

Supporting High Ability Students Through Our Five Goals

This month we will continue with our deep dive into Depth and Complexity. We are focusing on the thinking prompts of Trends and Change Over Time.

*Please check out the end of the newsletter for PD opportunities and HA Office Hours. *

Our goal for this newsletter is to learn how the thinking prompts can support student thinking and problem solving and for you to feel confident enough to try a question in your lesson.

Trends

Trends is analyzing cause and effect. It allows students to evaluate how things are in competition with each other. Students should be able to answer "In what way is this data moving, and why?" Trends are also not dependent on time, unlike the thinking prompt of Change Over Time.



Trends can be used in any content area: Social Science anything with an era or -ism

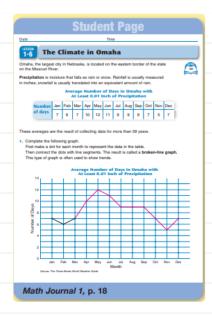
Science labs

Math coordinate points, sine/cosine waves, denominators grow or shrink when we multiply or divide fractions

ELA conflict, development of characters

Application of Trends and Change Over Time in Sixth Grade Everyday Math lesson 1.6

https://everydaymath.uchicago.edu/about/understanding-em/EM2007_G6_samples.pdf



It is important to remember that Depth and Complexity is intended to strengthen the work we are already doing in our classrooms. By simply reviewing the questions we ask, we can look at a lesson through a different or deeper lens. Here are a few examples of questions that could take a math lesson in sixth grade up a notch with minimal effort. Try having the students respond in writing after providing thinking and partner talk time.

Trends:

What trends can be identified by studying the table and graph? Name a factor that could interfere with the observed trends. Is it valid to say that snow made a significant difference in the trends?

Change over time:

What forces are acting on the precipitation that might impact the change over time? What information is missing from this graph that could impact the change over time?

Trends in Social Studies

We tend to learn things chronologically in social studies. However, what if we centered our curriculum around trends? Trends asks the thinker to look at *why something has changed.* Change over time spends more time thinking about *how* something has changed. Trends spends more time looking at the causes and change over time spends more energy on the effects. So, thinking back to the social studies curriculum, what if we spent more time grouping standards in the curriculum using trends? The common reason many give about the necessity of learning history is to learn from the mistakes of the past. I would challenge teachers to think about the causes of those mistakes and look for the trends. For example, instead of just learning what happened between 1492 and 1871 just because this course has always been taught in order, spend more time grouping standards based on the trends of our past and analyze those.

For example, rebellion becomes a trend in our U.S history. Teachers can start with learning about why people rebel against the government. Is it necessary for progress? Is it ethically appropriate? 8th grade teachers can have students study the American revolution, Shays' Rebellion, the Whiskey Rebellion, Martin Luther King's rebellion in Montgomery, Nat Turner's rebellion, and more. After students study the causes of all of these rebellions, they can create a presentation on the trends of our past and apply them today. When might rebellion be appropriate today based on the trends of the past? Will <u>historians</u> consider the event on January 6, 2020 at the U.S Capitol a rebellion? Was it appropriate? How does it compare to the trends we discovered so far? Studying the trends of rebellion might make studying history seem more relevant and purposeful than just studying events that happened in chronological order.

Understanding *why things change* also asks students to look at patterns so feel free to pair these two thinking prompts together.

What other subjects or standards could be grouped together by their trends for analysis and deeper learning?

Trends is data analysis

Principals and instructional coaches use trends all the time. They need to consider questions like:

- What direction is something moving or developing? (Look at the change over time, first.)
- Why is it moving that way?
- What forces are at play?
- What would stop this trend?
- Does an upward trend in one area influence another trend?
- What is the root cause of the trend?

Caution. Trends are VERY complex. There may be multiple causes and multiple factors that lead to one cause. Trends should rely on accurate details. Trends can quickly evolve into anecdotal stories or focus on one perspective that may or may not really be the reason for the trend. "Kids these days" is a great example of this thinking. Are current generations of kids just "bad?" Are they on technology too much? Did Covid really ruin their behavior? Rely on details, change over time, and multiple perspectives to get closest to the truth behind the trend.

Change Over Time

Change Over Time focuses on how an idea, topic, person, or event has changed over time. Lessons can involve evaluating change. Was it positive or negative? Necessary or unnecessary? What are the benefits and drawbacks?

Change Over time can be used in any content area:
Social Science Looking at how primary source documents have changed over time, timelines
Science rock cycle, plate tectonics, evolution, velocity
Math rate of change over time, math theories over time
ELA analyzing the way a character changes over time, looking at the way language has changed over time, sequencing

My favorite question that addresses my anxiety uses change over time. When I am personally struggling with something and I can't get it off of my mind, I use the five year test. I ask myself will this matter in five years? If the answer is no, then it will not affect me over time and I allow myself to stop worrying. If the answer is maybe or yes, then I spend more cognitive energy trying to address or solve what is worrying me. It has the potential to affect me over time and it needs to be addressed. Try using this strategy with students who worry, too!

2/16: Early Contributors to the Theory of Evolution

2/16: Who were the early contributors to the theory of evolution? Feb 16 | 0 pts

2/15: Wallace and Darwin

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2/15: Who was Charles Darwin?
Feb 15 | 0 pts

2/14: Early Study of Evolution

2/14: How did each person in the lesson contribute to the study of evolution?
Feb 14 | 0 pts

2/13: Change Over Time

2/13: Give one word to describe "change over time". Feb 13 | 0 pts

Applying Change Over Time in the Classroom

Change Over Time is Character Development

How does a character change throughout the story? This is a common question in any language arts class. However, we can pump up the thinking by applying the change over time prompt. Change over time focuses on the outcomes or effects and time must be a factor. It can be a short period of time or a long period of time but in the end, things have happened over that period that brought about notable effects. Are the changes in that character always positive? What are the negative changes, too? Were any of the changes preventable? What was the key moment in the story that ignited the change? These are all possibilities ELA teachers can use to make character analysis more meaningful with the change over time prompt.

Move Up the Ladder of Blooms

The key for this prompt is not just *what* changed over time. That is a lower knowledge or understanding level of Bloom's Taxonomy. A deeper question might ask: How *do we know there is change? What evidence do we have? Is this change significant?* Quickly we can move up the ladder of Blooms by asking kids to evaluate the change or synthesize by putting together the meaning of multiple changes.

Combine Multiple Prompts

Don't forget that many of the Depth and Complexity prompts work in tandem. Try pairing change over time with ethics. *Was the change over time ethical? For who?* Pair it with details. *What are the most crucial details to show how something has changed over time? What if those details were removed? Would we have any more evidence of the change?* Continue to analyze the change by

forcing analysis with these questions. *Does change always mean progress? Is new always better? Can we guess the future based on the past?*

Use change over time to ask some metacognition questions

- After a lesson is finished, use change over time as a creative way to review. Ask questions like
- How did your teacher last year explain this? How did that affect you this time you learned it?
- When might you use this information in the future?
- Is this information going to become more or less important over time? How?
- Is this different or the same as when your parents learned it?

Perry Middle students connect their classwork to change over time on their own.

Students are reading a novel where the character learns he is connected to multiple people in ways he did not realize. He learns that his life was not a series of coincidences, but the result of decisions and actions of many people around him. Students paired this novel with non-fiction pieces about the butterfly effect. After accessing different video options, they were asked to define the butterfly effect, apply it to their own lives, and apply it to another one of our thinking prompts. Look at this document to see how the prompt was set up and see excerpts of student thinking. While the prompt did not specifically say change over time, a few students definitely considered change over time through this prompt. Leave change over time as a response option all the time and students will find ways to access the thinking that may surprise you.

Evolution: change over time in science

Students are beginning to study evolution in science. Before they begin the unit, the teacher uses photos with different pieces of technology and asks students to put them in order from earliest to latest. Then he asks students how technology has changed over time. You can see how a day for change over time is listed in his Canvas module before he begins introducing the topic of evolution. One thing high ability students in this class crave is understanding of why they need to study change over time. How can we make the need to study change over time relevant in science classrooms?



HA Office Hours 2/26/24

Do you have questions about a particular student, resources for differentiation, or the identification process? I will hold office hours on the last Monday of each month. I will be available on a Google Meet. Pop on at any time during the hour to ask any questions that you may have. I can also answer general testing questions as well! The February office hour will be on 2/26/24 from 4-5 p.m.



To join the video meeting, click this link: <u>https://meet.google.com/msi-sghh-qof</u> Otherwise, to join by phone, dial +1 515-518-1055 and enter this PIN: 523 685 448# To view more phone numbers, click this link: <u>https://tel.meet/msi-sghh-qof?hs=5</u>

Spring High Ability Professional Development Opportunities

Kristie Speirs Neumeister, Ph.D. and Ginny Burney, Ph.D. from Ball State University are offering two workshops in May to focus on high ability education. Please see below and click the link for the details. Let Kim Jovic know if you would like to attend and if you would like virtual or in-person. **Virtual and In-Person Workshops:** Attached please find two flyers-one for our workshop on how to infuse higher order thinking skills and problem solving into core content areas and one for our workshop on understanding and meeting the social and emotional needs of high ability learners. These workshops are available for either in-person or asynchronous, virtual participation.

Screening Update-Kindergarten NWEA

During the month of March, the kindergarten academies are testing students who scored an 80th-95th percentile on at least one battery of the ability measure (CogAT) with the NWEA. The NWEA is our achievement measure for the high ability screening that is an adaptive measure so that we can truly see how students achieve. They take the test in Reading and Math. Once testing is complete, the last piece of the screening is teachers completing the SIGS teacher rating scale for students who score on the bubble of qualifying. Our identification meeting will be in April. See the information below if you would like to participate and learn about the identification process.



Event Information

High Ability Identification Meeting

This meeting will last from 3:30-5pm, but you do not have to attend for the full time. I started earlier this year, so you can come at a time that works for you and your building schedule. When?

Wednesday, Apr 24, 2024, 03:30 PM

Where? PTEC 210



Nina Bowman

Nina is using Smore to create beautiful newsletters