

**STEM Standard of Practice 4: Engage in Inquiry**

STEM proficient students will engage in *inquiry* to investigate [global issues](#), [challenges](#), and [real world problems](#).

A. Ask questions to identify and define global issues, challenges and real world real world problems.

**Grade: Kindergarten**

**Grades: First through Second**

**Grades: Third through Fifth**

**Essential Skills and Knowledge**

With prompting and support, students will be able to;

**Essential Skills and Knowledge**

With guidance and support from adults, students will;

**Essential Skills and Knowledge**

By the end of grade 5, students should be able to:

- Ask and answer questions:
  - a. about content specific books.
  - b. related to [global issues](#)
  - c. to solve [real world problems](#) or [challenges](#). (MS SLM Pk-1. 6.A.1d)
- Pose/ask questions about the problem/situation. (SS.K.6.C.2.b)
- Ask and/or answer who, what, where, how, when and why questions. (CCSS RI.K.1)
- Make predictions based on personal interest, interests of others, or issues or problems around them.
- Ask questions to make sense of an issues or problem.
- Ask or change a question to address issues or to solve problems.

- Ask multiple questions to identify and define:
  - a. [global issues](#).
  - b. [real world problems](#) or [challenges](#). (MS SLM 2-3. 6.A.1d)
- Pose/ask questions about the problem/situation (SS.2.6.C.2.b) using question words (e.g. who, what, where, how, when and why) (CCSS RI.2.1)
- Identify what did not make sense. (CCSS RI.2.1)
- Make predictions or ask questions. (CCSS RI. 2.1)
- Ask additional or clarifying questions when relevant and appropriate to further investigate [global issues](#) or to solve [real world problems](#) or [challenges](#).

- Ask complex questions related to:
  - a. *science, technology, engineering, and mathematics*.
  - b. investigating [global issues](#), solving [real world problems](#) or [challenges](#). (MS SLM 4-5. 6.A.1d)
- Pose questions that elicit higher order thinking responses. (SS.5.6.C.2.d)
- Use prior knowledge to individually formulate and refine questions to meet an informational needed. (MS SLM 4:51.B.3.b)
- Create research questions about [global issues](#), social problems or [challenges](#) that are grade level appropriate and based on student or class interest.
- Use background information to refine researchable questions. (MS SLM 4:5.3.A.1.a)
- Refine questions to investigate [global issues](#) or to solve [real world problems](#) or [challenges](#).
- Develop a plan for how the answer [complex questions](#) about [real world problems](#) or situations. (SS.5.6.C.2.f.)

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B. Conduct research to refine questions and develop new questions.

**Grade: Kindergarten**

**Grades: First through Second**

**Grades: Third through Fifth**

**Essential Skills and Knowledge**

With prompting and support, students will be able to:

**Essential Skills and Knowledge**

With some adult assistance, students will be able to:

**Essential Skills and Knowledge**

With some adult assistance, students will be able to:

- With modeling and support,
  - a. listen to [information](#) related to *science, technology, engineering, or mathematics*.
  - b. discuss topic related to student, school or community interests, issues, or problems.
  - c. ask and answer [questions](#) to better understand the [questions](#), problems, or issues. (See MS SLM Pk-1. 6.A.1a-e)
- Explore books that have information about *science, technology, engineering, and mathematics*. (MS SLM Pk-1. 1.B.1a)
- Learn how to change individual or group questions and [create](#) new [questions](#).

- Identify and gather appropriate information from *science, technology, engineering, and mathematics* content to investigate [global issues](#), [real world problems](#), or [challenges](#).
- Begin to apply note-taking strategies when searching information related to STEM. (See MS SLM 2-3. A.2c;B.1b)
- Critically review information to better understand [complex questions](#), [real world problems](#), or [global issues](#). (MS SLM 2-3.4.2.2f)
- Ask [complex questions](#) related to:
  - a. *science, technology, engineering, and mathematics*.
  - b. investigating [global issues](#), [solving real world problems](#), or [challenges](#). (MS SLM 2-3. 6.A.1d)
- Create new questions using information from *science, technology, engineering, and mathematics* content, to further investigate [global issues](#), [real world problems](#), or [challenges](#). (MS SLM 2-3.1.A.1b)

- Identify evidence needed to solve [real world problems](#), or [challenges](#).
- Collect information that may affect the understanding of [complex questions](#), [real world problems](#), or [global issues](#).
- Use keywords and text features to find information within a specific source. (MS SLM 4-5 3.A.1.a)
- Develop new questions using information from *science, technology, engineering, and mathematics* content. (MS SLM 4-5.1.A.1c)
- Reflect on and refine research questions, theses, hypotheses, or positions based on new information discovered in the [inquiry](#) process. (MS SLM 6:8 3.C.3.a;MS SLM 4-5.5.B.1c-d)
- Refine questions based on information/evidence found by individual and/or group researched. (MS SLM 4-5.1.B.3b)
- Apply safe practices for both assignment-related and personal online searches. (MS SLM 4-5 2.A.2.b)