

Author(s): Megan Nas, Trisha Paul

License: Unless otherwise noted, this material is made available under the terms of the **Creative Commons Attribution-ShareAlike 3.0 License**:
<http://creativecommons.org/licenses/by-sa/3.0/>

We have reviewed this material in accordance with U.S. Copyright Law **and have tried to maximize your ability to use, share, and adapt it.** The citation key on the following slide provides information about how you may share and adapt this material.

Copyright holders of content included in this material should contact open.michigan@umich.edu with any questions, corrections, or clarification regarding the use of content.

For more information about **how to cite** these materials visit <http://open.umich.edu/education/about/terms-of-use>.

Any **medical information** in this material is intended to inform and educate and is **not a tool for self-diagnosis** or a replacement for medical evaluation, advice, diagnosis or treatment by a healthcare professional. Please speak to your physician if you have questions about your medical condition.

Viewer discretion is advised: Some medical content is graphic and may not be suitable for all viewers.

Attribution Key

for more information see: <http://open.umich.edu/wiki/AttributionPolicy>

Use + Share + Adapt

{ Content the copyright holder, author, or law permits you to use, share and adapt. }

-  **Public Domain – Government:** Works that are produced by the U.S. Government. (17 USC § 105)
-  **Public Domain – Expired:** Works that are no longer protected due to an expired copyright term.
-  **Public Domain – Self Dedicated:** Works that a copyright holder has dedicated to the public domain.
-  **Creative Commons – Zero Waiver**
-  **Creative Commons – Attribution License**
-  **Creative Commons – Attribution Share Alike License**
-  **Creative Commons – Attribution Noncommercial License**
-  **Creative Commons – Attribution Noncommercial Share Alike License**
-  **GNU – Free Documentation License**

Make Your Own Assessment

{ Content Open.Michigan believes can be used, shared, and adapted because it is ineligible for copyright. }

-  **Public Domain – Ineligible:** Works that are ineligible for copyright protection in the U.S. (17 USC § 102(b)) *laws in your jurisdiction may differ

{ Content Open.Michigan has used under a Fair Use determination. }

-  **Fair Use:** Use of works that is determined to be Fair consistent with the U.S. Copyright Act. (17 USC § 107) *laws in your jurisdiction may differ
Our determination **DOES NOT** mean that all uses of this 3rd-party content are Fair Uses and we **DO NOT** guarantee that your use of the content is Fair.
To use this content you should **do your own independent analysis** to determine whether or not your use will be Fair.

STEM Society
An Intro to Inquiry-Based Teaching
Megan Nas and Trisha Paul

This lesson was designed to introduce college students to inquiry-based teaching.

Engagement: Prior knowledge about Inquiry-Based Teaching.

This is a chance to address and discuss previous ideas and misconceptions regarding the concept of inquiry-based teaching. Allow students to brainstorm.

- ❖ What is Inquiry-Based Teaching?
- ❖ How has it been experienced in the classroom?

Exploration: An explanation of what Inquiry-Based Teaching is.

Discuss the defining characteristics of Inquiry-Based Teaching.

- ❖ Empowers students to take charge of their learning
- ❖ Teachers ask instead of tell
- ❖ Asking guiding questions and answering student's questions
- ❖ Students apply knowledge to new scenarios
- ❖ Classroom environment parallels what scientists face in the real world

Explanation: Applying Inquiry-Based methods to our lessons.

In small groups, walk through the 5E lesson outlines and discuss how to present them in ways that emphasize inquiry-based learning.

- ❖ How can we incorporate these techniques to make inquiry-based lessons?
- ❖ What background information must students be provided with so that they can arrive at conclusions on their own?

Elaboration: Understanding the imperfections of Inquiry-Based Teaching.

There are times when Inquiry-Based Teaching may not be the most effective. Hypothesize about situations when this may be true and discuss why.

- ❖ When is inquiry-based teaching appropriate?
- ❖ When is it problematic?
- ❖ How can we distinguish between when it is appropriate or not?
- ❖ Need basic foundation of knowledge first
- ❖ Ex. Instructions for data collection often needed for consistency's sake

Evaluation: Assessment of understanding.

With exposure to the Inquiry-Based Teaching method, revise the 5E outline to reflect these techniques.

- ❖ Which of the 5E's did you change the most?
- ❖ How does Inquiry-Based Teaching improve the effectiveness of the lesson?
- ❖ Moving forward, what are some take-home messages about Inquiry-Based Teaching?