Preparing Students for Their Future NOT Our Past

Dr. Bill Daggett Associated School Boards of South Dakota School Administrators of South Dakota August 3, 2023



Our Kids Are Different

















SPN Siccessful Practices Network Revention

Social Media

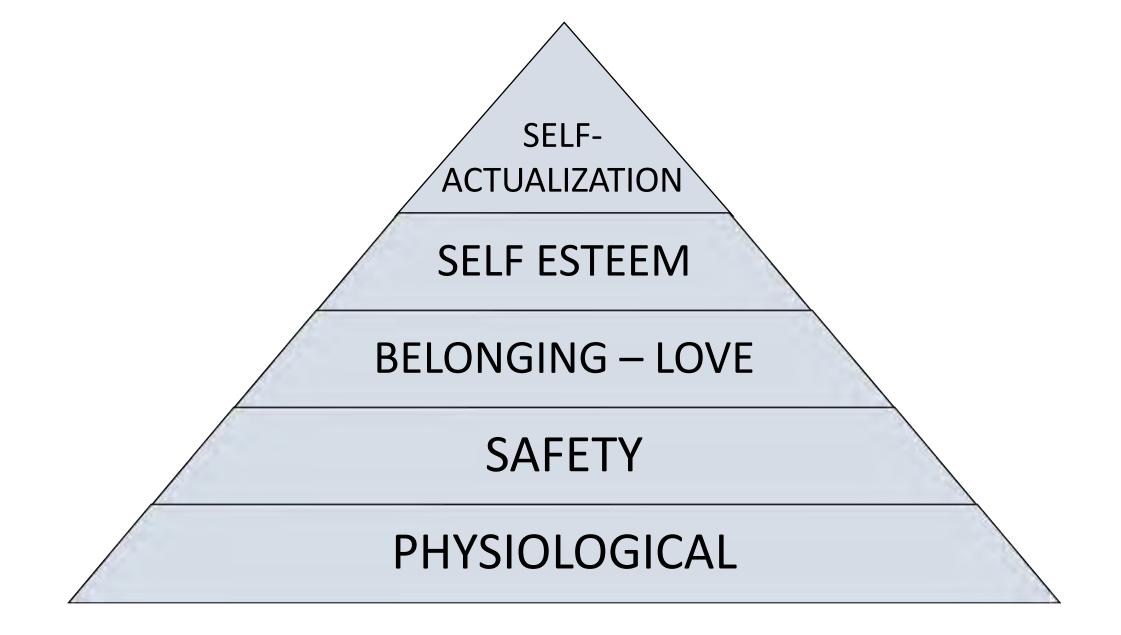


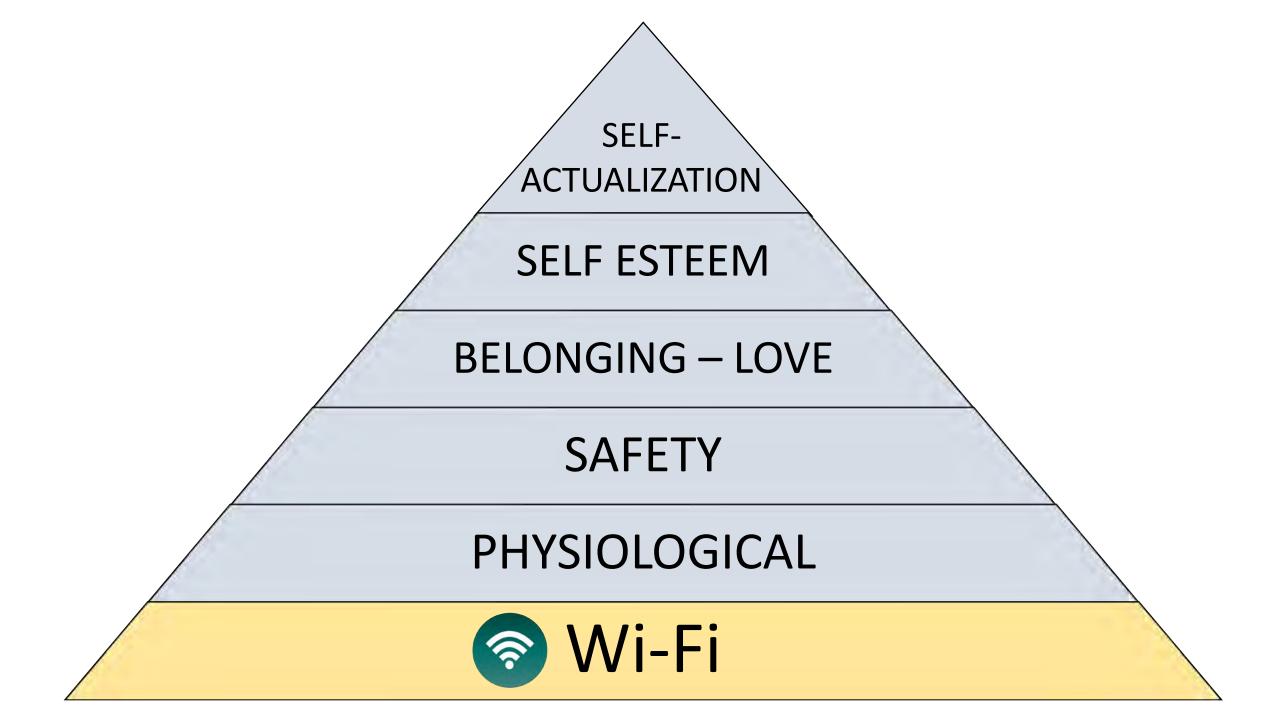
TikTok



Video Games





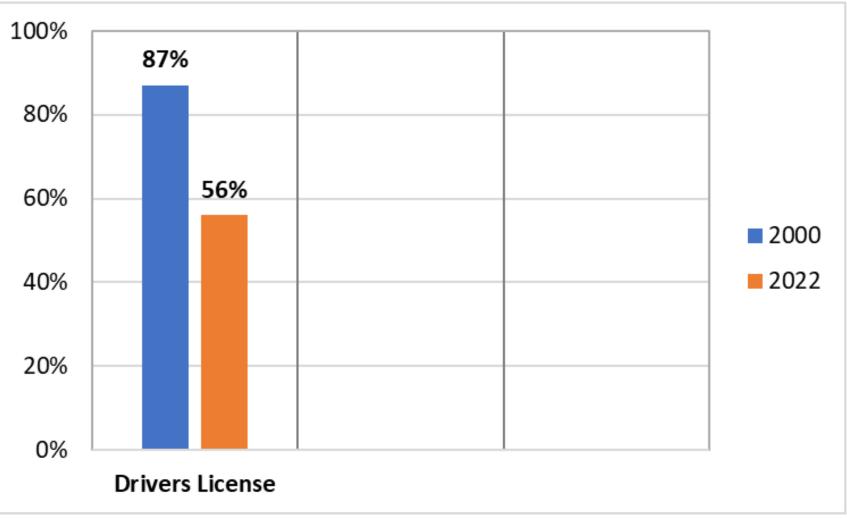






AASA Learning 2025: Natyional Commission

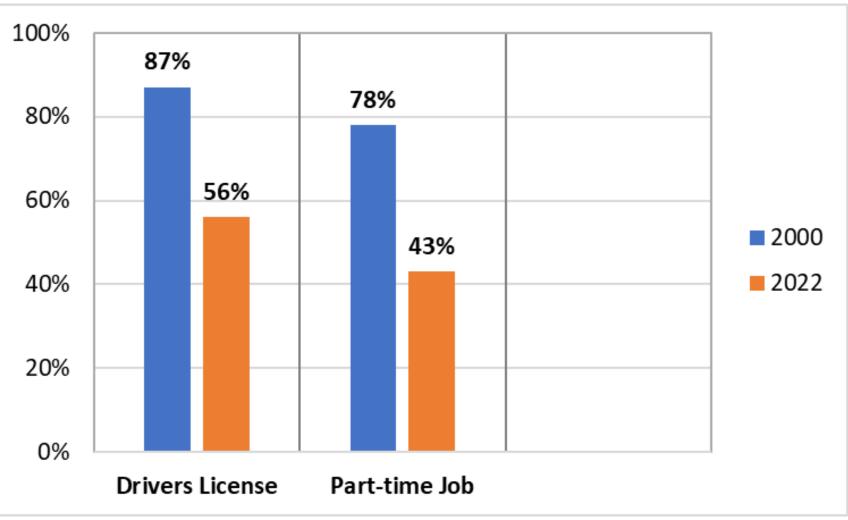
Percentage of 12th Graders Who Have:





Source: Monitoring the Future Study (Twenge, 2019, 2022 fig 1.13)

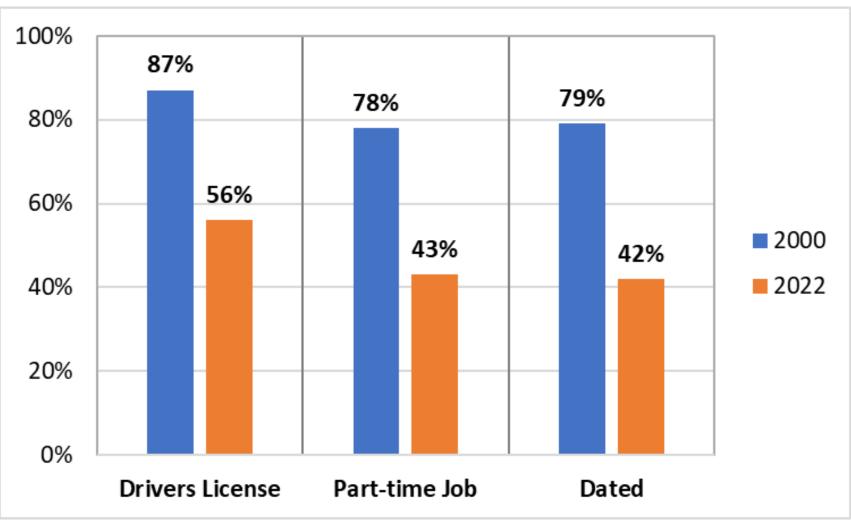
Percentage of 12th Graders Who Have:





Source: Monitoring the Future Study (Twenge, 2019, 2022 fig 1.13)

Percentage of 12th Graders Who Have:





Source: Monitoring the Future Study (Twenge, 2019, 2022 fig 1.13)

Many students increasingly struggle with...

- Adaptability
- Coping skills
- Self control
- Organizational skills
- Decision making skills
- Creativity
- Perseverance
- Communications
- Digital ethics



Our Kids Are Different





Workplace, Home, and Society



IMPACT OF ADVANCING TECHNOLOGY

To appreciate the magnitude and breadth of its achievements, imagine spending a day without IT. This would be a day without the Internet and all that it enables. A day without digital media—without wireless telephones, high-definition televisions, and video games. A day during which travelers had to navigate without benefit of the Global Positioning System (GPS) and banks and merchants could not transfer funds electronically. It would be, for most people in the United States and the rest of the developed world, a "day the Earth stood still."



We are moving from the age of IT to the age of AI





Print changed how people communicated and learned, which impacted the knowledge and skills they needed.



Print changed how people communicated and learned, which impacted the knowledge and skills they needed.

Al is having the same impact – just at lightning speed.



ChatGPT

Time taken to reach 1m users (mths)

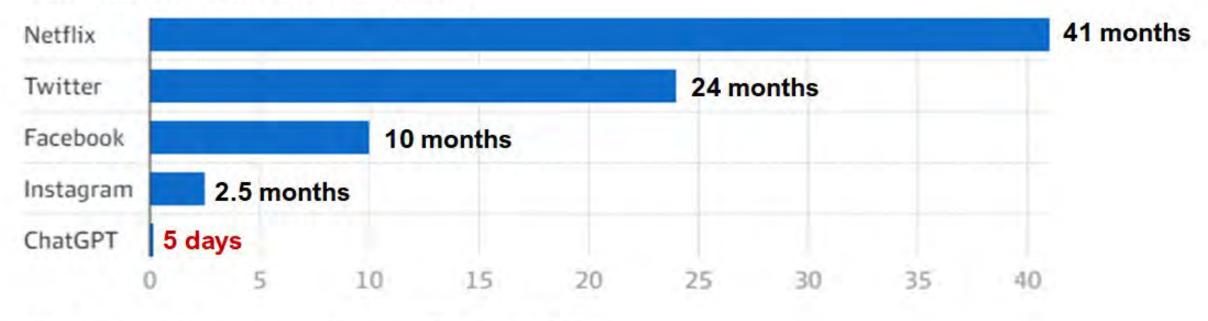


Chart: Financial Review • Source: Genevieve Roch-Decter, CFA



ChatGPT

100 million people in first two months



ChatGPT is 6 months old and already outdated.



ChatGPT	
• 500 Billion words	
 Based on a 2021 database 	
 Always learning and improving 	
SPN Successful Practices Network Practices Network	

ChatGPT	GPT-4	
 500 Billion words Based on a 2021 database 	 Based on up to the minute data base 10 Trillion words 	
 Always learning and improving 	• Pictures, graphs, charts, tables	
SPN Successful Practices NATIONAL Proceeding Propout Prevention Control Prevention Contro		

ChatGPT	GPT-4	GPT-5
 500 Billion words Based on a 2021 database 	 Based on up to the minute data base 10 Trillion words 	 Every video on the Internet Embedded chips Social media
 Always learning and improving 	 Pictures, graphs, charts, tables 	

SPN Successful Practices Network

chat.openai.com

ChatGPT and GPT-4 are from OpenAl

BARD is from Google



ChatGPT (OpenAl) to BARD (Google)



ChatGPT (OpenAl) to BARD (Google) to LLaMa (Meta)



Challenges



ChatGPT

ChatGPT can write:

- Poetry
- Essays
- Writing assignments
- Complete math problems



Al test classifier





Have ChatGPT prepare test questions to evaluate students' knowledge of what they wrote.



Use ChatGPT for a first draft and then direct students to improve upon it.



"Where will I ever use this?"

"Why do I need to learn this?"



Shift classroom instruction and homework





Cyber Security



Opportunities



Co-Pilot



Example of AI in education NWEA - MAP



Example of AI in education NWEA - MAP

Increasingly challenging questions to edge of student knowledge/skill.



ChatGPT

Tech companies and publishers are focused on this.



Why does it rain?



ChatGPT Prompt



Pretend to be a person with IQ of 50. Why does it rain?



It rain because the sky cry, it get sad and the tear fall down on the ground. That how it \square \square make everything all wet.



ChatGPT Prompt

Pretend to be a person with IQ of 100. Why does it rain?



Well, when the ground gets too warm, the water in the air turns into tiny droplets. And when these droplets get too heavy, they fall to the ground. That's why it rains! It's also caused by the sun heating up the Earth and water evaporating into the air. And when the air gets too full of water droplets, they fall back down to the Earth as rain.



Pretend to be a person with IQ of 200. Why does it rain?



Rain is the result of a complex set of meteorological processes that occur in the Earth's atmosphere. Water vapor, which is the gaseous form of water, is present in the air we breathe. As the sun heats the surface of the earth, some of the water vapor in the air is heated and rises into the atmosphere, where it cools and condenses into tiny droplets of liquid water or ice crystals. These droplets or crystals become heavy enough to fall to the ground as precipitation, which includes rain, sleet, snow, and hail. The specific conditions that lead to rain include the presence of moisture in the atmosphere, rising and cooling air, and the formation of clouds, which are made up of millions of these droplets or crystals. The amount of rain that falls, and where and when it falls, is determined by complex interactions between the temperature, pressure, and wind patterns in the atmosphere, as well as topographical features of the earth's surface.

山豆

Example of AI in education NWEA - MAP

Increasingly challenging questions to edge of student knowledge/skill.



What do you see as thye impact of...

NWEA - MAP

- Increasingly challenging questions to edge of student knowledge/skill.
- Then personalize to student interest



Example of AI in education NWEA - MAP

- Increasingly challenging questions to edge of student knowledge/skill.
- Then personalize to student interest
- Create suggested curriculum, instructional strategies and assessments



What are the implications of instructional materials, instructional strategies and assessments all being able to be personalized to each students?



Shift from a Proficiency to a Growth Model



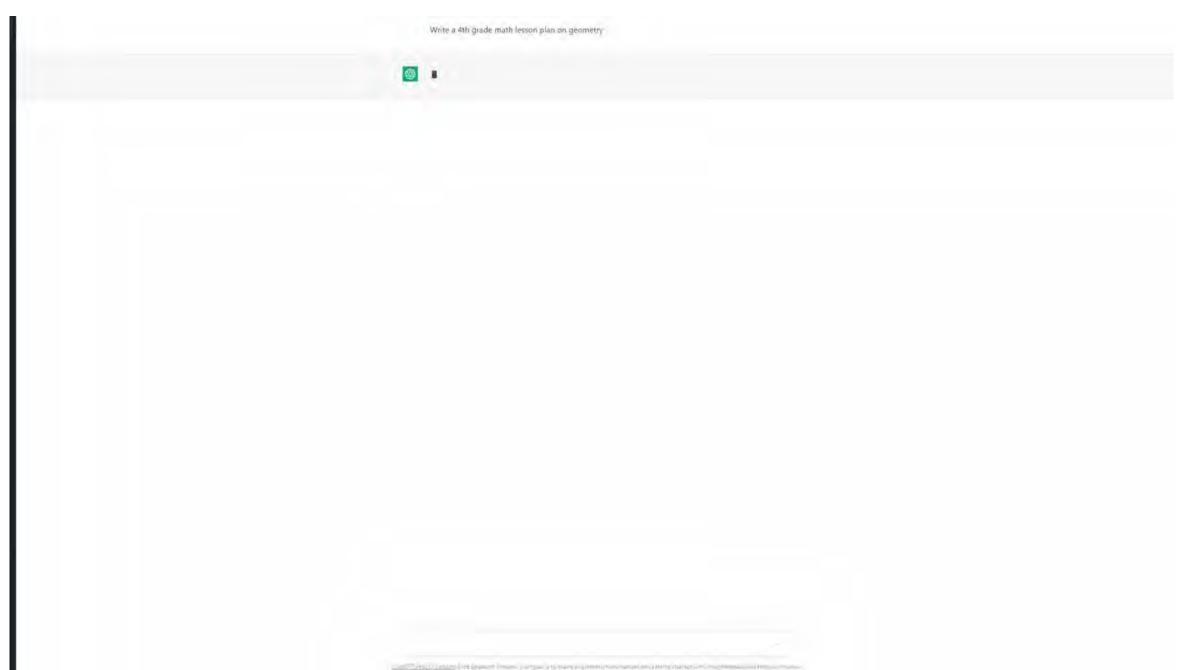
ChatGPT

ChatGPT can do:

- Lesson plans
- Assessments
- Curriculum
- IEPs



Write a 4th grade math lesson plan on geometry.



Exploring Shapes and Their Attributes

Objective: Students will be able to identify and describe the attributes of 2D and 3D shapes.

Introduction (10 minutes):

- 1. Begin the lesson by introducing the topic of geometry and explain that it is Independent Practice (20 minutes): the study of shapes and their properties.
- 2. Ask the students to brainstorm different shapes they know and write them on the chart paper.
- 3. Review the definitions of "2D" and "3D" and explain that we will be exploring both types of shapes.

Direct Instruction (20 minutes):

- 1. Introduce different 2D shapes, such as square, rectangle, triangle, circle, and hexagon.
- 2. Draw each shape on the whiteboard and ask the students to identify the number of sides and corners each shape has.
- 3. Discuss the attributes of each shape, such as the length of sides, angles, and symmetry.
- 4. Introduce 3D shapes, such as cube, sphere, cylinder, and cone, and discuss their attributes, such as faces, edges, and vertices.

Guided Practice (20 minutes):

- 1. Divide the class into groups and provide each group with a geoboard and rubber bands.
- 2. Instruct the students to create different 2D shapes on the geoboard using rubber bands.
- 3. Have the students share their shapes with the class and describe the

attributes of their shapes.

- 4. Provide each group with a set of 3D shapes and ask them to identify and describe the attributes of each shape.
- 1. Provide each student with a worksheet on identifying and describing shapes.
- 2. Instruct the students to complete the worksheet independently.
- 3. Circulate the room to provide assistance to students as needed.

Closure (10 minutes):

- 1. Review the different types of shapes and their attributes.
- 2. Ask the students to identify the most challenging part of the lesson and provide an opportunity for questions or clarification.
- 3. Assign homework on identifying shapes in the environment and describe their attributes.

Assessment: The students' understanding of 2D and 3D shapes and their attributes will be assessed through their participation in group and independent activities, as well as their completion of the worksheet. The teacher will also observe and assess the students' ability to identify and describe the attributes of the different shapes during the guided practice activity.

Write a lesson plan based of a 6th grade class reading

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2

1

Exploring Society through "Lord of the Flies"

Grade level: 6th Grade

Objective:

- Students will be able to analyze the characters and themes of "Lord of the Flies" in order Instruct the students to form new groups and assign each group a theme to analyze. to understand the complexities of human society.
- Students will be able to make connections between the novel and their own experiences on how it is portrayed in the story. in society.
- Students will be able to express their ideas and opinions about the novel through class • discussions, group work, and written assignments.

Materials:

- Copies of "Lord of the Flies" by William Golding
- Writing materials (paper, pens/pencils)
- Whiteboard or blackboard and markers/chalk ۲
- Online resources for research (optional)
- 1. Introduction (10 minutes)

Introduce the novel and its author to the students, providing any necessary background information.

Explain the objective of the lesson and what the students will be learning.

2. Ask students if they have any prior knowledge about the novel, or if they have read it before. Character Analysis (30 minutes)

Divide the students into groups and assign each group a character from the novel (Ralph, Jack, Piggy, Simon, etc.).

Instruct the students to read the chapters that their assigned character appears in and take notes on their behavior, actions, and dialogue.

Have each group present their findings to the class, focusing on the personality and motivations of their character.

Theme Analysis (30 minutes)

Write the themes of the novel on the board: Power, Fear, Savagery, Civilization, and Freedom.

Instruct the students to read the novel with a focus on their assigned theme and take notes

Have each group present their findings to the class, focusing on specific examples from the text.

4. Discussion (20 minutes)

Lead a class discussion about the characters and themes of the novel, encouraging the students to express their opinions and ideas.

Ask open-ended questions that promote critical thinking and discussion, such as: "Why do you think the characters behave the way they do?" or "How do the themes of the novel connect to our own experiences in society?"

5. Writing Assignment (30 minutes)

Instruct the students to write a short essay (1-2 pages) on one of the themes of the novel, exploring how it is portrayed in the story and how it relates to their own experiences in society.

Provide prompts and guidelines for the essay if necessary.

Encourage the students to use evidence from the text to support their arguments.

6. Conclusion (10 minutes)

Summarize the key ideas and concepts that the students learned in the lesson.

Remind the students that they will be able to continue exploring the novel in the upcoming lessons.

Assessment:

The teacher will assess the students based on their participation in group work and class discussion, as well as the quality of their written assignments. The written assignment will be graded based on clarity, organization, and use of evidence from the text.

'G Regenerate response

1

Write test questions based off of lord of the flies at a

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Lord of the Flies discussion questions

- 1.What do you think the author's message is in "Lord of the Flies"? Why do you think he wrote this book?
- 2.Why do you think the boys on the island start to act more like animals as time goes on?
- 3.Do you think Ralph is a good leader? Why or why not?
- 4. Why do you think Jack becomes obsessed with hunting and killing pigs?
- 5.How do the characters change throughout the book? Which character changes the most, and why?
- 6.Why do you think Piggy is often bullied and not taken seriously by the other boys?

write questions for a

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2

81

11th Grade Civics Class

Write questions for a 11th grade civics class test

- 1. What are the three branches of the US government? Explain their roles and responsibilities.
- 2. What is the Bill of Rights and why is it important to American citizens?
- 3. What is the difference between a democracy and a republic? Which one does the US have?
- 4. What is the electoral college? How does it work in US presidential elections?
- 5. What is the process for passing a bill into law in the US Congress?
- 6. What is the Supreme Court and how does it impact the US legal system?
- 7. What are civil rights and civil liberties? What is the difference between them?
- 8. What is gerrymandering? How does it impact US elections?
- 9. What are interest groups? How do they impact the US political system?
- 10. What is the role of the media in US politics? How has the media evolved over time?

Write questions for a 11th grade civics class test on the executive branch

- 1. What is the executive branch and what is its role in the US government?
- 2. What is the difference between an executive order and a law passed by Congress? Can executive orders be challenged in court?
- 3. What are the qualifications for becoming the President of the United States?
- 4. What is the role of the Vice President in the executive branch?
- 5. What is the Cabinet and how does it advise the President?
- 6. What is the role of the Executive Office of the President? What departments and agencies make up the EOP?
- 7. What is the State of the Union Address and why is it important?
- 8. What is the process for appointing federal judges, including Supreme Court justices?
- 9. What are the war powers of the President? How have they been used throughout US history?
- 10.What is the process for impeaching and removing a President from office? What are the grounds for impeachment?

write an iep for a se

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8

Write an IEP for a second grader with severe ADHD

An Individualized Education Plan (IEP) for a second grader with 2. severe ADHD would be tailored to meet the specific needs of the student. Here is an example IEP:

Student: [Student's Name] Grade: 2nd Date of IEP: [Date]

Present Level of Performance: [Student's Name] is a second grade student who has been diagnosed with severe ADHD. [He/She] has difficulty sustaining attention in the classroom and during independent work, which often results in incomplete assignments. [He/She] struggles to regulate [his/her] behavior and impulses, which sometimes leads to disruptive behavior in the classroom. [He/She] often interrupts peers during class discussions and has difficulty following directions. [He/She] struggles with organizational skills and often loses materials, such as pencils and homework.

Goals and Objectives:

1. [Student's Name] will improve [his/her] ability to sustain attention during independent work and classroom activities by participating in a 10-minute mindfulness exercise at the start of each class period. [He/She] will remain on task for at least 10 minutes without interruption in at least 3 out of 5 opportunities. [Student's Name] will improve [his/her] ability to regulate behavior and impulses by practicing self-monitoring strategies. [He/She] will use a behavior chart to track [his/her] behavior throughout the day and earn rewards for demonstrating positive behavior. [He/She] will demonstrate positive behavior for at least 80% of the school day in at least 3 out of 5 opportunities.

3. [Student's Name] will improve [his/her] ability to follow directions by participating in a "following directions" activity during each class period. [He/She] will follow verbal and written directions with 80% accuracy in at least 3 out of 5 opportunities.

4. [Student's Name] will improve [his/her] organizational skills by using a visual schedule to keep track of classroom activities and assignments. [He/She] will use the visual schedule to complete assignments on time and turn them in to the teacher. [He/She] will complete and turn in at least 80% of assignments on time in at least 3 out of 5 opportunities.

Special Education and Related Services: [Student's Name] will receive the following special education and related services to support [his/her] academic and social-emotional development:

- 1.Small group instruction in reading and math
- 2. Counseling services to address socialemotional needs
- 3. Consultation with the school psychologist to develop behavior management strategies
- 4. Occupational therapy to support fine motor skills and handwriting
- 5. Speech and language therapy to support communication and social skills

Assessment and Progress Monitoring: [Student's support the parents in ur Name] will be assessed and progress monitored advocating for their child in the following ways:

1.Ongoing observation by the teacher and other school staff

2. Review of progress on IEP goals at least every 6 months

3. Administration of formal assessments, such as the Woodcock-Johnson Tests of Achievement and the Behavior Assessment System for Children, as needed to inform instruction and measure progress

Placement: [Student's Name] will be placed in a general education classroom with support from special education and related services.

Parental Involvement: [Student's Name]'s parents will be involved in the development and implementation of the IEP. They will receive progress reports at least every 6 months and will be invited to participate in IEP meetings. The school will provide information and resources to support the parents in understanding and advocating for their child's education.

Artificial Intelligence

In the World Beyond School



ChatGPT

- ChatGPT can write:
- Technical reports
- Law briefs
- Code



USER this code is not working like i expect — how do i fix it?

```
resultWorkerErr := make(chan error)
defer close(resultWorkerErr)
go func() {
        defer cancel()
        resultWorkerErr <- b.resultWorker(ctx)
}()
err := b.worker(ctx)
cancel()
if err == mll {
        return <-resultWorkerErr
}
return multierror.Append(err, <-resultWorkerErr)</pre>
```



Shift from Content



Shift from Content to Skills.



Industrial-age machines enabled workers to accomplish physical task beyond the capabilities of their own bodies.



Industrial-age machines enabled workers to accomplish physical task beyond the capabilities of their own bodies.

Al is doing the same to knowledge workers.



Al will:

Replace some jobs



Jobs at Risk by Al

- Computer programmers
- Coders
- Software developers and engineers
- Content creators
- Technical writers
- Journalist
- Advertisers
- Para legals



Jobs at Risk by Al

- Court reporters
- Legal secretaries
- Medical secretaries
- Data entry clerks
- Medical assistants
- Medical records personnel
- Market researchers
- Financial analysts



Jobs at Risk by Al

- Data managers
- Traders
- Insurance agents
- Graphic designers
- Accountants
- Bookkeepers
- Customer service agents
- Web designers



Al will:

- Replace some jobs
- Fundamentally change many jobs



Impact of AI in corporate workplace

- 7% of jobs will be eliminated
- 67% of workers will have half of their workload impacted
- 30% will have minor impact (physical labor and human touch)



Co-Counsel



Conduct legal research



- Conduct legal research
- Summarize court opinions and filings



- Conduct legal research
- Summarize court opinions and filings
- > Assemble, analyze and create redline version of contracts



- Conduct legal research
- Summarize court opinions and filings
- > Assemble, analyze and create redline version of contracts
- Propose arguments for legal briefs and filing



- Conduct legal research
- Summarize court opinions and filings
- > Assemble, analyze and create redline version of contracts
- Propose arguments for legal briefs and filing
- Prepare deposition questions



- Conduct legal research
- Summarize court opinions and filings
- > Assemble, analyze and create redline version of contracts
- Propose arguments for legal briefs and filing
- Prepare deposition questions
- > All communications



In 1970's the prediction was ATMs would dramatically reduce the need for bank tellers.



There are more bank tellers today than there were in the 1970's.

But they preform different tasks and need a different set of skills.



Most workers will not be replaced by AI.



Most workers will not be replaced by AI.

They will be replaced by a person with skills that AI does not possess.



Technology applications embedding Al

- Deep Fake
- Blockchain
- Bioscience
- Nanotechnology
- Virtual and Augmented Reality
- Machine Learning
- > 3D Printing



Technology applications embedding AI

Deep Fake





















What should we be focused on?





What should we be focused on?

 The challenges to and opportunities for our existing instructional practices?





What should we be focused on?

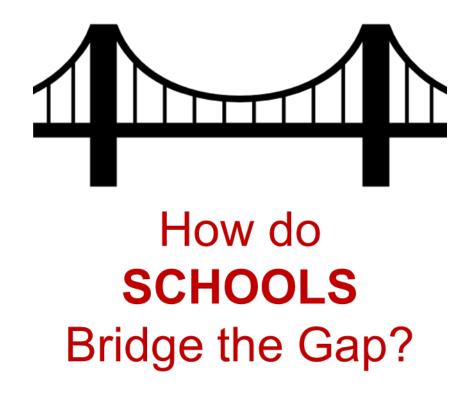
- The challenges to and opportunities for our existing instructional practices?
- The skills, knowledge and attributes our students will need to be independent in the AI age?



Our Kids Are Different











Needed

Knowledge

Skills



A critical skill in the age of artificial intelligence is the ability to do sophisticated editing.



A critical skill in the age of artificial intelligence is the ability to write sophisticated prompts



A critical skill in the age of artificial intelligence is technical reading and writing.



A critical skill in the age of artificial intelligence is digital ethics.



Needed

- Knowledge
- > Skills
- Attributes
- Dispositions



Worker will need to:

- Develop skills not easily replicated by AI
- Be able to work in an AI environment
- Be resilient and adaptable



56 foundational skills that will help citizens thrive in the future of work.

56 DELTAS across 13 skill groups and four categories

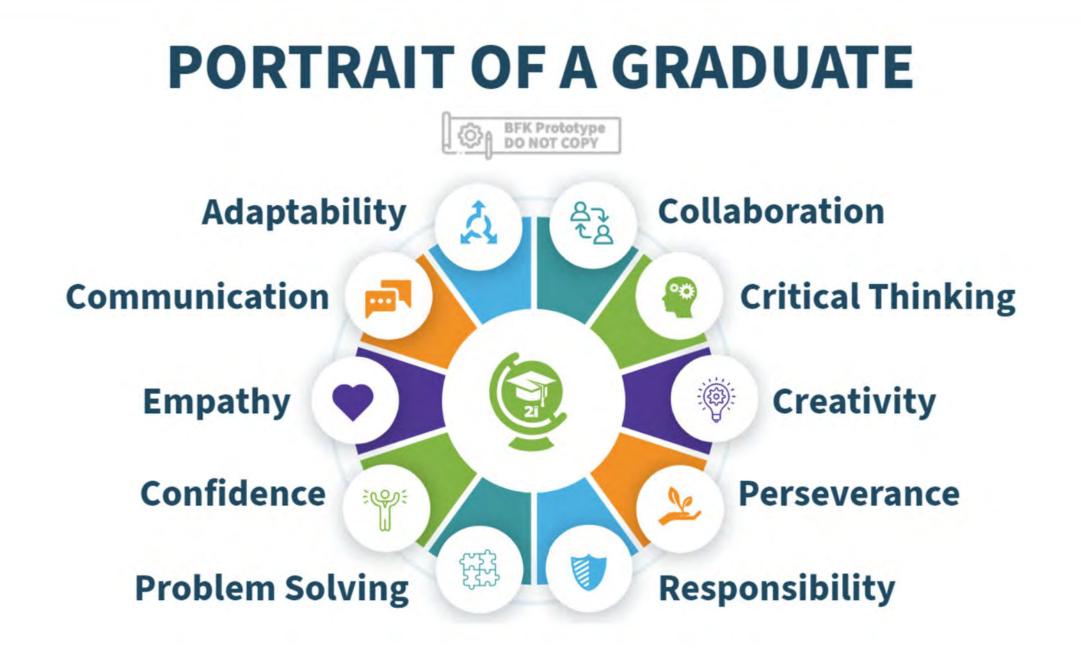
SOURCE: Marco Dondi, Julia Klier, Frederic Panier, and Jorg Schubert; *Defining the skills citizens will need in the future world of work;* McKinsey & Company, June 2021



Cognitive		Interpersonal	
 Critical thinking Structured problem solving Logical reasoning Understanding biases Seeking relevant information 	 Planning and ways of working Work-plan development Time management and prioritization Agile thinking 	Mobilizing systems Role modeling Win—win negotiations Crafting an inspiring vision Organizational awareness	Developing relationship Empathy Inspiring trust Humility Sociability
Communication Storytelling and public speaking Asking the right questions Synthesizing messages Active listening	 Mental flexibility Creativity and imagination Translating knowledge to different contexts Adopting a different perspective Adaptability Ability to learn 	Motivating different perconalities	CollaborationCoachingEmpowering
Self-leadership		Digital	
 Self-awareness and self- Understanding own emo and triggers Self-control and regulat 	management otions • Integrity • Self-motivation and	Digital Digital fluency and citizenship Digital literacy Digital learning	 Digital collaboration Digital ethics
Self-awareness and self- Understanding own emo and triggers Self-control and regulat	management btions Integrity Self-motivation and ion wellness engths Self-confidence G Energy, passion, and optimism	Digital fluency and citizenship Digital literacy	 Digital collaboration Digital ethics

enablement

Self-development

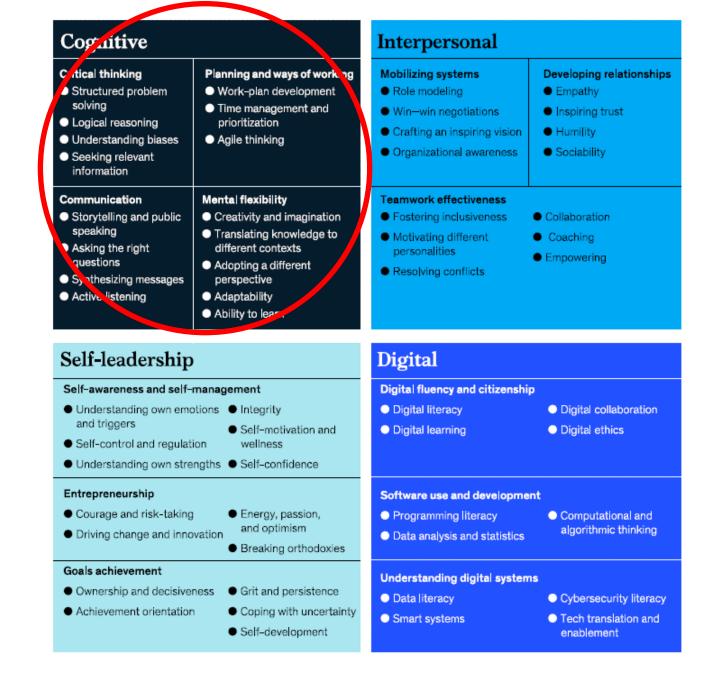


56 foundational skills that will help citizens thrive in the future of work.

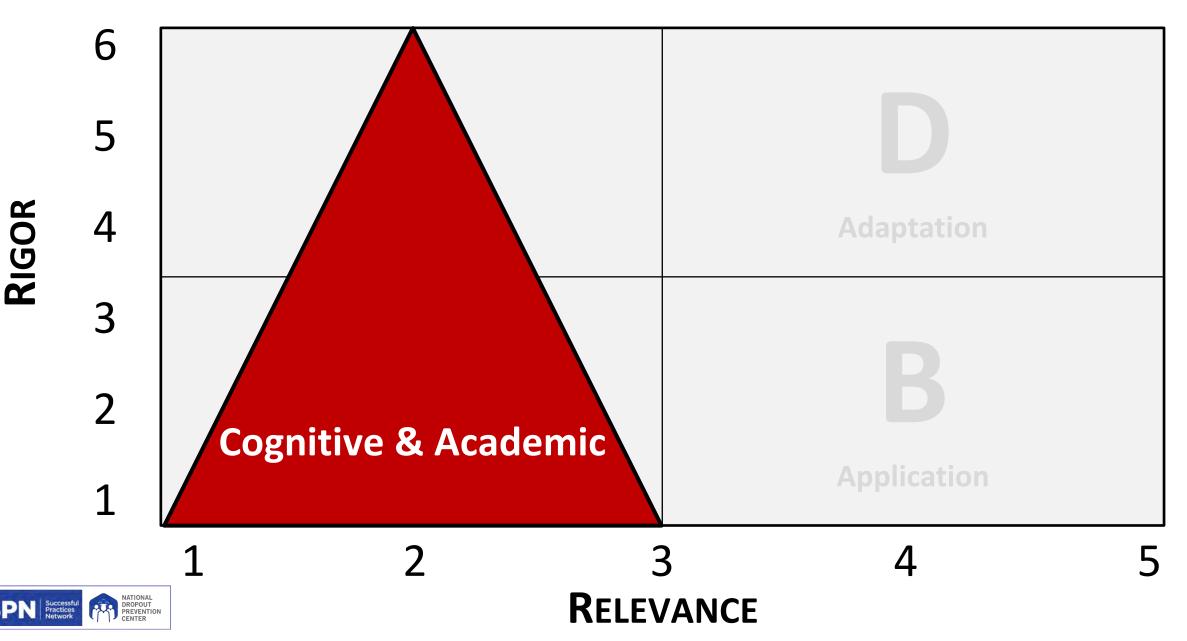
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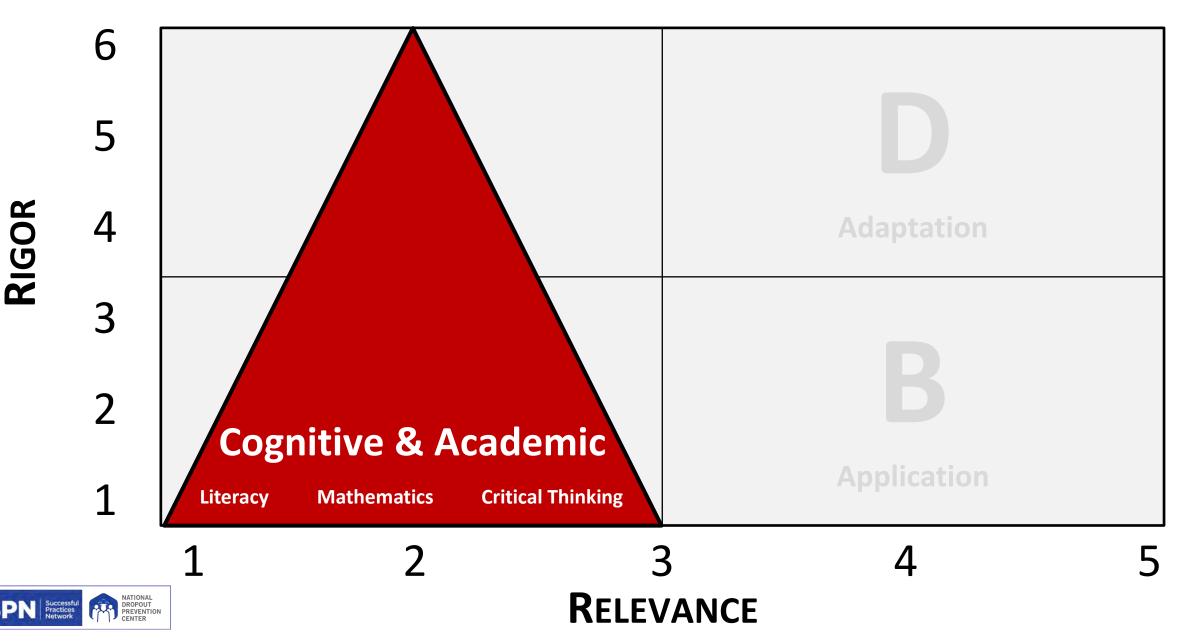




RIGOR/RELEVANCE FRAMEWORKTM



RIGOR/RELEVANCE FRAMEWORKTM



Emerging Literacy Skills

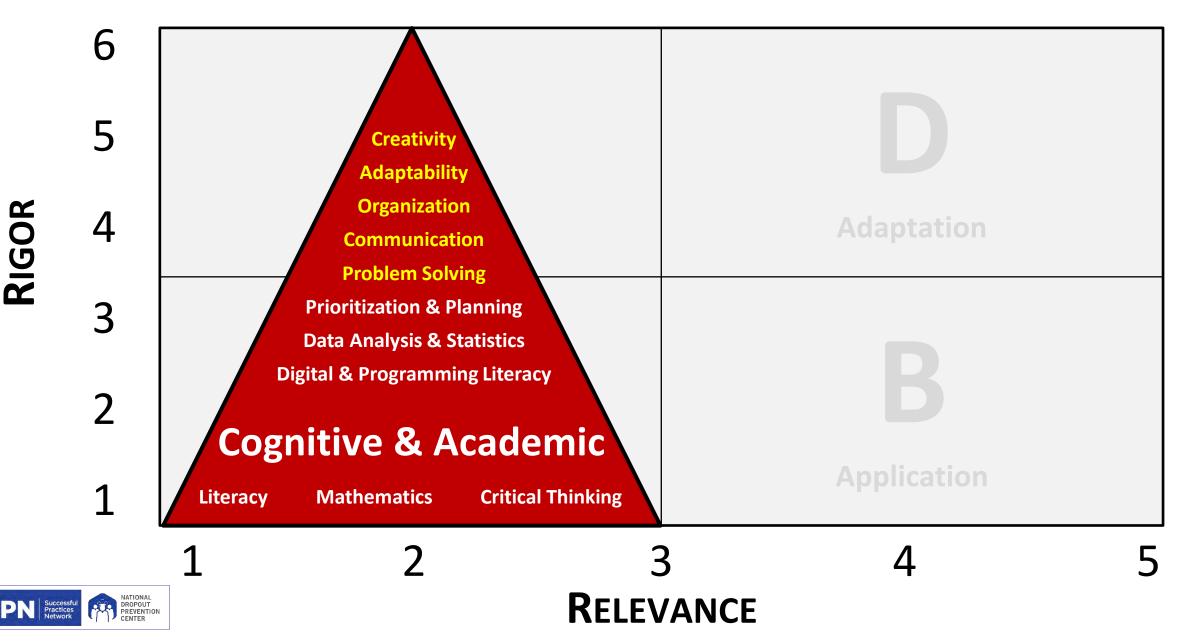
Editing Prompts > Digital Ethics >Technical Reading and Writing



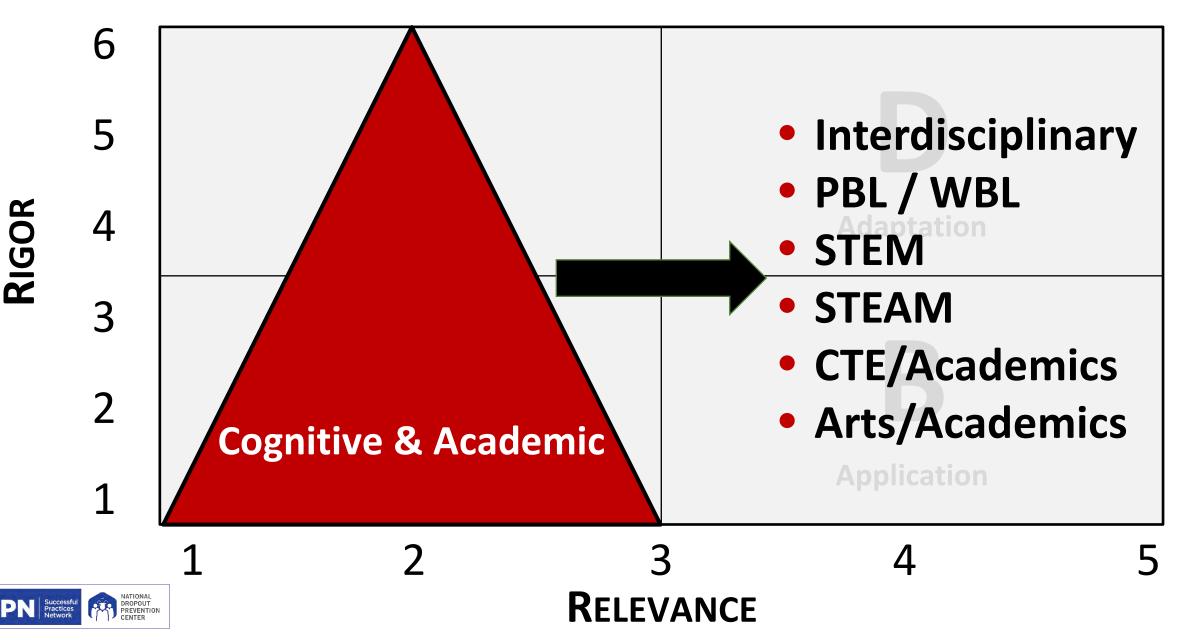
Shift from Content to Skills.



RIGOR/RELEVANCE FRAMEWORKTM



RIGOR/RELEVANCE FRAMEWORKTM



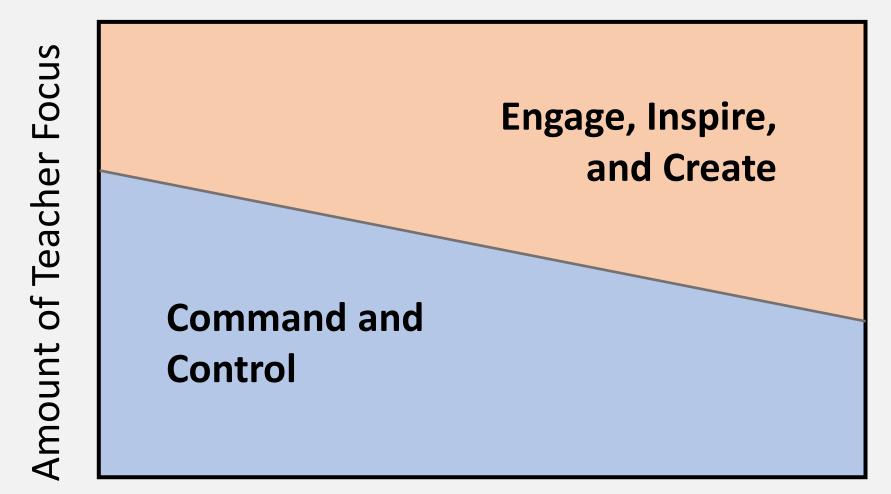
Build off what is working



We saw a shift in instructional practices from command and control to engage, inspire, and create.



A Shifting Environment



Historically to the Present

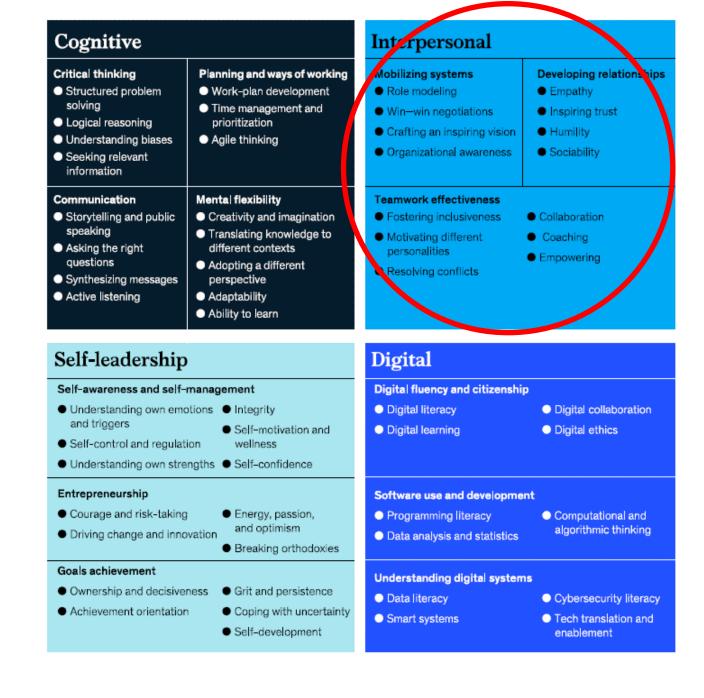


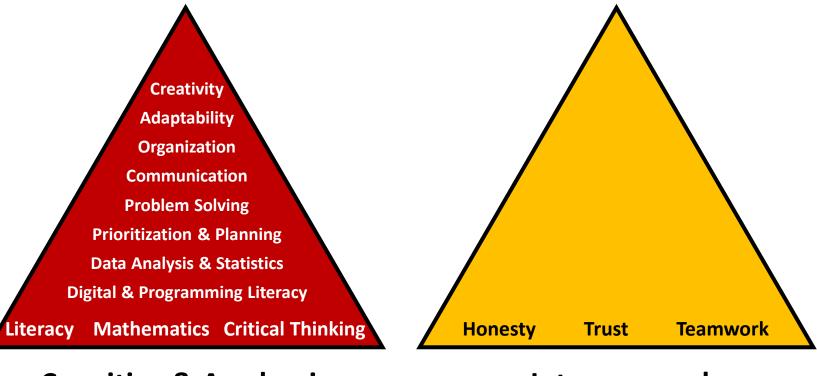
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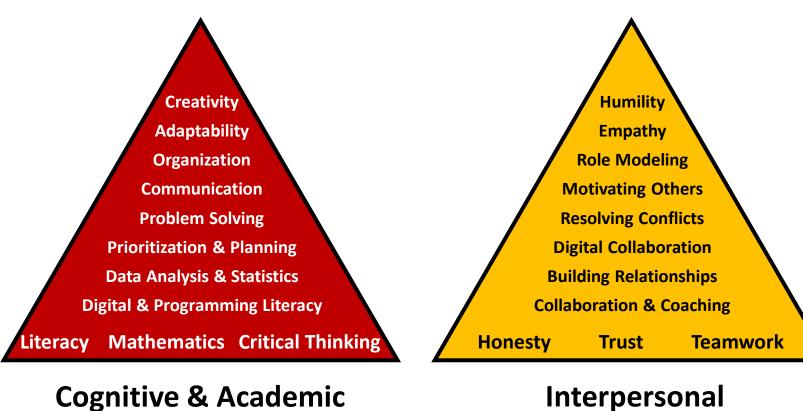




Cognitive & Academic

Interpersonal





Interpersonal



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Future Focused Success Framework Domains





How well does your curriculum, instructional practices and assessments align to needed skills, knowledge and attributes?



The Rubrics for Future Focused Success classify the degree to which the **Curriculum**, **Instruction**, and **Assessment** exhibit future focused characteristics in the classroom. Additionally, a fourth category allows the teacher to rate the level at which **Students** are modeling future focused skills, knowledge, and dispositions.

The Rubrics for Future Focused Success have three domain categories: **Cognitive & Academic**, Interpersonal, and **Self-Leadership**.



an Instructional Design Issue



- an Instructional Design Issue
- a Workforce Design Issue



- an Instructional Design Issue
- > a Workforce Design Issue
- a Learning Space Issue



- an Instructional Design Issue
- a Workforce Design Issue
- > a Learning Space Issue
- an Assessment Issue



Where are you on this Journey and where do you want to be in 2 years?



Join Us For the 2024 **FUTURE FOCUSED** S c h o o l s C o n f e r e n c e Explore The Why, What & How of Future-Driven Districts





Washington Hilton 1919 Connecticut Ave NW, Washington, DC, 20009



RSVP

Scan the QR code to register & use promo code Summer2023 for exclusive pricing for Learning 2025 guests!



Dr. Bill Daggett Founder, Successful Practices Network David R. Schuler Executive Director, AASA

SPN Successful Practices Network





bill@bdaggett.com

