the questions and response to this FS Data Sheet. (See F-3 below.)
- E. Complete the Pre-Teaching and Post-Teaching Forms.** Attach copies to this FS Data Sheet. Email copies of the forms as directed. [OPTIONAL]
- F. Attach a 1-page summary** that contains instructor, colleague, and student observations of the effectiveness of the lesson based on the following:
1. Discuss debrief feedback from colleagues. *(See Procedure B.)*
 2. Discuss the changes made to the original lesson plan. *(See Procedure B.)*
 3. Discuss the perceived effectiveness of the lesson from the instructor perspective. Show the students' feedback in a question-and-answer format (Use Procedure D debrief questions). Highlight any tools or resources that were most helpful in delivering this lesson plan. *(See Procedures C.)*
 4. **OPTIONAL:** Discuss the feedback from the Pre-Teaching and Post-Teaching forms. *(See Procedure E.)*
- G. Attach** the FS Data Sheet to the lesson plan and the Executive Summary and upload to your DropBox Assignment Folder.

FIELD STUDY 2B Data Sheet: LESSON PLAN with Trial
Aurora University OEDT-5101 • Technical Mathematics: Math-in-CTE

Name _____

School _____

Grade/Subject/Program _____

Lesson Plan Title _____

Math Concepts _____

Number of Students Participating _____

Date(s) Delivered _____

PROCEDURE:

- A. Research and write** one Math-in-CTE lesson plan using the NRCCTE format. Select the lesson plan from the Scope and Sequence Map. Attach any original lesson plan to this Data Sheet.
- B. Debrief** the lesson plan with course colleagues. Add their feedback to this FS Data Sheet. Make modifications prior to delivering the lesson to the field Study audience. Attach a copy of the edited Lesson Plan to this FS Data Sheet. (See F-1 and 2 below.)
- C. Deliver the lesson** to the FS audience using NRCCTE protocols. (See F-3 below.)
- D. Debrief the lesson** with your FS audience. **Write 3 to 5 questions to guide the debrief process.** Attach the questions and response to this FS Data Sheet. (See F-3 below.)
- E. Complete the Pre-Teaching and Post-Teaching Forms.** Attach copies to this FS Data Sheet. Email copies of the forms as directed. [OPTIONAL]
- F. Attach a 1-page summary** that contains instructor, colleague, and student observations of the effectiveness of the lesson based on the following:
1. Discuss debrief feedback from colleagues. *(See Procedure B.)*
 2. Discuss the changes made to the original lesson plan. *(See Procedure B.)*
 3. Discuss the perceived effectiveness of the lesson from the instructor perspective. Show the students' feedback in a question-and-answer format (Use Procedure D debrief questions). Highlight any tools or resources that were most helpful in delivering this lesson plan. *(See Procedures C.)*
 4. **OPTIONAL:** Discuss the feedback from the Pre-Teaching and Post-Teaching forms. *(See Procedure E.)*
- G. Attach** the FS Data Sheet to the lesson plan and the Executive Summary and upload to your DropBox Assignment Folder.

FIELD STUDY 3A Data Sheet: LESSON PLAN with Trial
Aurora University OEDT-5101 • Technical Mathematics: Math-in-CTE

Name _____

School _____

Grade/Subject/Program _____

Lesson Plan Title _____

Math Concepts _____

Number of Students Participating _____

Date(s) Delivered _____

PROCEDURE:

- A. Research and write** one Math-in-CTE lesson plan using the NRCCTE format. Select the lesson plan from the Scope and Sequence Map. Attach any original lesson plan to this Data Sheet.
- B. Debrief** the lesson plan with course colleagues. Add their feedback to this FS Data Sheet. Make modifications prior to delivering the lesson to the field Study audience. Attach a copy of the edited Lesson Plan to this FS Data Sheet. *(See F-1 and 2 below.)*
- C. Deliver the lesson** to the FS audience using NRCCTE protocols. *(See F-3 below.)*
- D. Debrief the lesson** with your FS audience. **Write 3 to 5 questions to guide the debrief process.** Attach the questions and response to this FS Data Sheet. *(See F-3 below.)*
- E. Complete the Pre-Teaching and Post-Teaching Forms.** Attach copies to this FS Data Sheet. Email copies of the forms as directed. [OPTIONAL]
- F. Attach a 1-page summary** that contains instructor, colleague, and student observations of the effectiveness of the lesson based on the following:
1. Discuss debrief feedback from colleagues. *(See Procedure B.)*
 2. Discuss the changes made to the original lesson plan. *(See Procedure B.)*
 3. Discuss the perceived effectiveness of the lesson from the instructor perspective. Show the students' feedback in a question-and-answer format (Use Procedure D debrief questions). Highlight any tools or resources that were most helpful in delivering this lesson plan. *(See Procedures C.)*
 4. **OPTIONAL:** Discuss the feedback from the Pre-Teaching and Post-Teaching forms. *(See Procedure E.)*
- G. Attach** the FS Data Sheet to the lesson plan and the Executive Summary and upload to your DropBox Assignment Folder.