

IMPROVE 21ST-CENTURY SKILLS IN CLASSROOMS

**Critical Thinking,
Communication,
Collaboration, and
Creativity**

Using Supplemental Resources



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Teacher Educator

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Former English Teacher



**MEET THE
AUDIENCE!**

Teacher/Instructor

Coach/Specialist

Librarian

Administrator

Other

3 RS OF EDUCATION



Reading



Writing



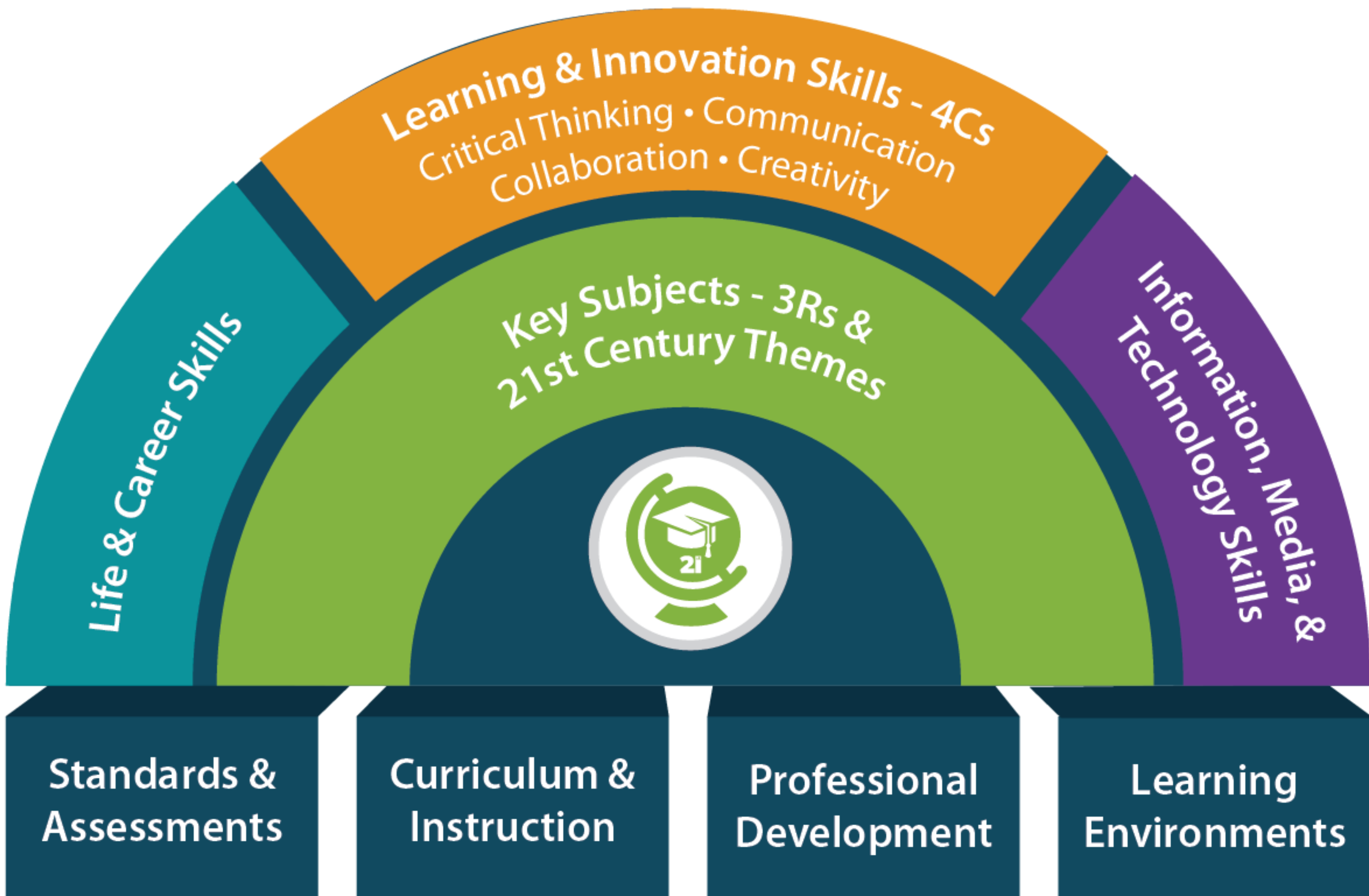
Arithmetic

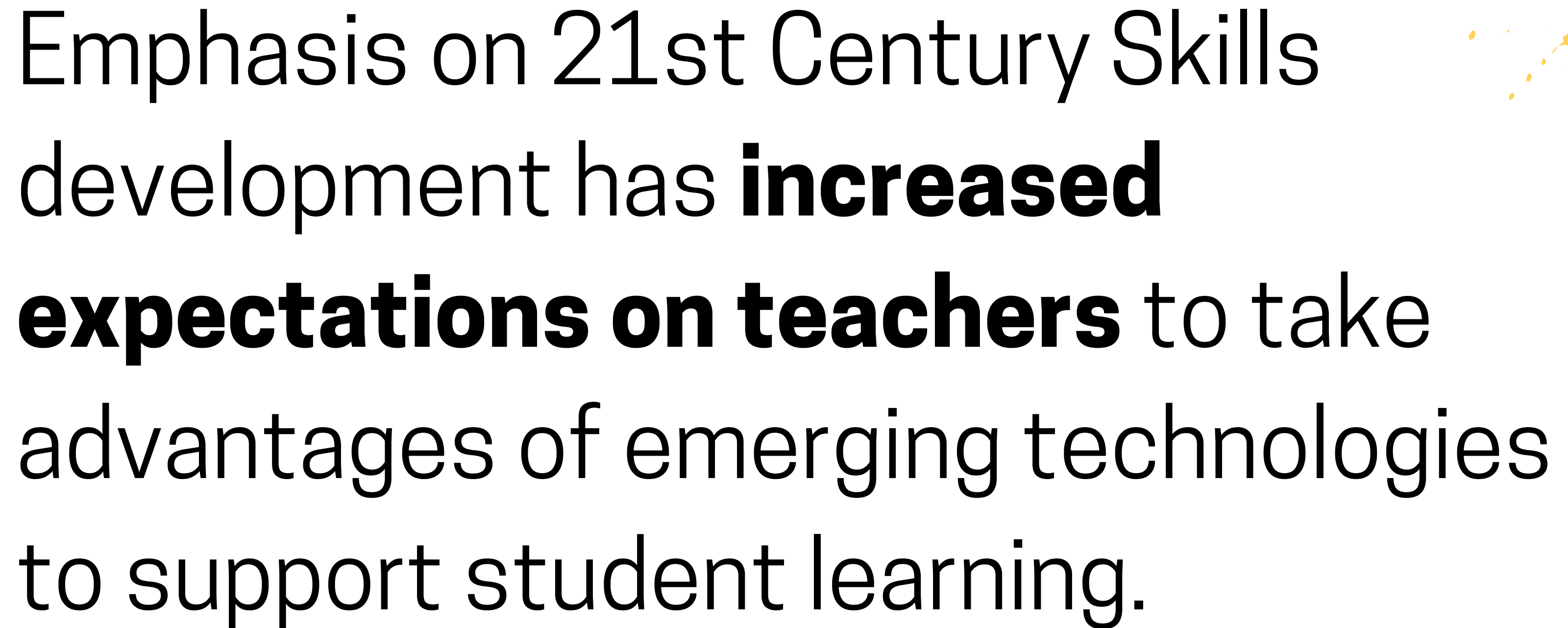
self-direction critical thinking technology
information literacy flexibility
collaboration productivity
open-mindedness

21ST CENTURY SKILLS



emotional intelligence time management
responsibility creativity media literacy
adaptability evaluation leadership
accountability

(Battelle for Kids, 2019; Chalkiadaki, 2018)








The text is enclosed in large teal quotation marks. There are decorative teal lines and splashes of yellow and orange paint around the text. The word 'increased' is in bold black font, as are the words 'expectations on teachers'.

Emphasis on 21st Century Skills development has **increased expectations on teachers** to take advantages of emerging technologies to support student learning.







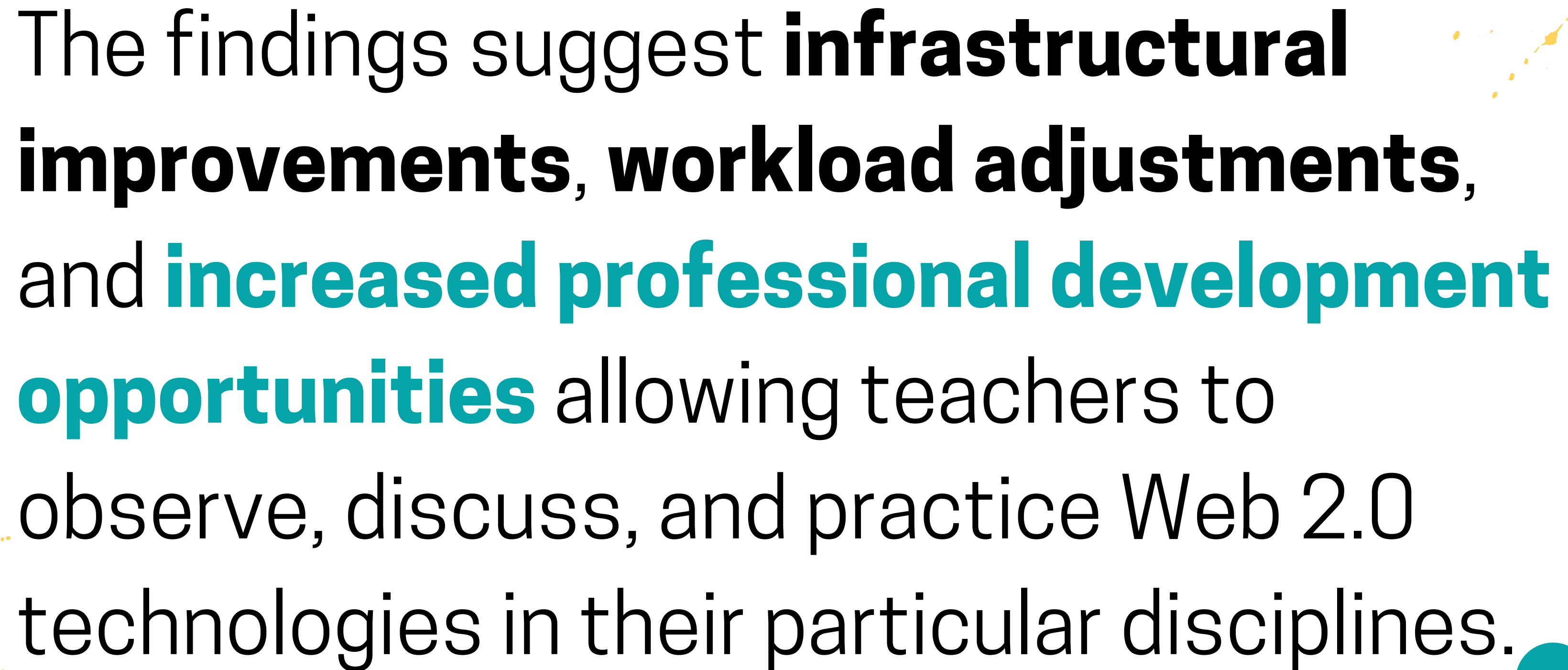
Yet it is not clear whether teachers are well equipped with the **necessary skills, support, and positive attitudes** toward integrating them in their practices.





While teachers are fairly proficient in their computer and internet skills and have fairly high computer self-efficacy, their **workload and a structured and standardized curriculum** were inhibitors.





The findings suggest **infrastructural improvements, workload adjustments,** and **increased professional development opportunities** allowing teachers to observe, discuss, and practice Web 2.0 technologies in their particular disciplines.

4 CS OF LEARNING & INNOVATION



Communication



Critical Thinking



Collaboration



Creativity

CRITICAL THINKING



CRITICAL THINKING

“ There is no consensus on a common theoretical definition of CT among scientists, educators, psychologists, or philosophers.

CRITICAL THINKING

However, UNESCO (2013), in work supported by Johnson and Hamby (2015), has defined CT as a **process** that involves asking appropriate questions, gathering and creatively sorting through relevant information, relating new information to existing knowledge, re-examining beliefs and assumptions, reasoning logically, and drawing reliable and trustworthy conclusions.

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(Lombardi et al, 2022)

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Research Projects

- Formulate a research question
- Gather information



Background Information to Start

Searching 2,136,955 full text articles in 862 titles from 104 publishers

Research Popular Topics



Humanities

- Drone aircraft
- Violence in the workplace
- Racial profiling
- Charter schools
- Minimum Wage
- Corporate responsibility
- Gentrification
- Censorship
- Political Activism
- Social inequality
- Gun control
- The Petroleum Industry
- Imprisonment
- Genetic counselling
- Active learning
- Unemployment
- Coronaviruses
- Human Rights
- Racial Profiling



Health & Medicine

- Metabolic disorder
- Immune System
- Prote
- Human nutrition
- Clinical Trials
- Clone
- Hormone therapy
- Leukemia
- Pregnancy
- Nursing ethics
- Blood transfusion
- Cirrhosi
- Adrenal Glands
- Epilepsy
- Post-traumatic stress disorder
- Seasonal affective disorder
- Skin Cancer
- Pneumonia
- Blackwell, Elizabeth (1821–1910)



Popular Research Topics



[< Go Back to Research Quick Tips](#)

Using Pre-Research to Understand Your Topic



Using Pre-Research to Understand Your Topic

© 2019 Credo Reference Ltd.

0:00 / 1:00

CC 1x

Overview

- Reminds students to make use of a variety of source types and background resources to fully understand their rese
- Includes strategies for locating related sources and other avenues of research.

The image shows a video player interface for a video titled "How to Find Relevant Sources" on the Credo Reference website. The video player is partially obscured by a second window on the left, which shows a similar page titled "Using Pre-Research".

Page Header: Credo Reference logo and a search bar.

Navigation: A link to "< Go Back to Research Quick Tips" is visible above the video title.

Video Title: "How to Find Relevant Sources"

Video Content: The video frame shows a green background with a play button icon and the text "How to Find Relevant Sources". A copyright notice "© 2019 Credo Reference Ltd." is visible in the bottom right corner of the video frame.

Video Player Controls: A progress bar at the bottom shows the video is at 0:01 / 0:57. Other controls include play/pause, volume, full screen, and a CC icon.

Overview Section: Below the video player, there is an "Overview" section with the following bullet points:

- Reminds students to make...
- Includes strategies for l...

The second window on the left shows a similar "Overview" section with the following bullet points:

- Presents search as a process that requires flexibility and open mindedness.
- Includes strategies to help students navigate towards the most relevant results.

The image displays three overlapping browser windows from the Credo Reference website. Each window features a blue header with the Credo Reference logo and a search bar. The windows are positioned to show different video thumbnails and their corresponding descriptions.

Window 1 (Left): The video thumbnail is a solid teal color. The title is "Using Pre-Research".

Window 2 (Middle): The video thumbnail is a solid light green color. The title is "How to Find".

Window 3 (Right): The video thumbnail has a red background with a white document icon containing a female symbol and a play button. The title is "Why You Need Many Sources".

Below each video thumbnail is an "Overview" section with a list of bullet points:

- Using Pre-Research:**
 - Reminds students to make connections between sources
 - Includes strategies for identifying relevant sources
- How to Find:**
 - Presents search as a process
 - Includes strategies to help students refine their search
- Why You Need Many Sources:**
 - Encourages students to seek out multiple sources of information in order to gain a fuller understanding of their research
 - Reminds students not to analyze information in isolation. Instead, students are encouraged to make connections between sources

LEARN360 PLUS CLASSROOM VIDEO DISTRICT

research

Advanced Search
Browse Standards

VIDEOS

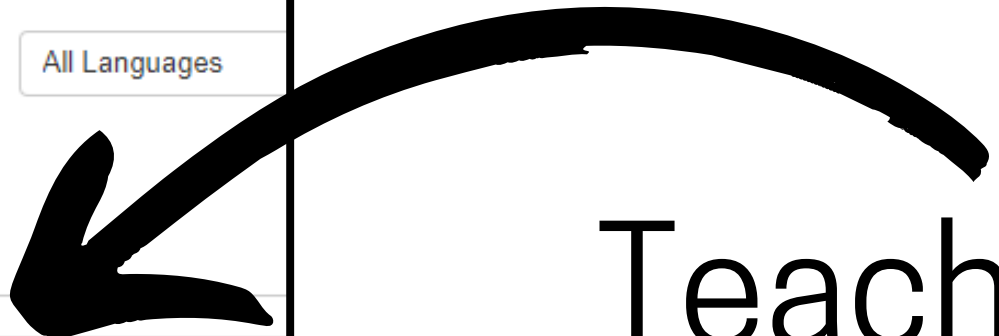
Filter 15,279 Results X

All Grades All Subjects All Formats All Languages
All Types All Producers All Copyright Dates

Internet Research (SEGMENT)
From Title: [How to do Research in the Library](#)
Hear how to narrow your topic while using a search engine, verify sources, and cite information from a website in a report. Miss Bookhawk urges students to use the library for **research** and ask librarians for help.
© 2005 | [Sunburst Visual Media](#), Grade(s): 6 - 8
Save Share Cite Standards

Research Unraveled (SEGMENT)
From Title: [Understanding Research in Health and Social Care](#)
Professor Rory Collins explains the **research** ongoing at UK Biobank, and what it will be used for. Dr. Collins gives an overview of cancer **research**.
© 2008 | [ClickView Pty Limited](#), Grade(s): 9 - 12, Academic/AP
Save Share Cite

Research Databases (SEGMENT)
From Title: [How to do Research in the Library](#)
View the contents of Infotrac Super Tom, Infotrac Health, NewsBank, World Book Encyclopedia, Chicago Discovering Authors, Exegy, American Leaders, and the SIRS series. Computerized catalogs include



Teach research practices

Research Projects

- Formulate a research question
- Gather information
- Evaluate and synthesize information
- Draw reasonable conclusions



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MIDDLE/HIGH

Search 300,137 multimedia assets

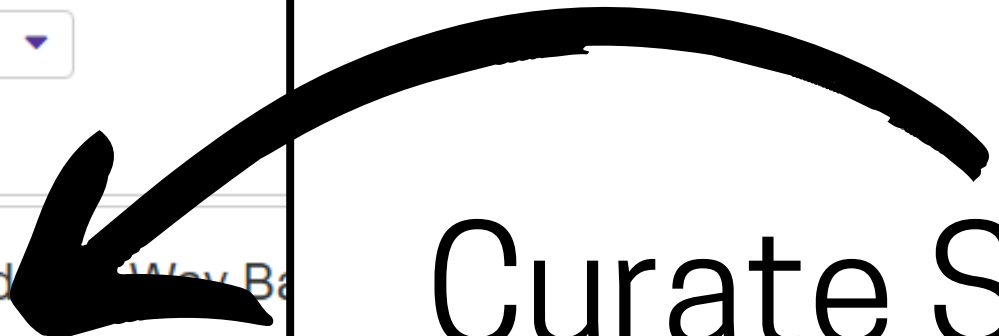
Filter 318 Results X Full Titles

All Grades | Impact of Technology on Society | Full Titles | All Languages
All Types | All Producers | All Copyright Dates

The Cannon: How The Cannon Revolutionised... (FULL VIDEO) | HD
Long range, high calibre weapons – the cannon helped propel the Union to victory. But how do advances that took place during the Civil War change the game?
© 2021 | Makematic, Grade(s): 9 - 12
Save Share Cite Standards

Civil War Innovation & Technology (FULL VIDEO) | HD
It was the most destructive conflict in US history – but the American Civil War also saw the emergence of technologies and innovations born from a will to win.
© 2021 | Makematic, Grade(s): 9 - 12
Save Share Cite Standards

Futureproof (FULL VIDEO) | HD PREMIUM
How can we predict job growth, training needs and the role of education in order to prepare for the future? What are the challenges and consequences of the pandemic, and of America's racial...
© 2021 | PBS, Grade(s): 9 - 12, Academic/AP
Save Share Cite Standards



Curate Sources with Informative Videos



[< Go Back to Research Quick Tips](#)

Synthesizing Research

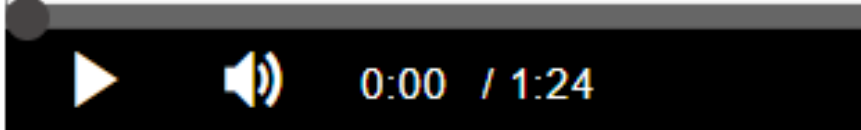


Overview

- Illustrates the process of synthesizing information from multiple research sources.
- Includes a discussion about the purpose of background sources such as encyclopedias in building a student's understanding.

< Go Back to Research Quick Tips

Synthesizing Research



Overview

- Illustrates the process of synthesizing information
- Includes a discussion about the purpose of backg

< Go Back to Research Quick Tips

Paraphrasing



Quoting



Paraphrasing



Summarizing



Overview

- Outlines the purposes and characteristics of paraphrased and summarized statements and direct quotes.
- After watching this video, students will be able to select the most appropriate method of presenting information base

CREATIVITY



CREATIVITY

“ Creativity is one of the **most discussed personal skills**. Creative production of **results** is the target (Martin, Nacu & Pinkard, 2016). The notion is, often, discussed alongside the concepts of **curiosity** and **imagination** (Wagner, 2008; Abdullaha & Osmanb, 2010; Teruggi & Zuccoli, 2015), while Ejsing-Duun and Skovbjerg (2016), also associate it with **playfulness**. It is, further, related with the ability to **innovate** (Sheikh & Siti, 2016; Cruz & Orange, 2016). ”

CREATIVITY

“ My contention is that creativity now is **as important in education as literacy,** and we should treat it with the same status.

”
(Robinson, 2006)

CREATIVITY

I don't mean to say that being wrong is the same thing as being creative. What we do know is, **if you're not prepared to be wrong, you'll never come up with anything original** -- if you're not prepared to be wrong. And by the time they get to be adults, most kids have lost that capacity. They have become frightened of being wrong.

Failure IS An Option

- Low-Stakes Practice
- Wrong Answer Day



CREATIVITY

Spark Creativity.

- Creative Challenges



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PLUS CLASSROOM VIDEO
DISTRICT

Search 387,451 multimedia a

Spark Creativity!

Writing Idea: sticky dot prompts

Save Share Cite Google Classroom

DESCRIPTION

Give each student a blank sheet of paper and have him put a sticky dot anywhere on the page to create an illustration that incorporates the dot. Whether the dotty drawing is realistic or imaginative, it's a creative challenge.

Colleen Gregory
Washington School
Minot, ND

TAGS

Apache Spark articles Creativity Design Mental processes prod
Programming languages Spark Thought



Creative Challenge
ideas

CREATIVITY

Spark Creativity.

- Creative Challenges
- Opportunities for reading and writing





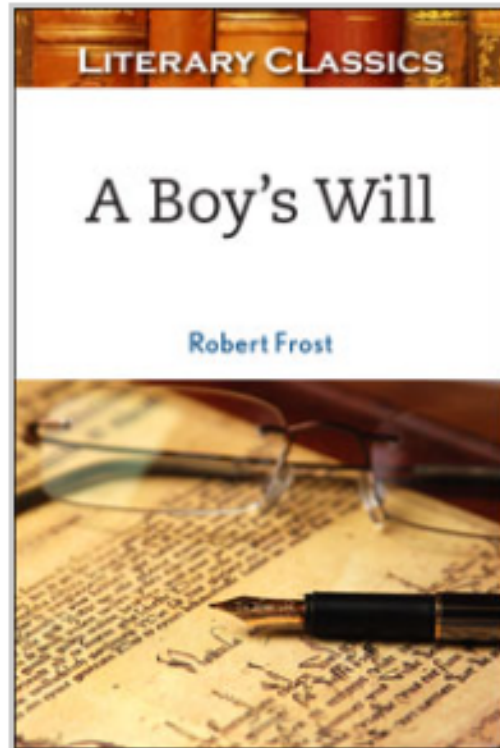
Search



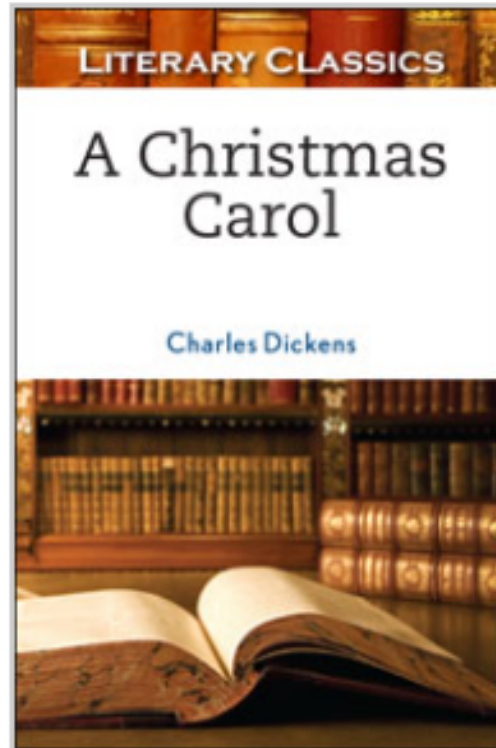
Home / Literary Classics (Full Text)

Literary Classics (Full Text)

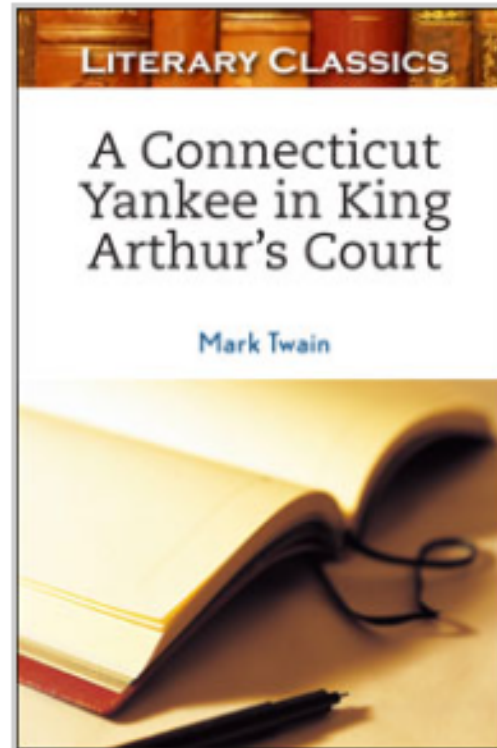
1,136 Full Text



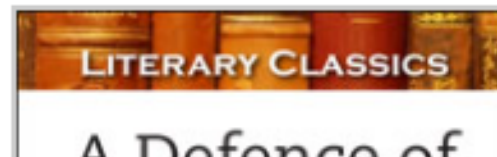
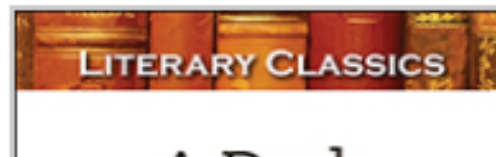
[A Boy's Will](#)



[A Christmas Carol](#)



[A Connecticut Yankee in King Arthur's Court](#)



Read full texts of literary classics


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The Little Fir Tree : Draw Me A Story (The art of reading) Full Video 09:14

Save Share Cite Segments Standards Google Classroom



0:00 / 9:14

DESCRIPTION

Voice-over narration, thematic music and the artist's hand combine to bring this classic tale to colorful life. The tall fir tree standing in Sergi's yard is all decorated for Christmas. When Sergi's ball gets stuck in the top branches of the tree, the tree comes to life and tells the children the story of how when he was only five, his dream came true: he became a Christmas tree. (Colored Ink & Pen)

DETAILS

Producer: Fil
Series: Draw
Date Added:
Copyright Da



Video story
+
a Creative Challenge!

CREATIVITY

Spark Creativity.

- Creative Challenges
- Opportunities for reading and writing
- Choice Assessment



COLLABORATION



COLLABORATION

“ Collaborative problem solving competency is the capacity of an individual to effectively engage in a **process** whereby **two or more agents** attempt to **solve a problem** by **sharing the understanding and effort** required to come to a solution and pooling their knowledge, skills and efforts to reach that solution.

COLLABORATION

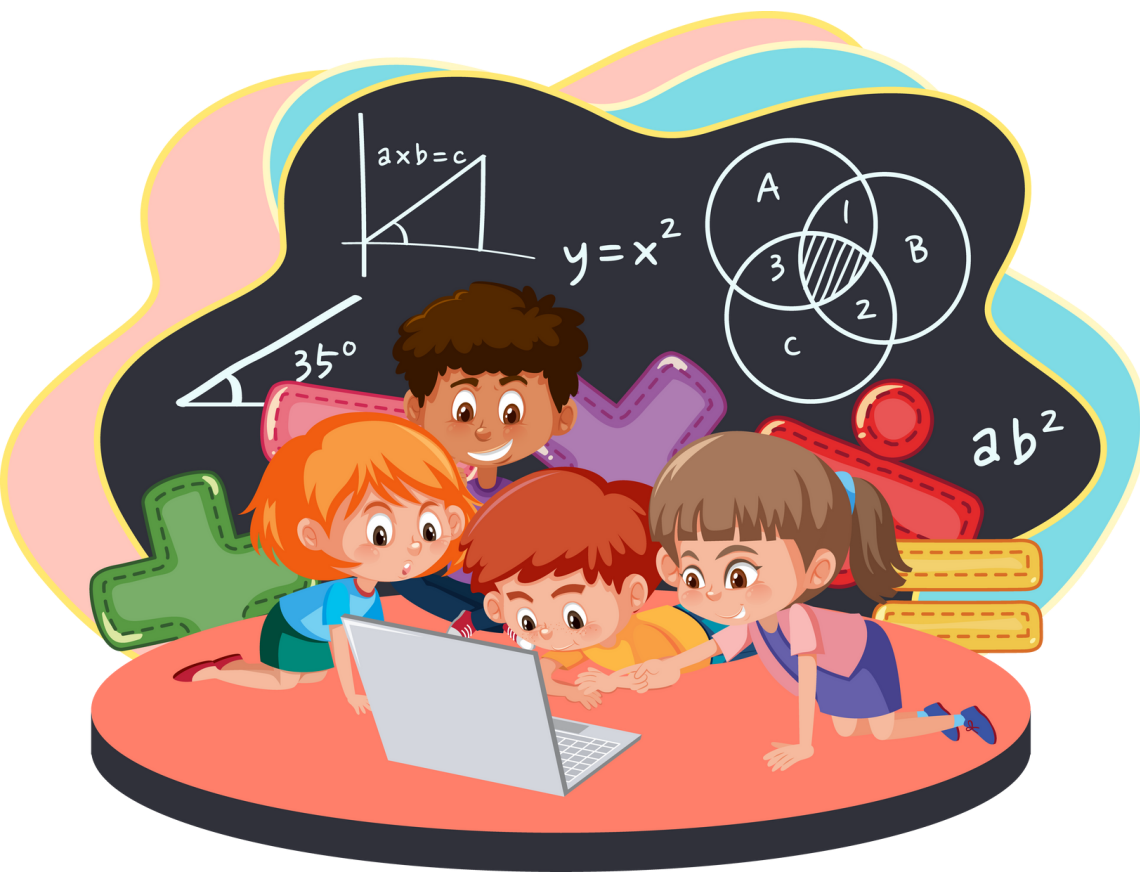
VS cooperation

Cooperation is typically a **division of labour** among group members. [...] Collaboration, on the other hand, contains inherent **flexibility of roles and responsibilities** with regards to the various subtasks in achieving a goal.

COLLABORATION

Learning Stations

- 2-5 students per group
- 1 central theme
- 3+ stations
- Mixture of paper and web-based



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MIDDLE/HIGH

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Printables

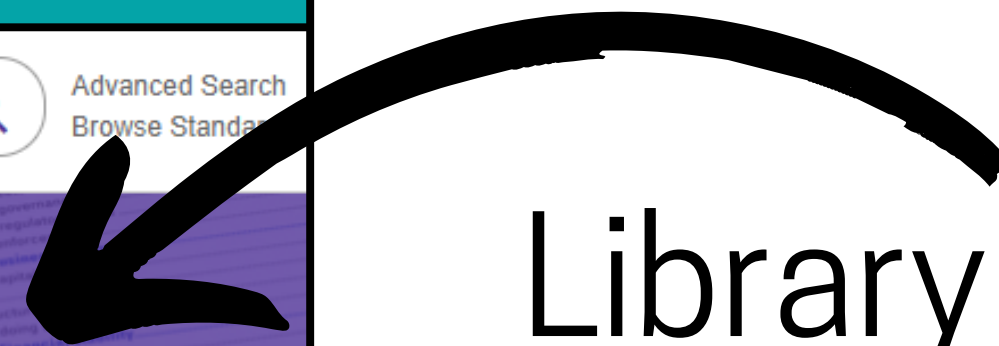
- Featured Printables
- Fact Sheets
- Math Activities
- Science Diagrams

Fact Sheets [View All >](#)

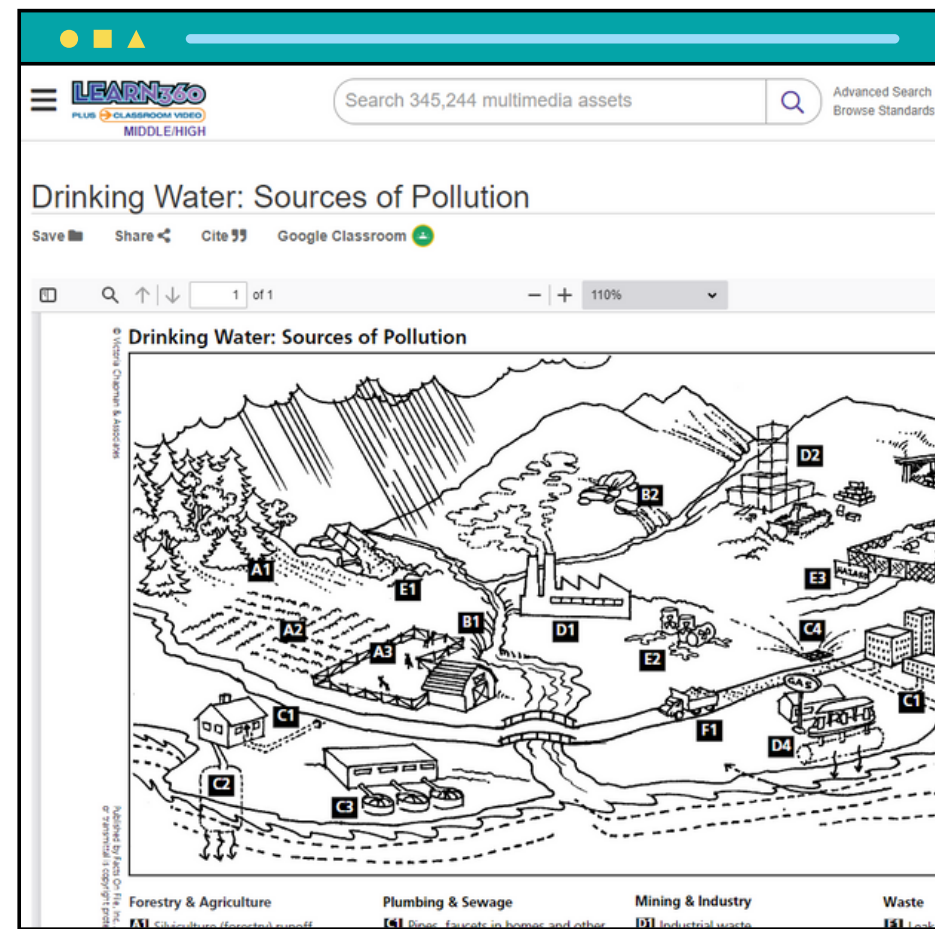
- Nurture #2: Born
Printable Title
- Drinking Water: Sources of Pollution
Printable Title
- Five Steps to Solving Problems & Making Decisions
Printable Title
- Chronology of North America
4500 BCE–1798 CE
Printable Title

Math Activities [View All >](#)

-
-
-
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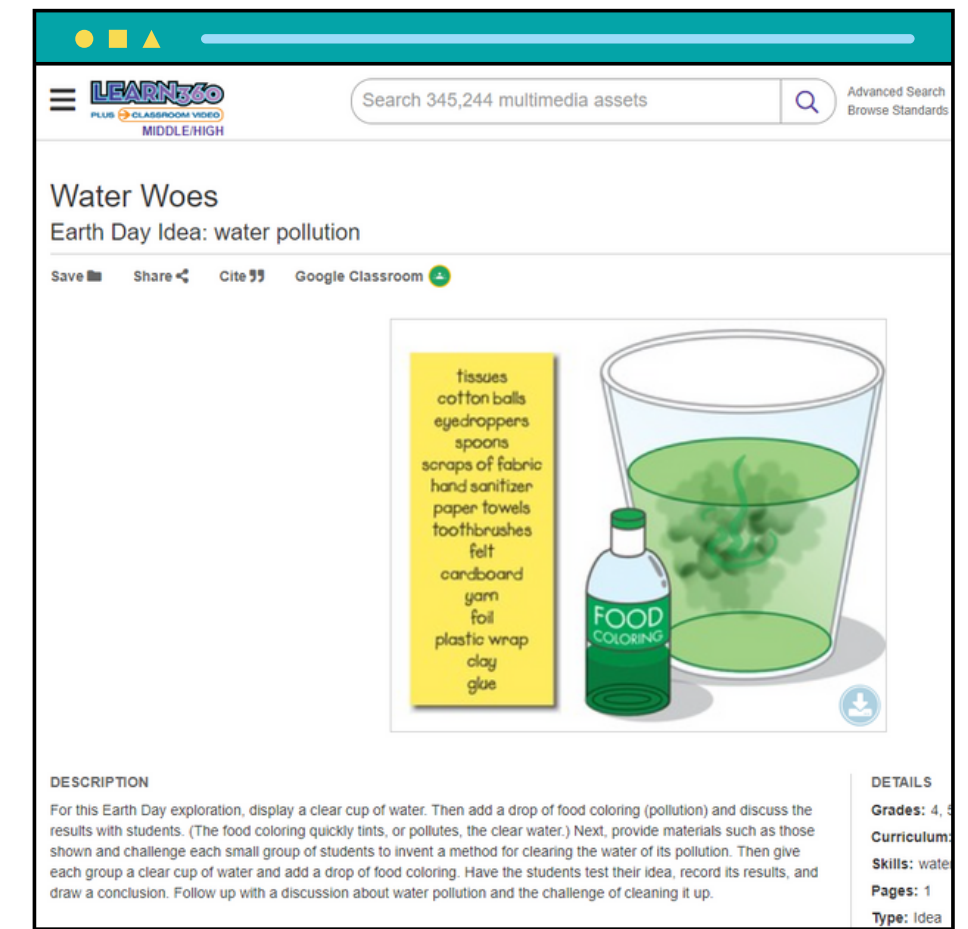
Library of printable resources & activities



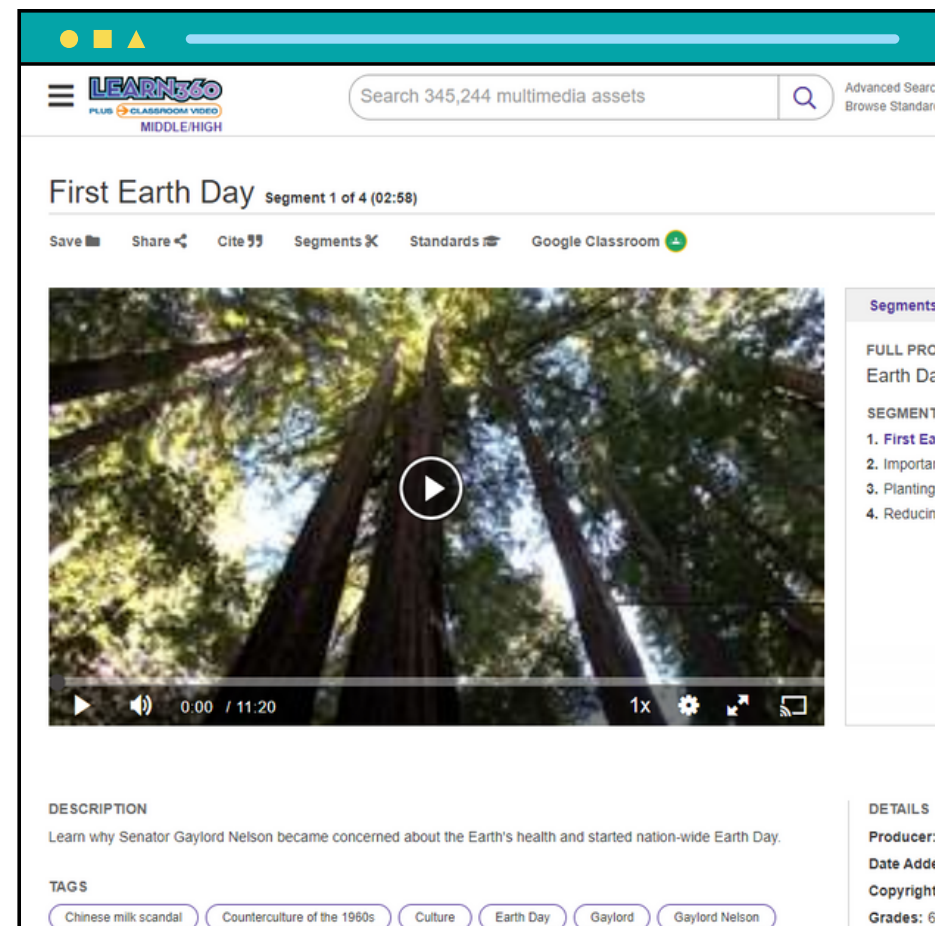
1
A printable
handout to show
sources of water
pollution

2

A hands-on
activity to
demonstrate
cleaning pollution



EARTH DAY STATIONS



A video to
explain why Earth
Day began

3

An interactive
game to show
students how
easy it is to
recycle

4



COMMUNICATION



COMMUNICATION

“ In fact, what gives the skill of communication its 21st century dimension is **its combination with dimensions of other skills** and competencies from the other categories.

Listening Skills

- Watch or listen to speeches or talks
- Interpret the message



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VIDEOS

Filter 366 Results X 2009-2022

All Grades Listening & Speaking All Formats

All Types All Producers All Copyright Dates

 2:26:20


Great Speeches, Volume 25: Barack Obama, Sa Specter, Nancy Pelosi, John Boehner, and Richa

PREMIUM ★

This volume features six vital speeches: Barack Obama's Tucson shooting m 2010 Reagan dinner address; Arlen Specter's farewell address; Nancy Pelos

© 2011 | Educational Video Group, Grade(s): 6 - 8, 9 - 12, Academic/AP

Save Share Cite

 00:00

Successful Speaking Series (SERIES) PREMIUM ★

This nine-part series is an effective tool for the introductory speech course at These lecture-launching, discussion-provoking videos are ideal for in-class s

© 2010 | Educational Video Group, Grade(s): 6 - 8, 9 - 12, Academic/AP

Save Share Cite



Great Speeches

Speaking Skills

- Watch models
- Low-stakes partner practice
- Classroom presentations in a safe space



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All Grades Listening & Speaking All Formats All Languages
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Verbal Communication (SEGMENT) PREMIUM ★
From Title: [Character: Communication Basics](#)
A speaker must know when a person is ready to listen and willing to listen. People may find it hard there are distractions or during emotional times.
© 2009 | [Learning Zone Xpress](#), Grade(s): 6 - 8, 9 - 12
Save Share Cite Standards Resources

Effective Communication (SEGMENT) PREMIUM ★
From Title: [Character: Communication Basics](#)
Good verbal communication involves clear language and respectful word choices. Don't send mixed messages with words that do not match body language. Effective communication depends on the speaker and the listener.
© 2009 | [Learning Zone Xpress](#), Grade(s): 6 - 8, 9 - 12
Save Share Cite Standards Resources

Communication Essentials (SERIES)
Talent, ambition, and great ideas won't amount to much if they're not supported by good communication. This four-part series helps high school and college students improve their communication skills in four different ways.
© 2010 | [Films for the Humanities & Sciences](#), Grade(s): 6 - 8, 9 - 12, Academic/AP



Skills videos to support struggling students

Writing Skills

- Read models
- Practice with online discussions

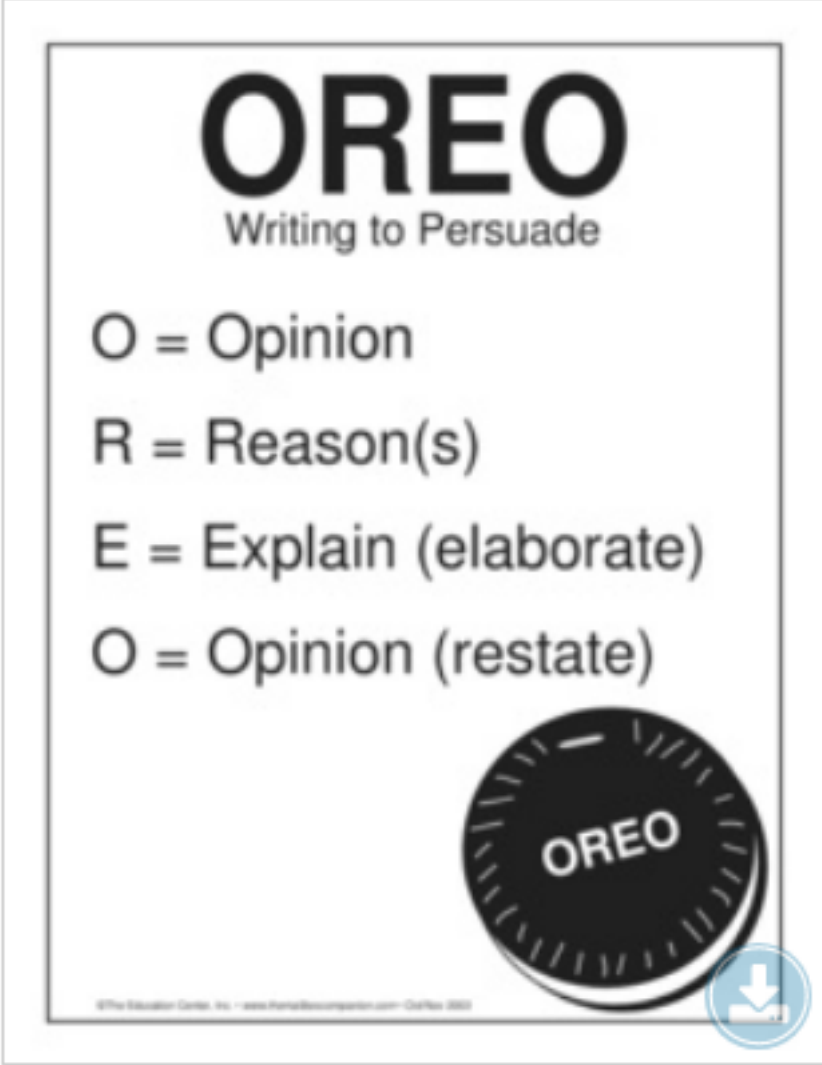


LEARN360
PLUS CLASSROOM VIDEO
MIDDLE/HIGH

Persuasive Writing

Writing Resource: writing to persuade poster

Google Classroom



OREO
Writing to Persuade

- O = Opinion
- R = Reason(s)
- E = Explain (elaborate)
- O = Opinion (restate)

OREO

DESCRIPTION | DETAILS



Persuasive Writing Resources

The screenshot shows a video player interface. At the top left is the 'LEARN360 PLUS CLASSROOM VIDEO DISTRICT' logo. A search bar contains the text 'Search 387,451 multimedia assets'. To the right of the search bar are links for 'Advanced Search' and 'Browse Standards'. The video title is 'The Art of Persuasive Writing Full Video 12:45'. Below the title are icons for 'Save', 'Share', 'Cite', 'Segments', 'Standards', and 'Google Classroom'. The video player shows a young woman with long hair sitting at a desk, writing in a notebook while looking at a laptop. A play button is centered over the video. The video player controls at the bottom show a progress bar at 0:00 / 12:45, a volume icon, a 'CC' icon, a '1x' speed icon, a settings gear icon, a full screen icon, and a share icon. To the right of the video player is a 'Segments' sidebar with a list of segments: 'FULL PROGRAM', 'The Art of Persuasive Writing', and a list of four segments: '1. Research', '2. Include a Point of View', '3. Summarize', and '4. Provide Support'. Below the video player is a 'DESCRIPTION' section with the text: 'Having the right tools and approach to being persuasive can give you the power to achieve what you want, and even influence people to make a real difference in the world. This program guides students through the persuasive writing procedure and offers tips for reaching a desired outcome. Students will see the power of a well thought out and balanced argument with Pip, our main character, bringing about change at her school and even at home.' To the right of the description is a 'DETAILS' section with fields for 'Producer: C...', 'Date Added', 'Copyright D...', and 'Grades: 6 -'.



Skills videos to support struggling students

CRITICAL THINKING

COLLABORATION

CREATIVITY

COMMUNICATION

PROBLEM-BASED LEARNING

“ In problem-based learning, students working in **collaborative groups** learn by **resolving complex, realistic problems** under the guidance of faculty. [PBL fosters] process skills: **research, negotiation** and **teamwork, writing, and verbal communication.** ”

ALL OF THE ABOVE


Problem Based Learning (PBL).

- Collaborative groups
- Authentic problem
- Creative solutions



Issues & Controversies


Search




Cryptocurrency
Are Bitcoin and Other Digital Currencies Viable Units of Exchange?

On November 11, 2022, FTX, one of the largest exchanges of cryptocurrency—digital tokens of exchange often referred to simply as crypto—declared bankruptcy, sending shockwaves...


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Two-Party System
Would More Major Political Parties Benefit the United States?



Immigration Policy
Do Stringent Immigration Policies Benefit the United States?



Social Media and Free Speech
Should Social Media Companies Do More to Combat Disinformation and...



Authentic, real world problems

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Five Steps to Solving Problems & Making Decisions

Save Share Cite Google Classroom

1 of 1 Automatic Zoom

MENTAL & EMOTIONAL HEALTH

Five Steps to Solving Problems & Making Decisions

FIVE STEPS & A FOOTNOTE	EXAMPLE
<p>1 The issue: Describe the situation, or identify the problem.*</p>	<p>1 My job as a nurse orderly doesn't pay enough to support my family and isn't very satisfying. I want to go back to school to study for a better job—but which job?</p> <p>2 Registered Nurse Physician's Assistant Inhalation Therapist</p> <p>3</p>
<p>2 The alternatives: List the possible choices.*</p>	
<p>3 The consequences: Consider the possible</p>	



Problem-Solving Resources

21ST CENTURY STUDENTS NEED TO:

- **Think critically** about complex topics,
- **Communicate** with their peers,
- **Collaborate** to accomplish goals, and
- Solve problems **creatively**.



Questions & Comments

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 MrsHebertTeach.blog

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