



		Content	Activity
Section 1	Introduction	Review of Learning Objectives and handouts	Handout: Agenda, DLM Science Framework Reference Sheet, DLM Adapted Science and Engineering Practice Document, EE Examples
Section 2	Science and Engineering Practices in DLM Science EEs	Review how science and engineering practices relate to DLM science essential elements. Introduce DLM Adapted Science and Engineering Practices Document	Group Discussion
	Example 1: Elementary School	Overview process of identifying the science engineering practice and specified information for student engagement regarding an identified essential element in the <u>elementary</u> grade band.	
	Example 2: Middle School	Overview process of identifying the science engineering practice and specified information for student engagement regarding an identified essential element in the <u>middle school</u> grade band.	
Section 3	Wrap Up	Closing information	Handout: Post Learner Assessment

This guide describes the workshop preparation, flow, and video segment for this module. Facilitators should use this narrated movie to help facilitate learning with their participants.

The entire workshop should take approximately 60 minutes when presented to a group.

Setting up

- Equipment
 - Presenter's computer with video of "Module 2: Science and Engineering Practices Part 1." This video should be accessed and reviewed before the training at the DLM Professional Development website.
 - LCD projector with external speakers or sound system.
- Prior to the training, create the appropriate number of packets with these materials:
 - Agenda
 - Handouts and Worksheets
 - DLM Science Framework – Reference Sheet
 - DLM Adapted Science and Engineering Practices Document
 - EE Examples
 - Post Learner Assessment
- Learning Objectives
 1. Participants will be able to identify the science and engineering practice for an Essential Element (EE).
 2. Participants will be able to identify how to engage students in the science and engineering practice that is the specified in an EE.

Section 1 – Introduction

- Greet the participants.
- State the title of the module and briefly review the learning objectives.

"Welcome everyone. The topic of today's presentation is the DLM Science and Engineering Practices. During the next hour, we will be learning a number of things about the DLM Science and Engineering Practices and how they relate to the Essential Elements to aid in engaging your students with science."

- See who is in your audience.

"As we get started, it will be helpful to know a bit about you. Raise your hand if you are a classroom teacher. How many of you are speech-language pathologists? Are there any occupational therapists here today? Physical therapists? Teaching assistants? How about school psychologists? School administrators? Did I miss anyone?" Ask anyone who raises a hand to say what job he/she does.

- Review the list of handouts.

"I'm glad all of you could be here today. We will begin the recorded presentation in a few minutes, but before that, please take a moment to review the handout packet you received. You should have a copy of the today's agenda, the DLM Science Framework Reference Sheet, and DLM Adapted Science and Engineering Document."

- Make sure everyone has all of the handouts before you start the module.

“Does everyone have a copy of each of these?” Supply extra handouts to anyone who needs them.

“Does anyone have any questions?” Pause to see if there are questions and respond appropriately.

“If there are no (more) questions, let’s go ahead and get started.”

Section 2 – Module

- Play the video.

After the module is finished, promote group discussion. Here are some suggested discussion questions:

- As a review, what are the science and engineering practices?
 - Eight sets of skills often used by scientists and engineers
- As a group, let’s list all eight practices. Everyone please identify at least 2 of these practices for yourself before we begin to share... (*Facilitator, pauses for a few moments before having participants share with partners or as an entire class.*)
 - Asking questions and identifying problems, developing and using models, planning and carrying out investigations, analyzing and interpreting data, using mathematics and computational thinking, constructing explanations and designing solutions, engaging in argument, and designing solutions, and obtaining, evaluating, and communicating information
- Give an example of how students can use a science and engineering practice.
 - Answers will vary
- How many science and engineering practices does each Essential Elements (EE) address?
 - Each Essential Element addresses one science and engineering practice
- Which science and engineering practice will testlets focus on?
 - Testlets will focus on the one science and engineering practice identified by the DLM Essential Elements for Science which can be found online at the DLM Science website.
- What document is available to help identify how the identified science and engineering practice can be used at your grade band level?
 - DLM Adapted Science and Engineering Practices Document found on the DLM science website.
- Looking at the DLM Adapted Science and Engineering Practice Document, what are the three areas given to explain how that practice can be employed at each grade level band?
 - The three areas identified for each practice are what skills are included, how the skill can be used, and what students could be asked to do to demonstrate the application of the skill.

Summarize the comments offered by participants and move forward.

Section 3 – Wrap Up

- Pass out the post learner assessment.
- Once the discussion comes to a close, present everyone with a post learner assessment and say,

“The last thing we will do is complete the Post Learner Assessment.”

- Collect the assessment. When everyone has finished say,

“That concludes the DLM Science and Engineering Practices Part 1 module. Thank you for your attention and participation.”