Module Study Protocol

Preview the Learning → Investigate the Development of Learning → Prepare for Instruction

PREVIEW THE LEARNING

Step 1: Explore the Module Content and Ideas

Action Items	Guiding Questions	Resources
A. Read the Introduction in the Module Overview. • Identify the anchor and supporting phenomena for the module.	• What scientific understanding do students build by studying the anchor and supporting phenomena?	• Module Overview–Introduction
B. Study the questioning structure. • Identify the Essential Question, Focus Questions, and Phenomenon Questions that students explore throughout the module. • Use the Enduring Understanding, Concept Statements, and Knowledge Statements to answer the guiding questions.	• How do the Focus Questions work together to build a coherent understanding of the Essential Question? • How does exploring the Phenomenon Questions help students answer the Focus Questions?	• Module Overview–Module Map • Module questioning structure

Step 2: Identify the Module Focus Standards

Action Items	Guiding Questions	Resources
A. Examine the focus standards.	• How does exploring the anchor phenomenon help students develop the targeted science ideas? (Content Standards) • What scientific and engineering practices do students use to develop an understanding of the targeted science ideas? (Scientific and Engineering Practices, or SEPs) • What recurring science concepts do students apply to uncover the targeted science ideas? (Recurring Themes and Concepts, or RTCs)	• Module Overview–Focus Standards
B. Read the Building Content Knowledge section in the Module Overview.	• How are students building content knowledge as they navigate through each concept in the module?	• Module Overview–Building Content Knowledge

Step 3: Examine the Module Assessments

Action Items	Guiding Questions	Resources
A. Examine the End-of-Module Assessment (EOMA) and the EOMA rubric. • Review the EOMA by taking the assessment or looking at the sample student responses. • Explore the EOMA rubric.	• How do students demonstrate their understanding? What evidence do you see of students applying science knowledge (Content Standards), scientific and engineering practices (SEPs), recurring science concepts (RTCs)?	• EOMA and EOMA rubric • Module Overview–Focus Standards
B. Examine the Conceptual Checkpoints.	• What connections exist between the Conceptual Checkpoints and the EOMA?	• Conceptual Checkpoints • EOMA and EOMA rubric

INVESTIGATE THE DEVELOPMENT OF LEARNING

Step 4: Determine the Module Investigations

Action Items	Guiding Questions	Resources
A. Examine the anchor visual progression. • Identify the anchor visual updates for each concept in the module.	• What are the critical components of the anchor visual updates? • How do students progress toward answering the Essential Question?	• Appendix A: Module Storyline
B. Analyze the learning progression in the module. • Consider these questions one concept at a time.	• What question are students exploring? • What investigations and activities are students engaging in? • What are students figuring out? • How does what students figure out connect to other learning? How does it connect to previous learning? How does it move or drive the learning forward?	• Appendix A: Module Storyline

PREPARE FOR INSTRUCTION

Step 5: Deepen the Learning and Preparation

Action Items	Guiding Questions	Resources
A. Leverage student strengths and anticipate barriers.	• How can your students leverage their strengths? • What barriers may exist for your students within the module's content? How will you support access to the content for students who have gaps in background knowledge? • How will you support students in building a coherent understanding of the science content? • How can you use local or culturally relevant phenomena to support students?	
B. Prepare the necessary materials and plan for materials management.	• What materials are needed? • What advance materials preparation needs to occur? • What is your materials management plan/routine?	• Module Overview–Advance Materials Preparation • Module Resources • Great Minds Digital Platform: Materials List • Great Minds Digital Platform: Preparation Guide
C. Consider pacing needs and how to address pacing obstacles.	• How many days are allotted for the module and each lesson set? • What pacing concerns need to be addressed when planning a lesson set? • Optional: How does the pacing for this module compare to state or district pacing guides?	• Module Overview–Module Map
D. Engage in any additional study you need to be fully prepared.	• What questions do you have about the science? • What additional resources or information do you need to feel fully prepared to teach the module?	• Module Overview–Additional Reading for Teachers • Credible outside resources