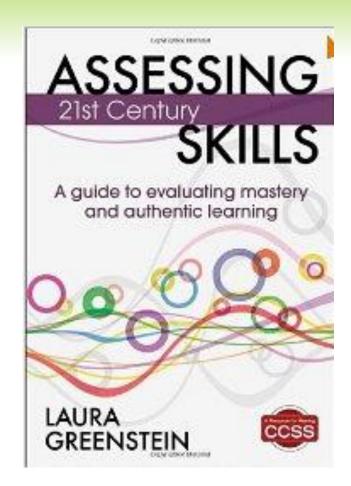
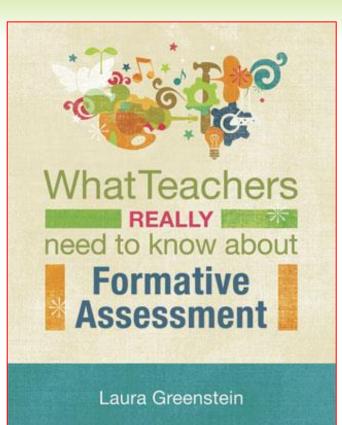


#### ASSESSING 21<sup>ST</sup> CENTURY SKILLS PRODUCTS, PROCESSES, POSSIBILITIES

Assessment Network Laura Greenstein, Ed.D.





### THROUGH THE LENS OF ASSESSMENT

What students know and can do as a result of teaching and learning.



### LEARNING TARGETS

- Oefine 21<sup>st</sup> century skills.
- Describe the progression from Common Core to 21<sup>st</sup> Century.
- Oevelop 21<sup>st</sup> century competencies in learners.
- Illustrate strategies for assessing these competencies.

## WHAT'S BEEN SAID ABOUT 21<sup>st</sup> century Skills

- "How long have 21<sup>st</sup> century skills been around? For about 21 centuries." Andy Rotherham, Education Sector
- "21<sup>st</sup> Century skills are the latest doomed pedagogical fad" Jay Mathews, Washington Post
- We should be well on our way to creating 22<sup>nd</sup> century classrooms" Alfie Kohn
- While the Common Core Standards focus on what is essential they do not describe all that can or should be taught." (CCSS)

What are 21<sup>st</sup> C. Skills?

P-21 U. Melbourne CPE OECD Metiri/NCREL

And earlier... Costa and Kallick Benjamin Bloom Edward Glaser



## **COMPLEXITY SIMPLIFIED**

Thinking

Acting

Living



### 21<sup>ST</sup> CENTURY THINKING



- © CRITICAL THINKING
  - Evaluate, Analyze, Synthesize

#### PROBLEM SOLVING

• Reason, Interpret, Apply

#### OREATIVITY

• Curiosity, Innovation

#### METACOGNITION

• Reflection, Mindfulness

Students use critical thinking, creativity, and problem solving skills every day.



#### 21<sup>ST</sup> CENTURY ACTIONS



- COMMUNICATION
- COLLABORATION
- DIGITAL LITERACY
- TECHNOLOGY PROFICIENCY

#### **Visual Literacy**

#### A PERIODIC TABLE OF VISUALIZATION METHODS 204 Strategy Visualization **Data Visualization** G C former with or articles camp The partnersh was of pergenerative start increases time in the medical distribution (Developer, and the perfect and tradimentation of strength is traditioned ...... Th **Metaphor Visualization** 2-0-4 204 Information Visualization Ga Provide a strategy out of the strategy out of the second strategy of Plant Response provide plantach a se provide and provide the second plantach a set provide and provide the second plantach and plantach response and plantach and an Tes Tr Me Mm St 66 or State Married State --20 ×0< - 01 **Concept Visualization Compound Visualization** FO Pi L Statut a statute (rad); assists into 60 Fp 65 The surgermentary on al project propie in anno Arrent & on study alterna a linear Br Rí pro ches bes sheet and in case Real Property 204 204 • C + \* 6 \* >04 104 - 253 Sq Hy SW в Ac R Pa Cy . Ve 10 Cc. Ar Ge Pm Pr Kn Ber .841 100 . 22 -Sec. Sec. Hi Se Sa In E Pt FI CI Le Py Ge TI Dt Cp Cf. Co IC Lm a state of the local division of the local d -Sec. >0< < (1) > 2-014 2:0 2-0-4 104 <n 1 EV Tk Sp Sy Df Se So Fo Ib Pr Pe ¥ Da Tp Cn Sn Hb and shared Note: Depending in your location and convection speed it can take some time to load a pop-up picture. version 1.5. Process. Cy Visualization C Faint Langier & Parriel | Spring mediated interacting Structure Hy Visualization >04 -104 >04 ->0< > O - C 2-0-4 ->04 >04 Su Pc Ho Fd Ft s TC St Oc Mg Ld Po Sm Is: 0 Overview and the second -100 ikel. -. Detail ------Sec. 14 0 Detail AND Overview 204 >0< ->0< 0 >0< 10 >04 1 Pf Mz Bm Stc Vc Hy Ta Edil 59 Ad De Sr Sđ 4.30 Drivergesst thinking --Total Date ing mater 1000

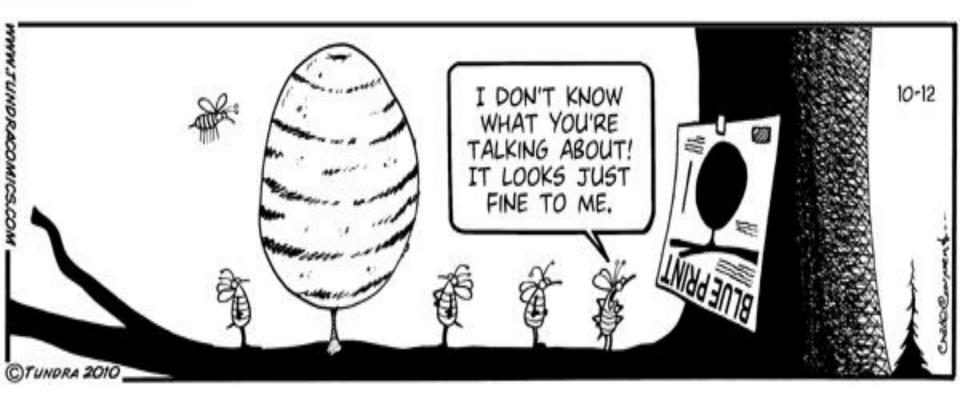
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2.4 Convergent chinking



# Students communicate and collaborate every day.



### 21<sup>st</sup> Century <u>LIVING</u> in the World



- CIVIC RESPONSIBILITY
- GLOBAL UNDERSTANDING
- LEADERSHIP AND RESPONSIBILITY
- OLLEGE AND CAREER SKILLS:

Work Ethic, Goal Setting,

Time Management, Integrity

### GLOBAL AWARENESS



A positive work ethic contributes to success



#### CHECK-IN Collaboratively build a one sentence summary of 21<sup>st</sup> century skills.



List your top three 21<sup>st</sup> Century Skills

### CCSS ELA AND MATH NEW TEST QUESTIONS



### 4<sup>TH</sup> GRADE MATH PROBLEM

PARCC RELEASED ITEMS

Numbers of stadium seats (grade 4)

Baseball stadiums have different numbers of seats. Drag the tiles to arrange the stadiums from least to greatest number of seats.

San Francisco: 41,915

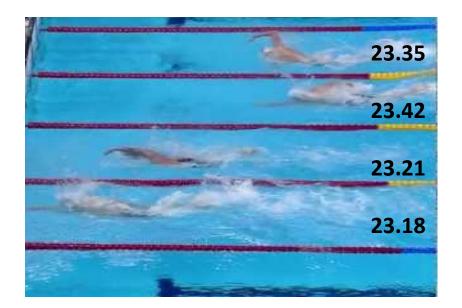
Washington: 41,888

San Diego: 42, 445



## 6<sup>TH</sup> GRADE MATH

Four swimmers compete in the 50 meter race. The finish time for each swimmer is shown in the video



Explain how the results of the race would change if the race used a clock that rounded to the nearest tenth.

### HIGH SCHOOL MATH PROBLEM

The first four terms of a sequence are: 8,12,18,27,... Write a recursive function for this sequence:



Hannah makes 6 cups of cake batter. She pours all the batter into a rectangular cake pan with a length of 11 inches, a width of 7 inches, and a depth of 2 inches. One cubic inch is approximately 0.069 cup.

What is the depth of the batter in the pan to the nearest 1/8 of an inch. (Empty pan is illustrated)

## GRADE 3 ELA QUESTIONS

- Write an ending for the story that tells what the characters say and describes actions and events.
- Watch an informational video and read two articles about dental health. Take notes on these sources, and then write an informational essay about dental health.



## ELA GRADE 5



#### Item Prompt:

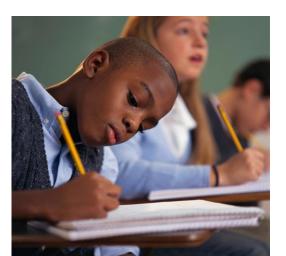
In this story, the fox's character can be described as mischievous. Write a paragraph explaining why the fox's character is mischievous. Use details from the story to support your answer.

#### Writing Assignment:

You have read three articles about child philanthropists. Think about their causes and choose which one you would most like to support. Write an opinion essay explaining why you chose that cause and what you could do to help support it.

## ELA MIDDLE SCHOOL

Grade 7: Explain the meaning and purpose of the metaphor in the final sentence of the text. Use details from the text to support your response.



## ELA HIGH SCHOOL

Grade 11: Explain why the author most likely provided general information about estuaries BEFORE the "Principles and Concepts" section. Support your answer using details from the passage.



## SOCIAL STUDIES, SCIENCE, TECHNICAL

Grade 10: (read about political cartoons, review a packet of cartoons) Plan and deliver an oral presentation on the power of political cartoons as a tool for defining issues and influencing public opinion. Support your analysis with details from what you have read and viewed.



#### EXTENDING THE CORE

#### <u>CORE</u>

- Literacy
- Numeracy
- ELA in History,Science, Tech

Stevton.com

#### 21<sup>st</sup> CENTURY SKILLS

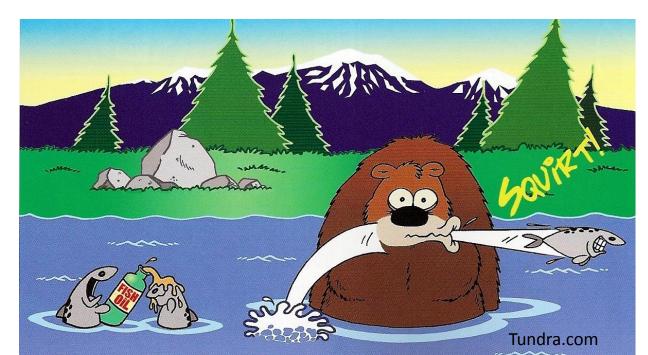
- Thinking: critical thinking, problem solving, creativity, metacognition
- Acting: Communication, Collaboration, Digital Literacy, Technology Proficiency
- Living: Citizenship, Leadership,
   Global Understanding,
   College/Career

# CORE PROVIDES A FOUNDATION 21<sup>ST</sup> CENTURY SKILLS BUILD THE DWELLINGS

Blog.builddirect.com

## PARADIGM: Lessons Worth Learning

- 20<sup>th</sup> and 21<sup>st</sup> century knowledge and skills are not mutually exclusive
- Multi-century skills have been learned since before millennium were counted
- Content-rich learning must be integrated with authentic applications (Go deeper, not wider)



## 21<sup>st</sup> Century Demonstrations of Learning

- Performances,
   Demonstrations
- Publishing: Script, Blog, Reviews
- Products: Games, Inventions
- Presentations
- Simulations/Case Studies
- Original Designs: Print, Graphic, and Multimedia



## SPECTRUM OF 21<sup>ST</sup> CENTURY ASSESSMENTS



- Rubrics
- Checklists
- Observations
- Project Logs
- Contracts
- Formal/Informal Questions



### ASSESSMENT IN THE 21<sup>ST</sup> CENTURY

- Core Knowledge is **aligned** with 21<sup>st</sup> Century skills
- Integrated with instruction: Embedded formative assessment guides teaching and learning, curriculum and planning
- Multiple measures provide numerical data and support informed judgment
- Feedback to help students progress towards targets; Flexible and responsive to students
- Skills and application are emphasized in the context of content knowledge.
- Embed knowledge and skills into demonstrations of learning: assess both
- Fair (without bias), Valid (measures intended targets), Reliable (consistent & error free)

## PROGRESSIONS

CORE	21 <sup>st</sup> CENTURY	STRATEGY	ASSESSMENT



Next Slide: Complete your own progression

#### PROGRESSIONS: 20th to 21st Century

20 <sup>th</sup> Century	21 <sup>st</sup> Century	Strategy	Assessment
Literacy: Determine central ideas	Verify data in a news report	Debate on a current topic	Research Skills Debate Rubric

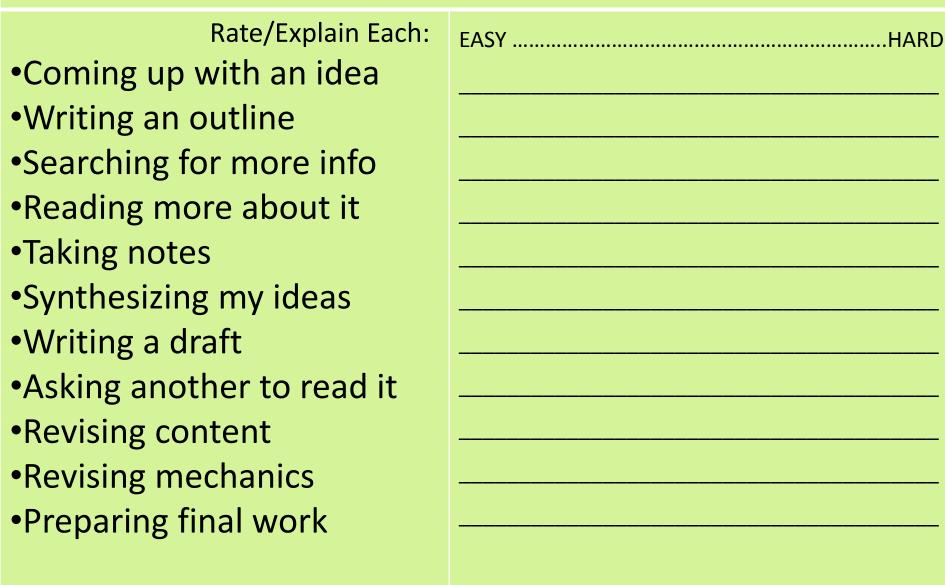
#### HYBRID RUBRIC FOR A PROJECT

Standard/Learning Target Rate each on a 1 to 4 scale Provide feedback on each	Student Rating: Exemplary, Proficient, Room for Growth, Novice REFLECTION	Teacher Assessment: Exemplary, Proficient, Room for Growth, Novice FEEDBACK
Content: Main ideas are clearly described Information is fully accurate		
Creative elements: Original ideas Fluency: multiple ideas		
Reliable Research:Multiple sources are usedSources are accurately citedInformation is synthesized intoa cohesive summary		
Presentation:Logical sequenceStays focused on topicMeets required lengthAll members participate		

## PROBLEM SOLVING RUBRIC

Standard:	4 EXPERT	3 COMPETENT	2 APPRENTICE	1 NOVICE	Score
Identifies the problem	I clearly described the problem in relation to the situation and included supporting details	I described the basics of the problem with some clarifying information	I explained parts of the problem but don't think I got it all	I had difficulty recognizing and defining the problem	
Identifies multiple solutions	I came up with at least 4 feasible and clearly described solutions	I offered 2-3 plausible solutions	I described one or two possible solutions	I couldn't think of any solutions	
Defends solution	I analyzed all the solutions and picked one that shows my understanding of the problem and the outcomes	I evaluated the solutions and picked one that is feasible	l gave a simple explanation for one choice	I wasn't able to explain my solution and wasn't sure it would work	

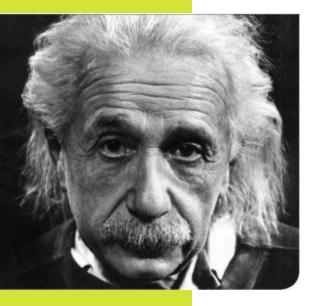
#### Metacognition THINKING ABOUT WRITING



## PUBLIC SPEAKING

Checklist for Public Speaking	Comments
✓ if satisfactory performance according to standard	
X if not satisfactory based on standard or guideline	
Introduction captures the attention of the audience	
Purpose is evident throughout	
Content is understandable and logically sequenced	
Speech: Language is appropriate to the purpose.	
Volume, rate, and articulation are effective.	
Engages with audience through body language, eye	
contact, and gestures.	Gigaom.com
Used technology to support message	
Summary synthesizes main ideas in presentation	

### EDUCATIONAL CONUNDRUMS



- "Not everything that's counts can be counted and not everything that's counted counts." (Attributed to Albert Einstein and William Bruce Cameron)
- What do today's students need to know and do to be successful in a world that we cannot yet see?

## **CONTACT INFORMATION**

#### Laura Greenstein

- lauragteacher@hotmail.com
- http://www.assessmentnetwork.net
- *"Assessing 21<sup>st</sup> Century Skills"* Published by Corwin/Sage
- <u>
   "What Teachers Really Need to Know About Formative Assessment</u>": an ASCD Publication

### References

- Partnership For 21<sup>st</sup> Century Skills
- Organisation for Economic Co-operation and Development
- enGauge: NCREL and Metiri Group
- Output Center for Public Education
- Our Content of Melbourne: ATC21S
- Ourriculum 21: Heidi Hayes Jacobs
- 21<sup>st</sup> Century Skills: Bernie Trilling & Charles Fadel
- SBAC Released Items at <u>http://dese.mo.gov/divimprove/assess/sbac.html</u>
- PARCC Information at <u>http://parcconline.org/about-parcc</u>