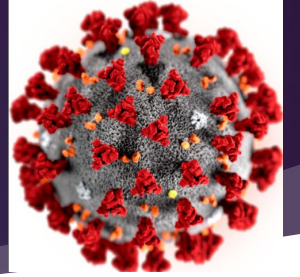# Kaplan Model
Using Depth & Complexity to support gifted learning

By Beth Kostka

Engage: Catching a virus…
## Choose a question to answer on next slide

► While a virus may be common…

- Discuss the **ethical issues** of a highly contagious virus

- Considering the **trends** of how a virus spreads, what are economic insights...

- Examining the **rules** of how a virus spreads is helpful to society. For example…

- Studying the **details** of what separates coronavirus from other viruses broadens thinking by…

- In what way will analyzing how contagon response **changes over time** reveal new information about our changing society?

- How does sharing **multiple perspectives** about social distancing opens minds to other cultures and geographic locations…

Collaborate!
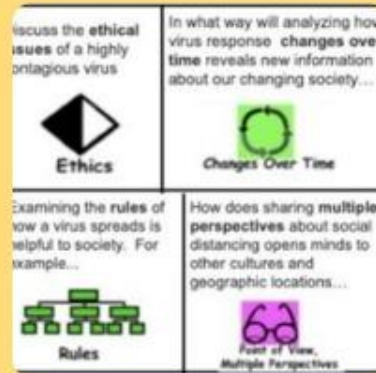
Choose one of the 4 questions-Respond in the post box below

1)Discuss the ethical issues of a highly contagious virus, 2)Looking at the trends of virus spread reveals what economic insights of.. 3)How does sharing multiple perspectives about social distancing opens minds to other cultures, ideas & locations? 4)In what way will analyzing how social distancing

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Click **Edit This Slide** in the plugin to make changes.
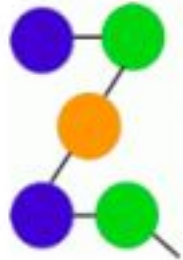Don't have the Nearpod add-on? Open the "Add-ons" menu in Google Slides to install.

Explore: Match these icons with the different discussion points we just engaged in

Details

Big Ideas

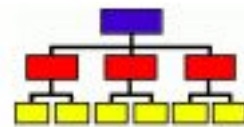Language

Patterns

Ethics

Different Perspectives

Trends

Rules

Changes over Time

questions

coronavirus from other viruses broadens thinking by…

reveal new information about our changing society?

Examining the rules of how a virus spreads is helpful to society. For example…

Discuss the ethical issues of a highly contagious virus

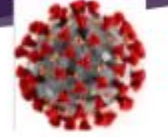How does sharing multiple perspectives about

Looking at the

How to Edit

Click **Edit This Slide** in the plugin to make changes.

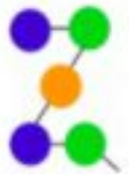Don't have the Nearpod add-on? Open the "Add-ons" menu in Google Slides to install.

Details — Language

Big Ideas ???

Patterns — Ethics

Different Perspectives — Trends

Rules

Changes over Time
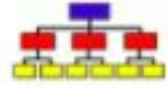
??? questions

Engage: Catching a virus...
Choose a question to answer on next slide

While a virus may be common...

- Discuss the **ethical issues** of a highly contagious virus
- Looking at the **trends** of virus spread reveals what economic insights of...
- Examining the **rules** of how a virus spreads is helpful to society. For example...
- Studying the **details** of what separates coronavirus from other viruses broadens thinking by...
- In what way will analyzing how contagon response **changed over time** reveals new information about our changing society...
- How does sharing **multiple perspectives** about social distancing opens minds to other cultures and geographic locations...

Consider: How did these two activities meet the needs of the gifted learner?

Open Ended Question

How do the last two activities we just completed meet the needs of the Advanced learner?

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How does this engage activity <u>meet the needs of the gifted learner?</u>

Needs of the Advanced Learner

"These learning characteristics suggest the need for curriculum, instruction, and assessment that are differentiated in level, <u>complexity, depth,</u> and pacing to ensure that gifted children have the opportunity to make continuous learning progress in school." - National Association for Gifted Children (NAGC)

*Differentiation*

Interest

Different knowledge

Depths

Point of View

vision & text

Patterns, problems, rules

Learning Style

We have just engaged in the Kaplan Depth and Complexity Model of Gifted Learning

- ► Looked <u>deeper</u> into one topic
- ► Used expert <u>thinking traits</u> to learn about/explore a topic

  patterns

  ID rules

  consider ethical dilemmas

  changes over time

- ► Connects the thinking process with an **icon/picture** (<u>metacognition</u>)
- ► Provided <u>choice</u> to students
- ► Gives opportunity to see & experience more complexity of a topic
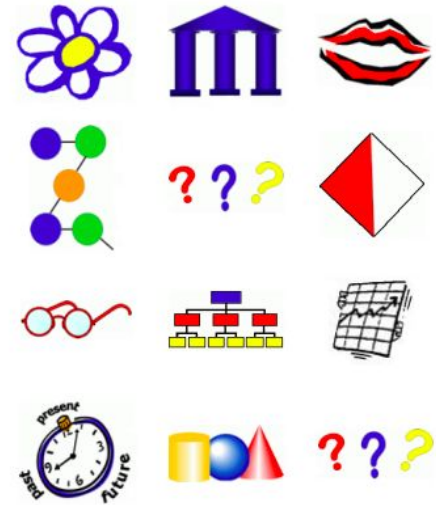
EXPLAIN: Model Background Depth and Complexity Model

The Back Story

Developed by Bette Gould & Sandra Kaplan in 1996

The overarching goal of Depth and Complexity is to **move students towards expert knowledge of content**. Bette Gould and Sandra Kaplan looked to understand how an expert understands their field differently from a layperson. Through interviews, they saw that **these experts knew things like repeating patterns, required rules, ethical dilemmas, changes over time, and essential vocabulary within their field.**

Based on characteristics of expert learning

They identified eleven of these traits and assigned a name and a symbol to each. The idea is that **students can use these same ways of thinking** to move closer to an expert's level of understanding.

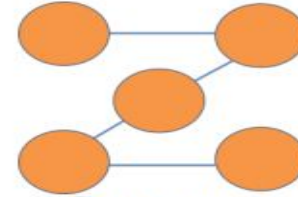Identified 11 thinking traits and assigned each a symbol

Language of the Discipline
- What vocabulary is used?
- What tools are used?
- What methods are used?
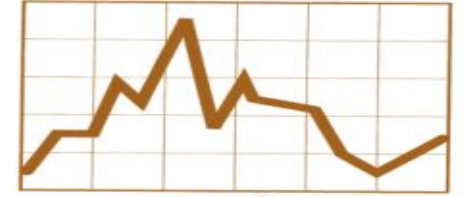- What service is provided?
- What products are made?

Details
- Who..?   What..?
- When...? Where..?
- Why...?   How...?

Patterns
- What patterns do you notice?
- Can you predict what will come next?
- Why do you think so?

Trends
- Identify cause & effect relationships
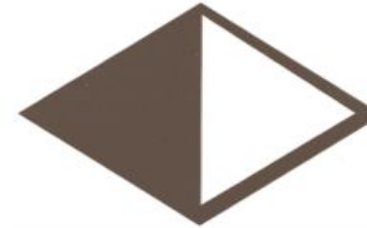- What are influencing factors?

Unanswered Questions
- What words don't you understand?
- What is unclear?
- What information is missing?

Change Over Time
Past Present Future
- What was it like in the past, the present & what might it be like in the future?
- What caused the change?

Ethics
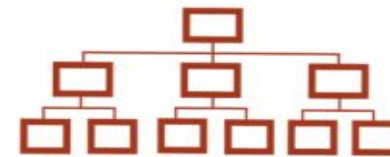- Who believes the behavior or action to be right or wrong and why?

Big Ideas
- What is the theme?
- Identify the "Big Idea", principle or generalization.

Depth & Complexity Icons
Use this page to guide discussions, as conversation "cues" during literature circles discussions, & as writing prompts to encourage critical thinking.
Shared by Sandra Kaplan

Multiple Perspectives
- Who agrees & disagrees?
- What are their opinions?
- Who believes what & why?

Rules
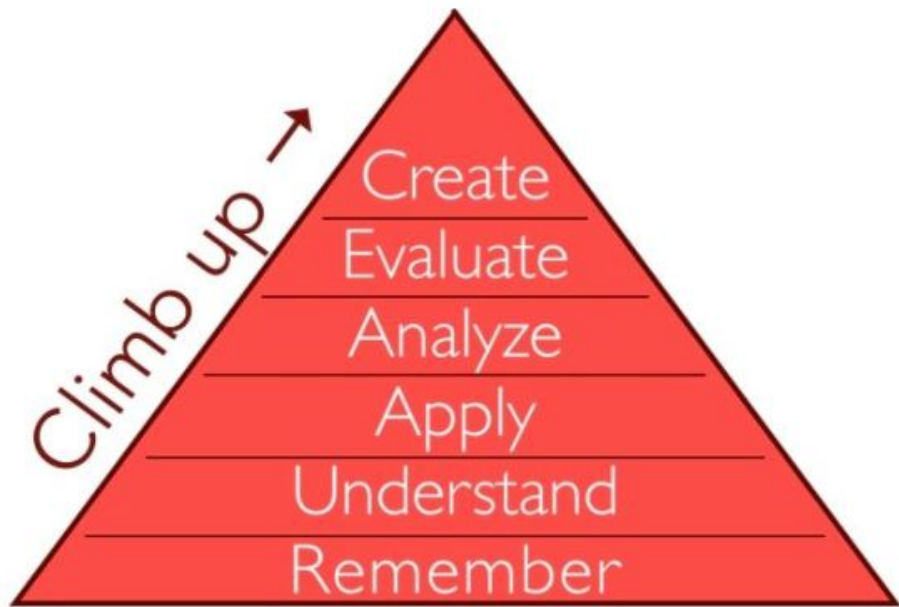- What are the rules?
- How it is structured?

Across the Disciplines
- What common theme connects the topics?
- How is one topic like the other?

Goal of model

Instead of asking students to <u>identify</u>...prompt them to (ELA example)

- look for <u>patterns</u> in character's actions
- <u>Compare</u> patterns in character's actions with another character's
- <u>Judge</u> the ethics of the patterns seen in character's actions
- <u>Create</u> a new situation they would continue this pattern

EXPLAIN: Depth and Complexity Model
What is it??

► **Model is a series of (prompts/tasks//discussions) added to curriculum to increase rigor & engagement (Model used at Classroom level by any teacher)**

► **Icons/prompts can be added to lessons/units that you have already developed**

► **a poster can be hung and used to integrate the model prompts into <u>discussions</u>**

► **can be used to build new <u>tasks/units/extensions</u> including the following:**

- task cards
- choice boards
- stations
- problem-based learning tasks
- inquiry-based learning tasks
- individual student tasks

- discussions
- circles
- group work

- Icons provide visual cues
- It is a roadmap for higher order thinking
- Versatile and easy to incorporate

Dive Into Depth and Complexity

- An essential part of differentiating the curriculum through depth and complexity is using the **icons**, and **ensuring that students are familiar with them**.
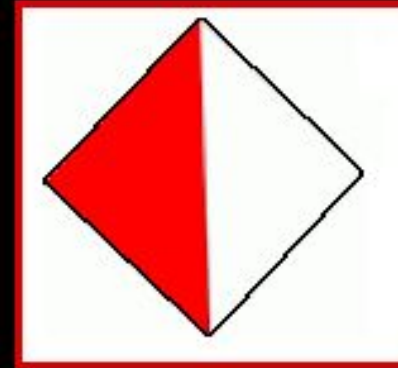
Open Ended Question

What is the power of the icon to you?
Why do you think pairing icons with tasks benefits gifted learning?

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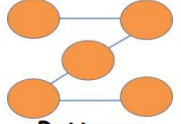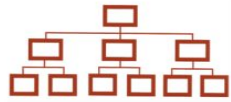Don't have the Nearpod add-on? Open the "Add-ons" menu in Google Slides to install.

Power of Icons
Provide structure and support for taking a deeper and more complex look at any topic

- **Quick Easy Application to any Material**

- For Visual learners--A picture is worth a thousand words

- Provide scaffolding to do higher level thinking for second language students and students with learning disabilities

- Develop "Habits of Mind" that become ingrained

- Advanced learners are asked to reach into the upper ranges of their ZPD

- Increase student enthusiasm and motivation

Which Icon or Thinking Trait do you like the best? Why?

Language of the Discipline
- What vocabulary is used?
- What tools are used?
- What methods are used?
- What service is provided?
- What products are made?

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- When...? Where..?
- Why...?   How...?

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Poll

A. Rules

B. Patterns

C. Details

D. Trends

E. Language

F. Ethics

G. Change over time

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EXPLAIN: Depth and Complexity Model Suggestions For Teacher

► **Introduce a few icons over time**

► **introduce them in pairs**

► **Always include the icon as a visual connection but focus on THINKING**

► **When you are teaching draw the icon next to questions or ideas to realize that this type of expert thinking is happening all the time (not just on a task)**

► **Keep a poster in your room**

GREAT guide for creating gifted tasks/lessons
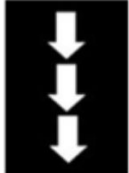
With practice the icons can be used BY STUDENTS in self-directed learning!

A Quick Example

Rather than just asking general questions about content, the Depth and Complexity prompts help you to quickly increase the level of content knowledge required in a question.

- A task like "Compare and contrast Lincoln and Washington" is *ok*, but too broad. It's unlikely to push advanced students. They can too easily settle into the obvious and surface-level (both are humans, both are men, one has brown hair, one has grey hair).
- Instead, ask students to "Compare and contrast the ⚖ *ethical dilemmas* Lincoln and Washington faced" and suddenly there's room for a deeper understanding.
- Or say "Compare and contrast the 🚦 rules that Lincoln and Washington created as presidents."

There are a lot of layers to model....Content Imperatives
(another element of Depth and Complexity)

Origin	Contribution	Convergence	Paradox	Parallel
Beginning of a thing's or person's existence; background	Action or object that brings a result or helps something to advance	Coming from different directions and meeting at a point or place	A thing that contains contradictory qualities; incongruity; oxymoron	A thing that is similar and comparable to another; that occurs, exists at the same time, way or place

Elaborate: Try It With Popcorn...

Consider the rather bland topic of popcorn, this time using the Kaplan model to add interest and rigor

- What are the **origins** of popcorn?

- Examine the **paradox** of health and flavor in popcorn.

- What cultures have a snack food that **parallels** popcorn?

- What has **contributed** to the popularity of popcorn?

- What factors **converge** to cause popcorn to pop?

from http://www.byrdseed.com/introducing-depth-and-complexity/

More examples across discipline and age range

Language of Discipline in Math (Elementary)

What **geometric shapes** make up this cow?

Circle

Octagon

? ?

Rectangle

Parallelogram

?

Pentagon

?

Trapezoid

Square

Triangle

?

?

Middle School Science

Engage: Video clip from Indiana Jones or The Mummy dealing with the discovery/importance of relics, or the **ethics** of hunting relics

Explore: Students Skype with a professional archeologist and share their reasoning regarding soil and artifacts. **(unanswered questions)**

Archeological Institute of America: archeological.org

One column might hold patterns that support the generalization while one holds specific perspectives.

ELA/High School

Interdisciplinary: The Archeology Project

ELA: Students read informational texts about archeological digs, as well as primary source material from British colonists (diaries, letters, travelogues). **(ethics, rules, multiple perspectives, details)**
Science: Students predict what types of artifacts could have survived from Colonial times, based on the soil of the region they have chosen. **(rules, patterns, unanswered questions)**
Social studies: Students pretend they have discovered fossils from one of the original 13 colonies. They will "find" at least one artifact from each of the following groups: large landowners, farmers, artisans, women, children, indentured servants, slaves and American Indians. **(trends, details)**
Math: Students use area and perimeter to determine how they will set up their archeological dig. They will diagram the layout of their dig, using a map of the 13 colonies. **(rules)**
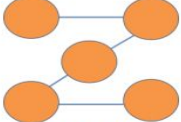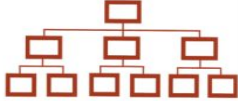
What is one way you can incorporate the Depth and Complexity model into your teaching (next year)?

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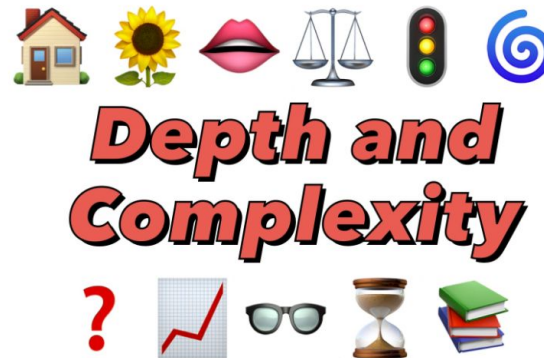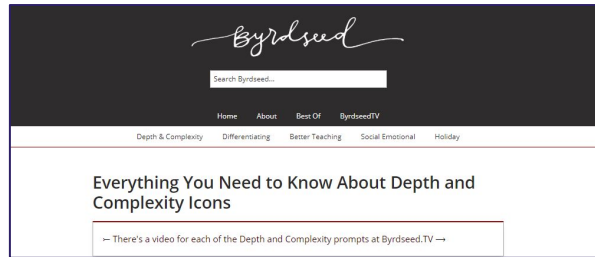
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Resources

http://www.byrdseed.com/introducing-depth-and-complexity/

http://www.dazzleonadime.com/index.php/strategies/depth-and-complexity/