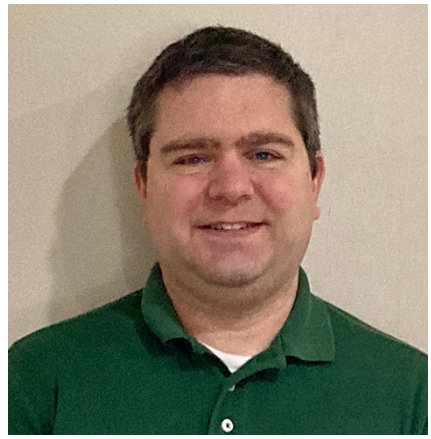
Williams, C. (2023)
The Hoosier Science Teacher, *46*(1)
DOI 10.14434/thst.v46i1.36341

The President's Paragraph: Notes from HASTI's President

The Phenomena of Teaching Science in 2023

Craig Williams



In each issue of The Hoosier Science Teacher, we invite the president to share some thoughts as an introduction. In this issue, HASTI's current President Craig Williams shares his thoughts about challenges and opportunities in 2023-24 for science teachers in Indiana.

Happy summer to all readers of The Hoosier Science Teacher! To those of you who are currently classroom teachers, I hope you are enjoying the chance to unwind a bit, follow a more relaxed schedule, and get a chance to reflect on the past school year. I usually find that with the day-to-day teaching pressures removed, I have a chance to think more expansively. I think about the reasons I am in this profession. After being in a classroom with me for nearly ten months, how are my students different than when they first walked through the door?

After being a teacher for so many years, we may get the feeling that we are in the answers business. Year after year, we train our students to know certain things, or how to perform certain tasks. The students can easily get the sense that school is all about learning the answers—or perhaps figuring out shortcuts to those answers. If it can be Googled, they may wonder why they need to learn it.

Imagine if ten years ago you were asked what the biggest challenges would be facing society in the year 2023. How many of us could have predicted the technological, medical, sociological, political, and environmental challenges that we see today? Clearly, we cannot foresee the exact issues that our students today will face in ten, twenty, or thirty years. However, we can teach them to be inquisitive and to learn how to answer un-Googleable questions.

Full listing of authors and contacts can be found at the end of this article.

One of the exciting things about our new state science standards is that they encourage us to turn the focus away from teaching students to get the right answers, and instead to teaching students how to ask meaningful questions. Asking questions is not just the first of the SEPS standards. It sets the tone for the scientific process of planning investigations, making inferences from data, and learning to deploy useful models. Here's a question we can all ask ourselves: do our students feel like the science classroom is a safe environment to ask questions, and one where asking questions is encouraged?

The challenge is, of course, how to accomplish that while ensuring that our students come away with the key content knowledge that is expected. Under the NGSS model, one of the primary ways we do that is through selecting phenomena that are exciting and engaging for the students in our communities. Picking a series of phenomena that will not only pique the students' curiosity but also help students learn the disciplinary core ideas is not an easy job! It may take several tries before finding the best phenomena to use and the best ways to implement the lessons.

Speaking of phenomena, there is a special one coming up in less than a year: the total solar eclipse of April 8th, 2024. It is not too early to start thinking about how you will use this once in a lifetime event to harness students' natural curiosity and incorporate eclipse or space-related topics into your lessons. I encourage you to think about this now, before the school year gets

Published by the Hoosier Association of Science Teachers, Inc. (https://hasti.org/) ISSN 2475-451x

underway. The website greatamericaneclipse.com is predicting that there could be up to half a million visitors to Indiana, in addition to the four million residents already in the path of totality. This will be a big event - potentially the biggest tourism event in Indiana's history!

As you think about ways to incorporate the eclipse into your lessons, try to resist thinking of eclipses as an already solved problem. True, the law of universal gravitation was worked out hundreds of years ago by Newton, and Google will tell you the exact minute that totality should begin and end for any location. But try to think about it through the eyes of your students. What do they already know about eclipses? What questions do they have? What would they like to learn about the sun, moon, and planets? How can you leverage this event to get them excited about learning those things?

Whether you devote a couple of lessons to the eclipse, or develop a full unit of study, this is one great way to practice implementing a phenomenon-based, three-dimensional lesson. It will give you confidence to do the same with other phenomena. Don't do it alone! I encourage you to consider attending both the fall HASTI mini-conference on October 14th and the main HASTI conference on February 18th-20th to learn more about NGSS style lessons, solar eclipses, and space-related lessons, and much, much more! You can also find information about NGSS and the upcoming total solar eclipse at the HASTI website. Simply click on the "NGSS" or "Events" links at the very top of the page. The NSTA website also has excellent resources on both topics.

I am looking forward to working with all of you in the coming school year. I am especially looking forward to our next gathering when we will share ideas, support each other, and learn from each other. Enjoy your summer, and don't forget to take time to reflect, to wonder, and to question.

Author

Craig Williams (craig.williams@nwesc.k12.in.us) is the 2023-24 HASTI president. He teaches Physics at Northwestern H.S. in Kokomo, IN.