Selecting Assistive Technology: Different Learning Challenges Require Different Solutions

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Create Address Replenish Educate Conference - Champlain College Saint-Lambert

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By the End of this Workshop, My Goal is For You to Take Away:

- Moving from I can't to I can

- I'm going to help you know how you can help Melanie, Kira, or Jeremy achieve this…

- Not one size fits all approach to learning difficulties

Assistive Technology (AT) Defined

"Any items, devices, equipment, or products which may be commercially available, customized, or adapted to help a person with a disability to function or to improve, maintain or increase their capacity to function" (U.S.C § 2201, 2202)
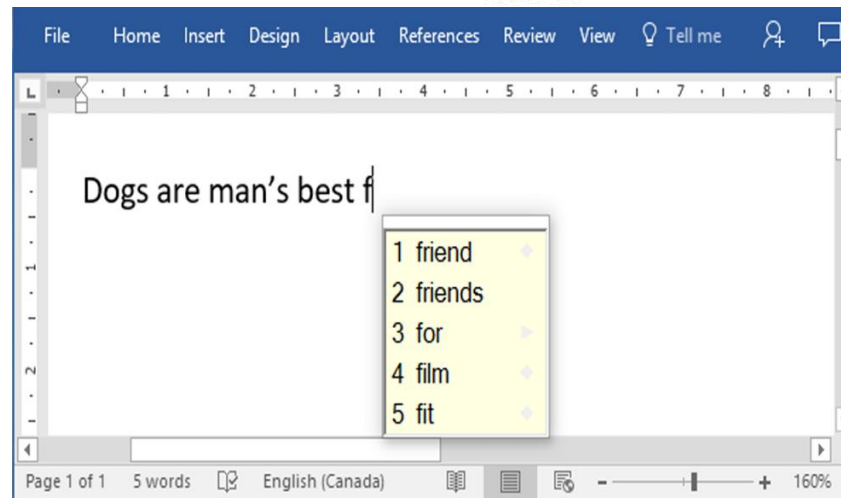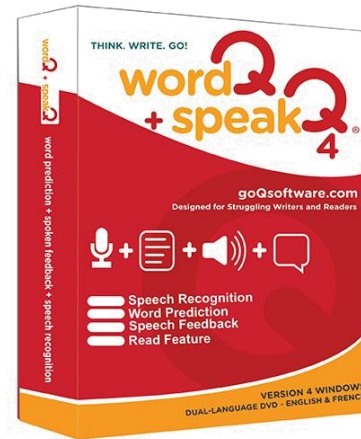
AT in Context

- Tools that help students with learning difficulties **compensate** for areas they struggle with

- AT does not **teach** or **remediate** academic skills

Assistive Technology Can Be:

Hardware

Software

Mobile Apps

Hardware

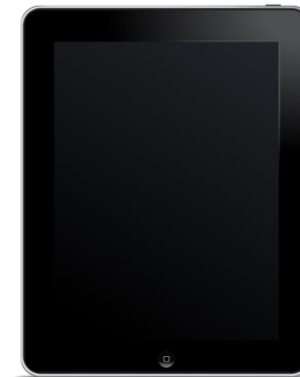## Low Tech

High Tech

What can be AT? What is not AT?

- Math drills
- Audiobooks
- Reading rulers/guides
- Spelling games
- Mind/concept maps
- Graph paper
- Headphones
- Pencil grips

- Apps that teach phonics
- Raised line paper
- Typing software
- Picture dictionary
- Wobble chair
- Fidget toys
- Behaviour management programs

What can be AT? What is not AT?

- Math drills
- Audiobooks ✔
- Reading rulers/guides ✔
- Spelling games
- Mind/concept maps ✔
- Graph paper ✔
- Headphones
- Pencil grips ✔

- Apps that teach phonics
- Raised line paper ✔
- Typing software
- Picture dictionary ✔
- Wobble chair ✔
- Fidget toys ✔
- Behaviour management programs

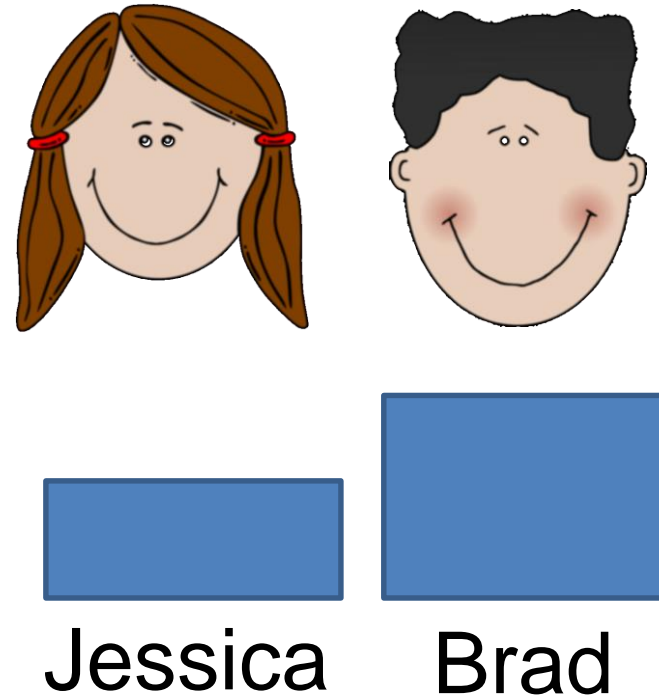# Putting the "Assist" in Assistive Technology

"Mind the Gap"

- Curriculum is structured to build on prior knowledge/ skills /develop new skills
- New skills:
  - Require foundational/ basic academic skills (e.g., spelling, word reading)
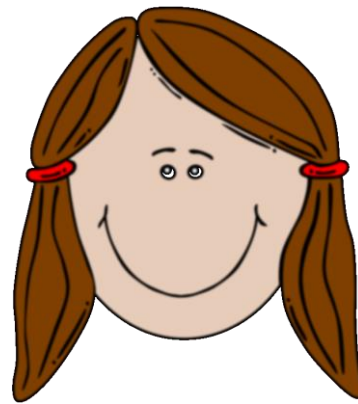 - Build on previously learned skills

Beginning of Grade 1 – Spelling Skills

- Jessica is having difficulty learning to spell

- Brad is learning to spell at the typical rate

Jessica   Brad

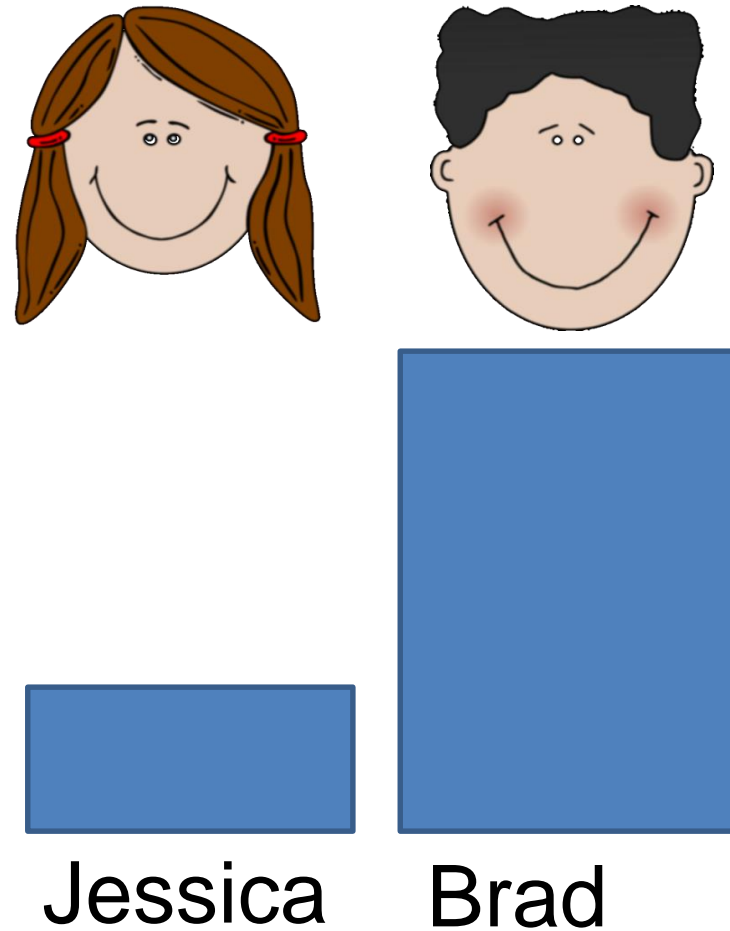# End of Grade 2 – Sentence Writing Skills

What has happened
to the gap? Why?

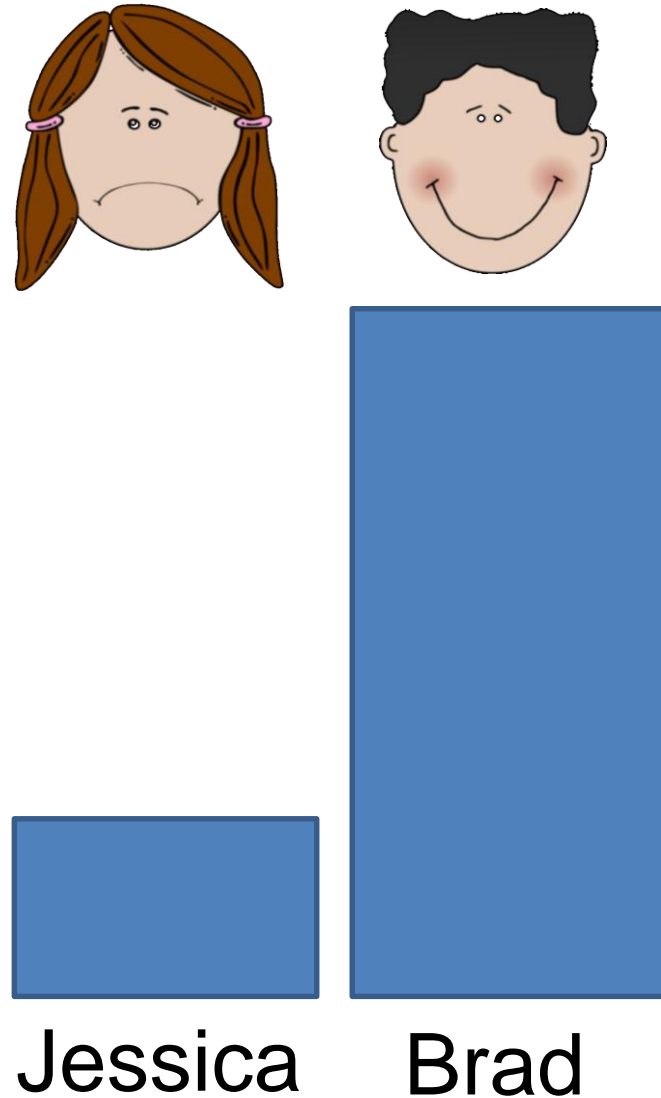Jessica   Brad

End of Grade 3 – Paragraph Writing Skills
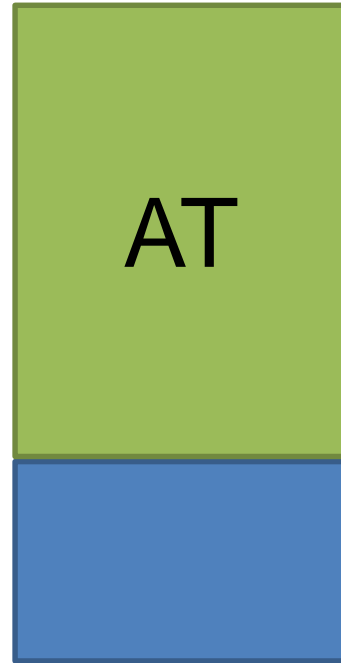
What has happened
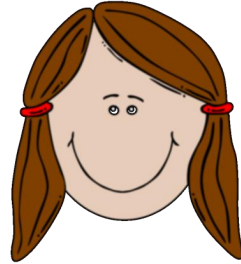to the gap? Why?

Jessica   Brad

End of Grade 6 – Essay Writing Skills

What has happened to the gap?

How has this affected Jessica?

Jessica   Brad

The Goal of AT is to Help Reduce the Gap

AT

Jessica

Brad

Simple AT that Could Have Helped Jessica

- Record herself - dictate her text, type/write it up later

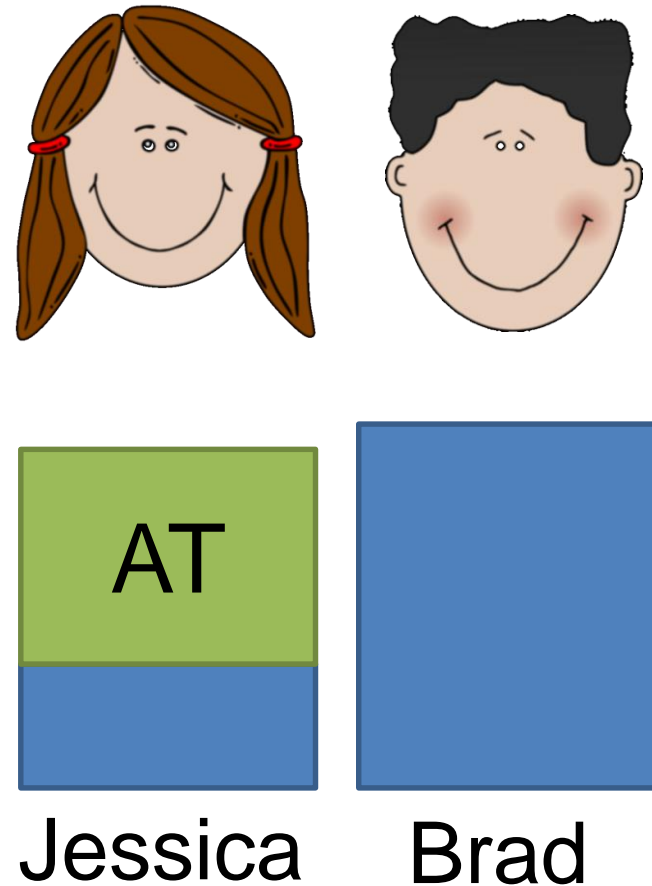# Timing is Everything

- When should students start using AT?

AT Introduced at the End of Grade 2

Is AT enough?

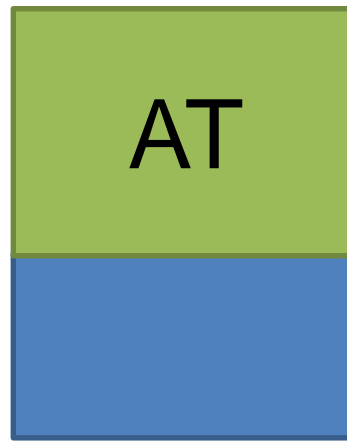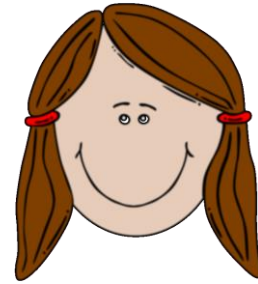Are other supports needed?

If so, what would you recommend?

AT

Jessica   Brad

AT Introduced at the End of Grade 6

Is AT enough?

Are other supports needed?

If so, what would you recommend?

Jessica   Brad

AT is **Not** "One Size Fits All"

- Often, children/teens with learning difficulties are **not** tech savvy

- Children/teens with similar difficulties may benefit from different AT

Training/Knowledge in the School System
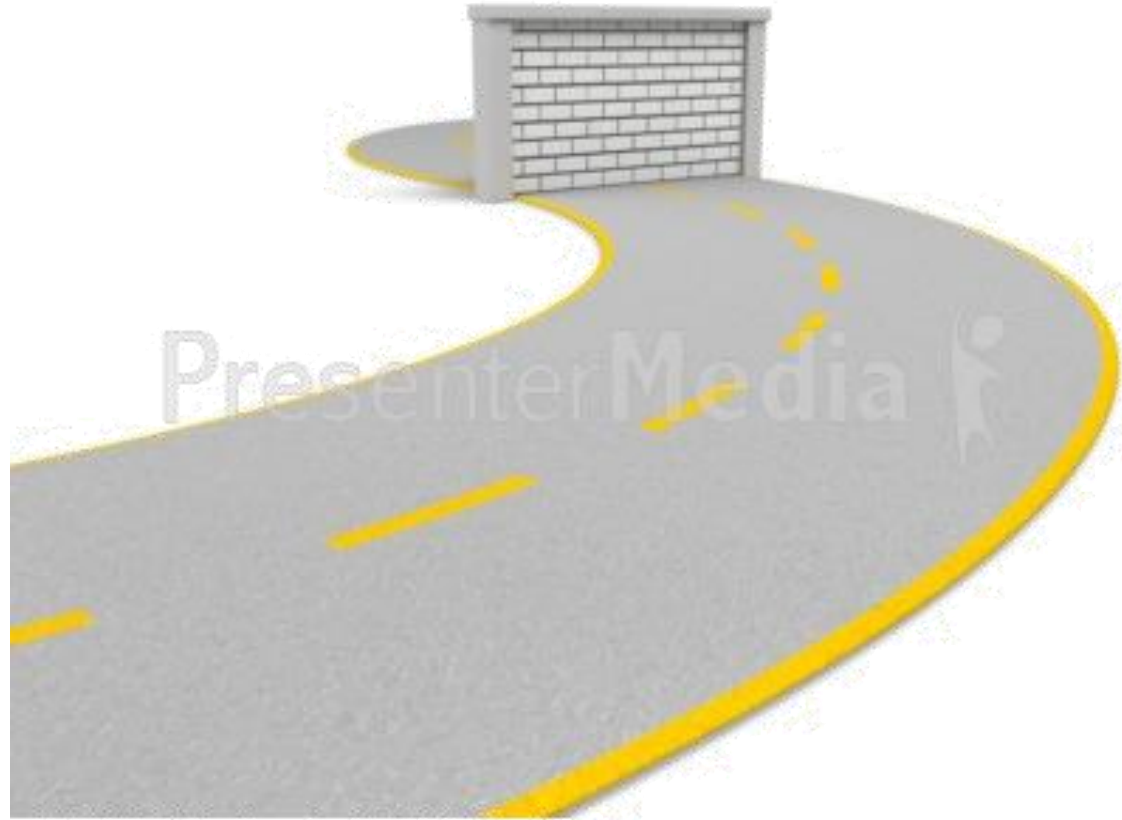
Lack of Knowledge

Lack of Awareness

Lack of Support

Lack of Skill

Too Much Choice

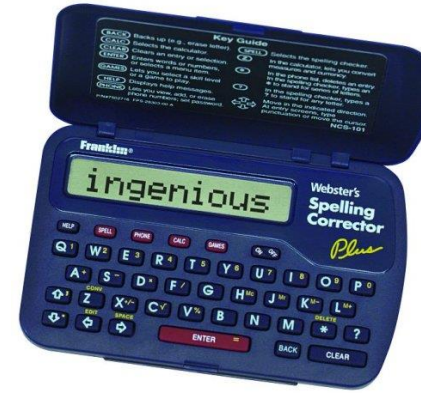# What is the Roadblock to students using AT?
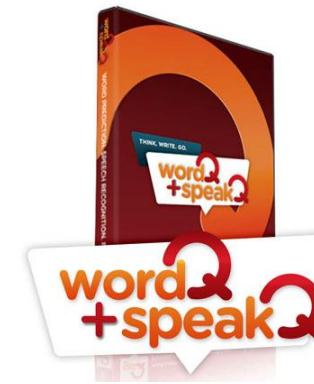

Why do some students choose not to use AT?

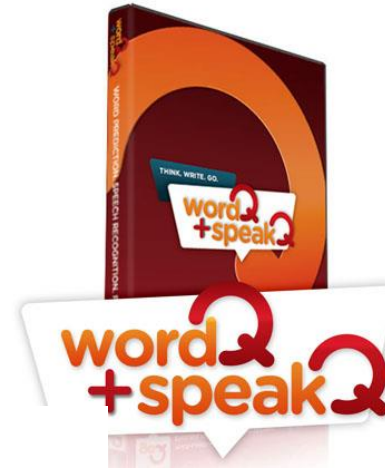# Status Update – Where AT is Today?

About 5-10 Years Ago…

- College/University

- Restricted

- Uncommon

- Stood out

Where We Are Today

What Are Some Popular AT Software?

What Are Some Popular AT Hardware?

What Are Some Popular AT Smartphone and Tablet Apps?
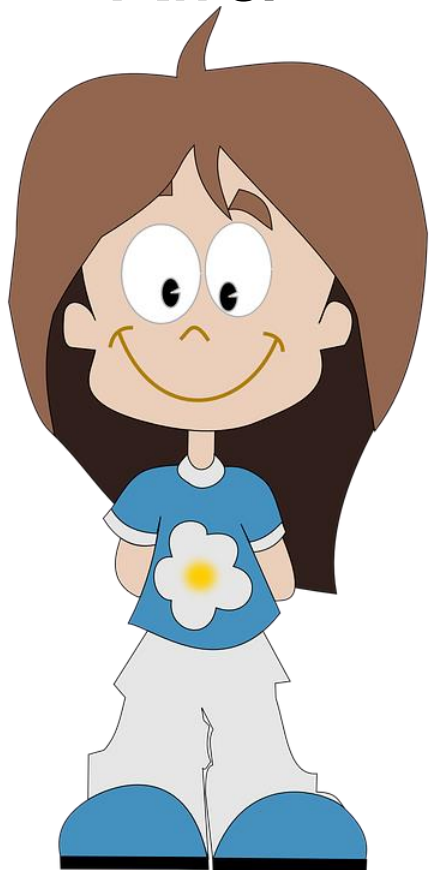
Voice Dream Reader

ClaroRead

Dyslexia Keyboard by Ghotit

TextAloud

Natural Reader

How Does AT Work?

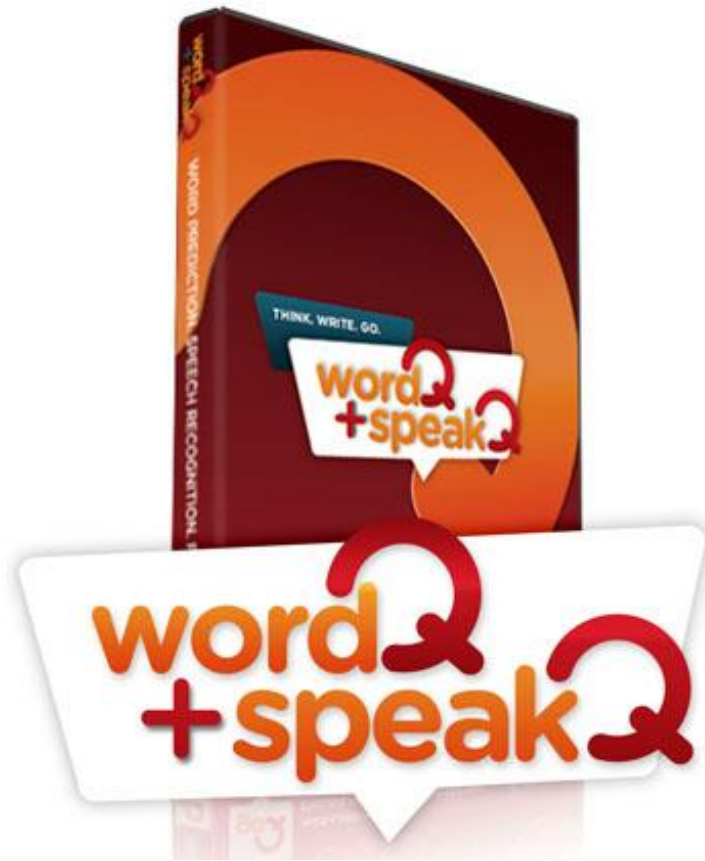# Our Students for Today

Kira

Jeremy

Melanie

What Types of AT are Recommended the Most for Students with Learning Difficulties?

- Text-to-speech

- Dictation software / Speech-to-text
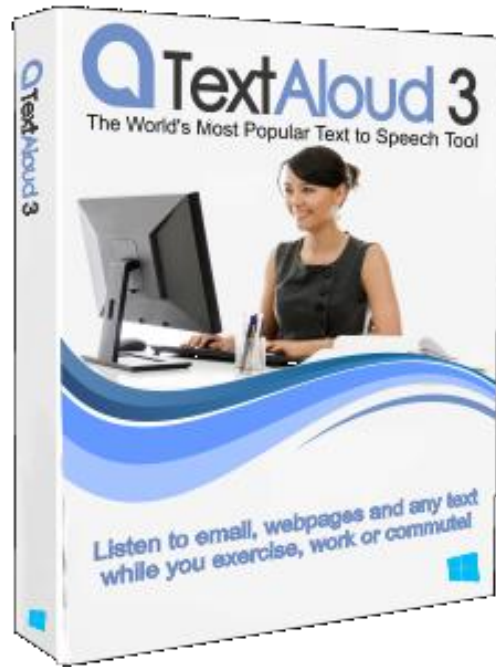
- Word prediction

- Organizational Software

What is Text-to-Speech and How Can it Help?

- Reads digital text out loud
- Helps with Reading Comprehension
- Mental effort is spent on comprehension rather than reading

Popular Text-to-Speech Software

Some Free and/or Inexpensive Software Options

Besides Specialized Software, Where Else is Text-to-Speech Available?

- Specialized software is not always necessary for text-to-speech

- Most of you have text-to-speech built-in to your devices!

Let's Find the Hidden Text-to-Speech On Your Devices!

1. Use the instructions handed out to you to find text-to-speech on your device

2. Practice using text-to-speech on your device for a few minutes

Thoughts?

What did you like?

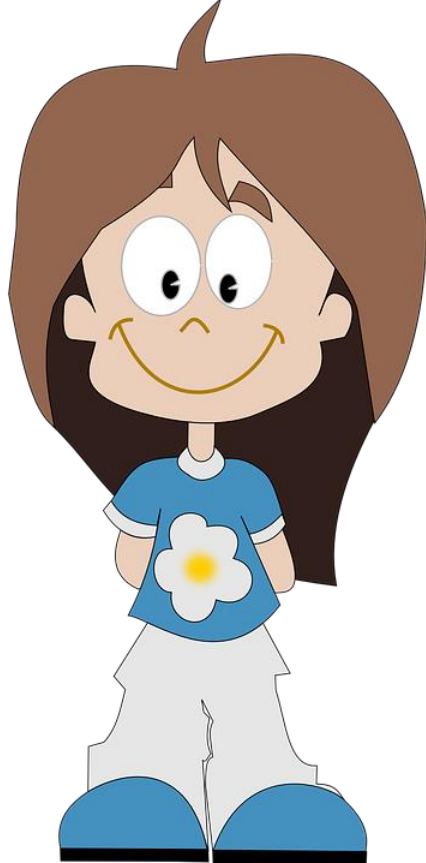What didn't you like?

Was it helpful?

Was it harmful?

Can you see this being used in your work with children/adolescents?

If so, how?

Which Students Do You Think Would Benefit Most from Text-to-Speech?
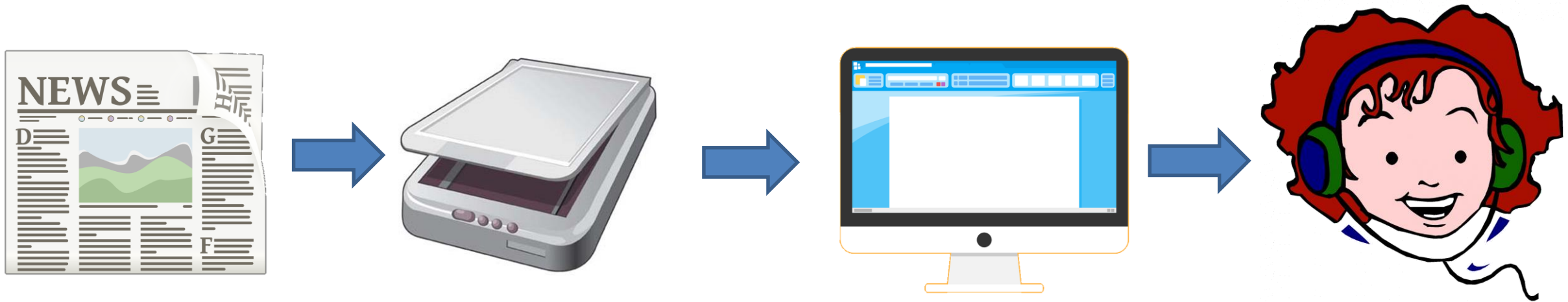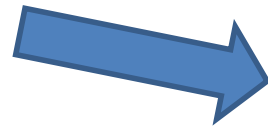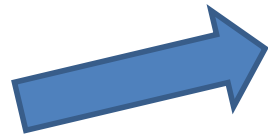
Kira

Jeremy

Melanie

Side Note: Turning Paper Text into Digital Text

- Optical Character Recognition software (OCR) is a must!
- OCR is a process that:

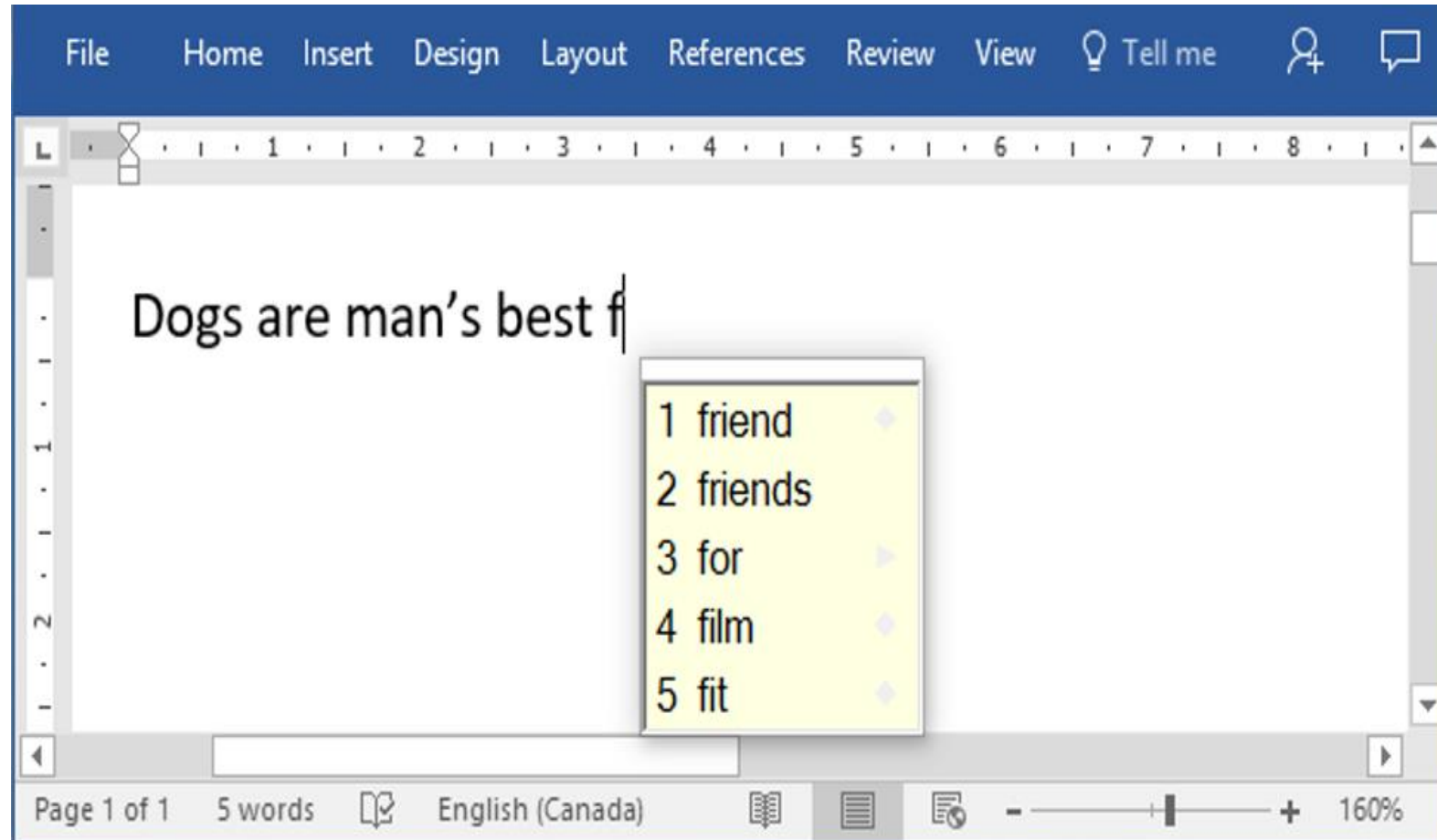# OCR Using Your Phone or Tablet

Some OCR Software and Apps

Software & Websites

- ABBYY FineReader
- OmniPage
- http://pdf2doc.com/
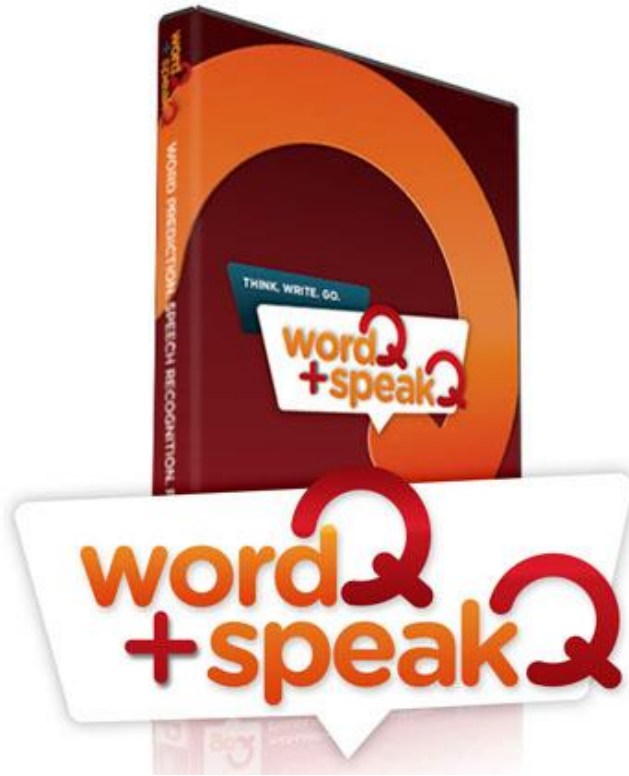- FoxitPhantom PDF
- Adobe Profressional

Apps

- CamScanner
- Fine Reader
- Tiny Scanner

Word Prediction

Commonly Used Word Prediction Software

How Can Word Prediction Help?

- Spelling difficulties
- Fine motor issues
- Second language learner
- Slow typist

Besides Software, Where Else Can I Find Word Prediction?

Built-in to MacBooks

Apps installed on your tablets/smartphones

- Typ-O HD,

- iWordQ

- Dyslexia Keyboard by Ghotit
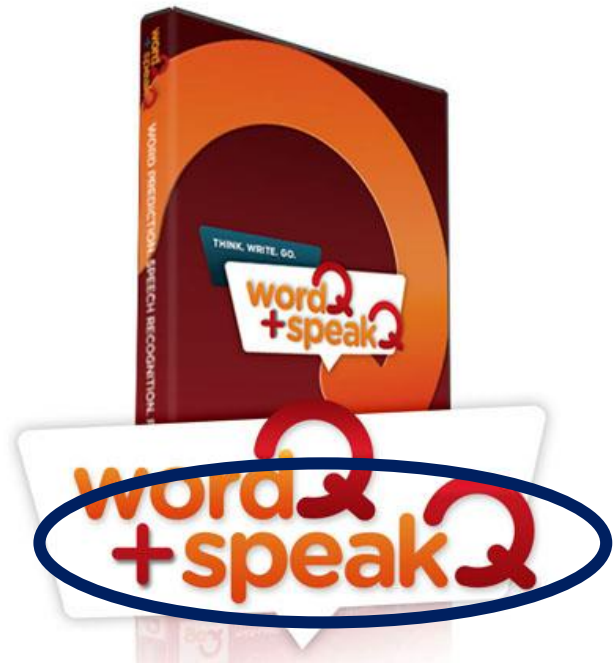
Dictation/Speech-to-Text

Transcribes a person's voice into text

How Can Dictation Help Students?

- Severe spelling problems

- Fine motor

- Working memory difficulties

  - E.g., forgetting what they wanted to write while spelling/typing

Popular Dictation Software
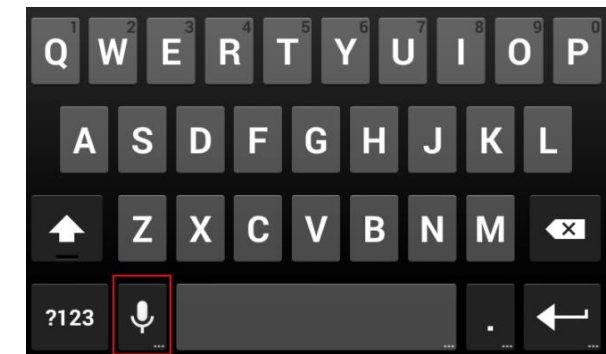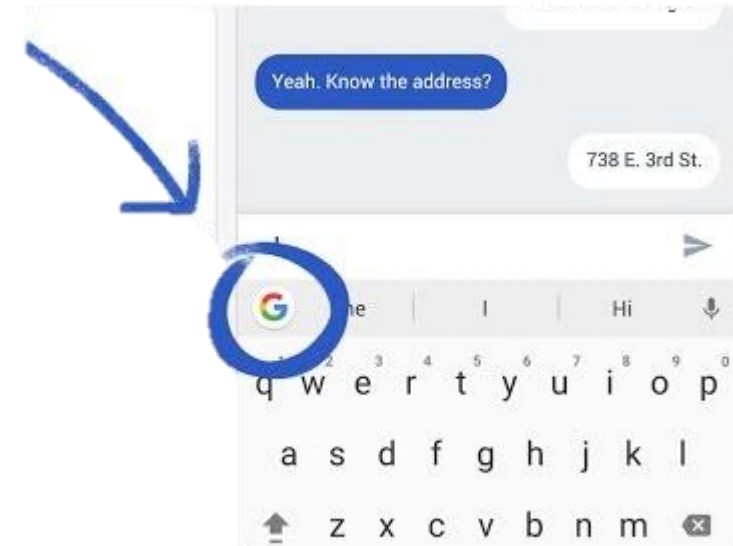

Dictation add-on to WordQ

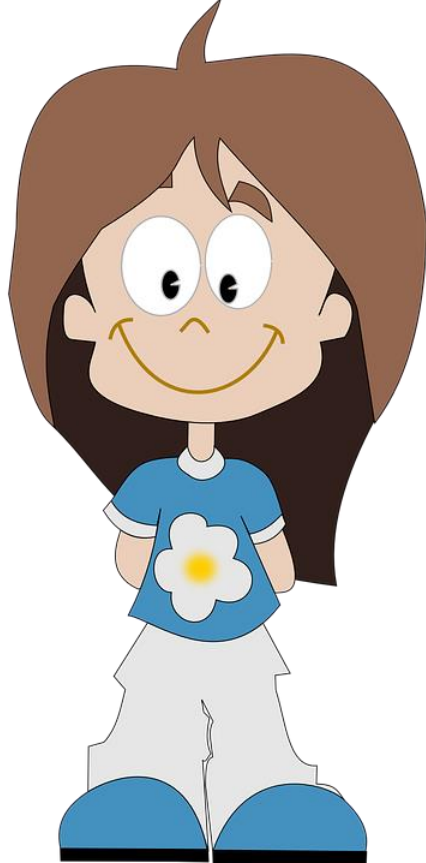# Besides Software, Where Else Can I Find Dictation?

MacBooks

Siri

iPones and Android keyboards

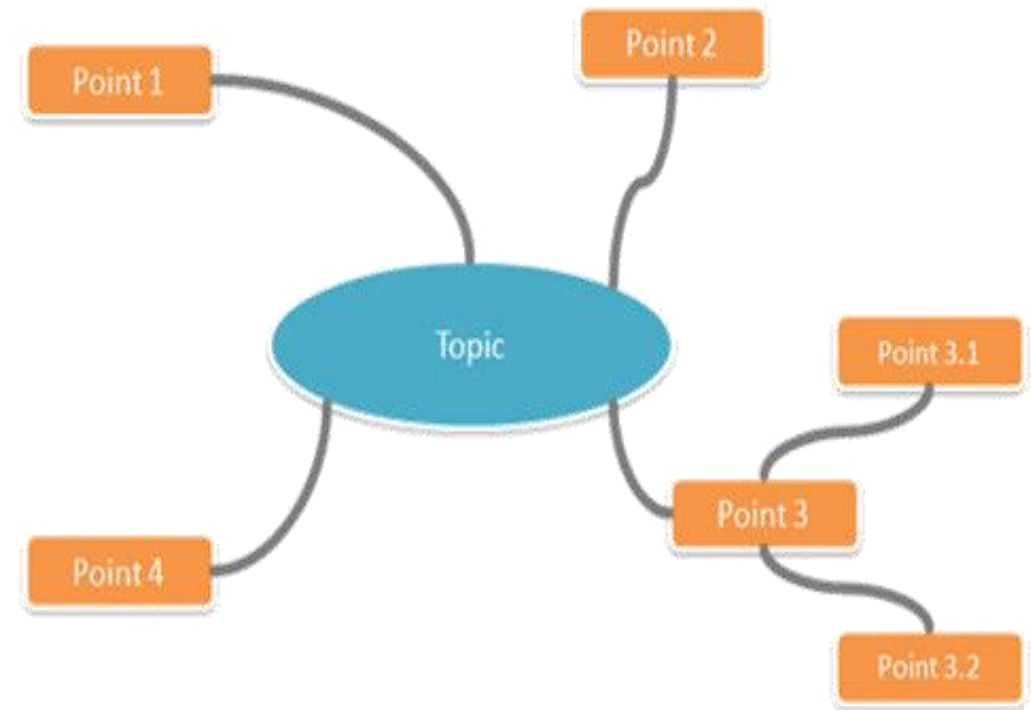# Based On What You Know Now, What AT Do You Think Would Best Support Our Students?

Kira

Jeremy

Melanie

Mind Mapping

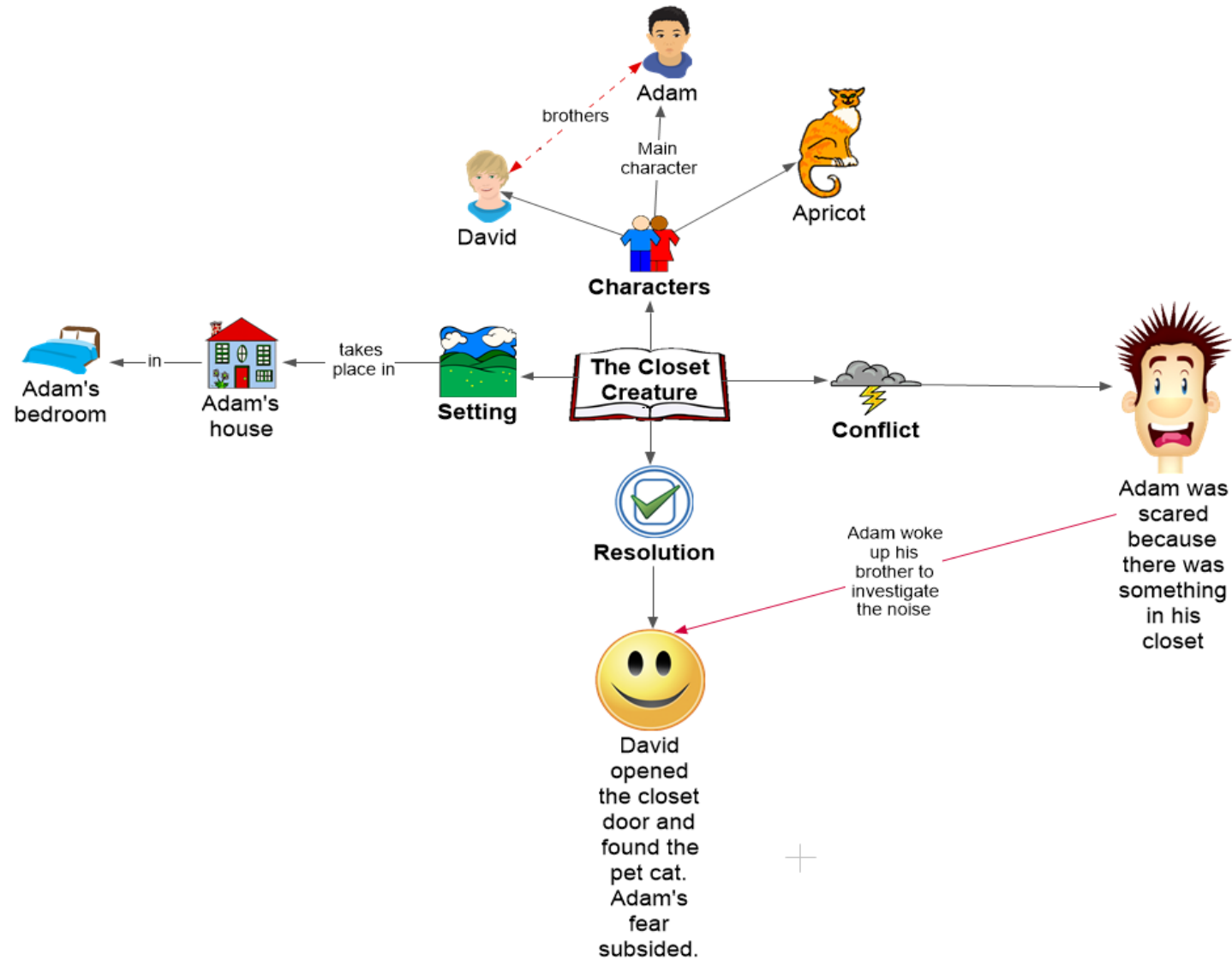At your tables, make a mind map to "make sense" of the content we have covered so far.
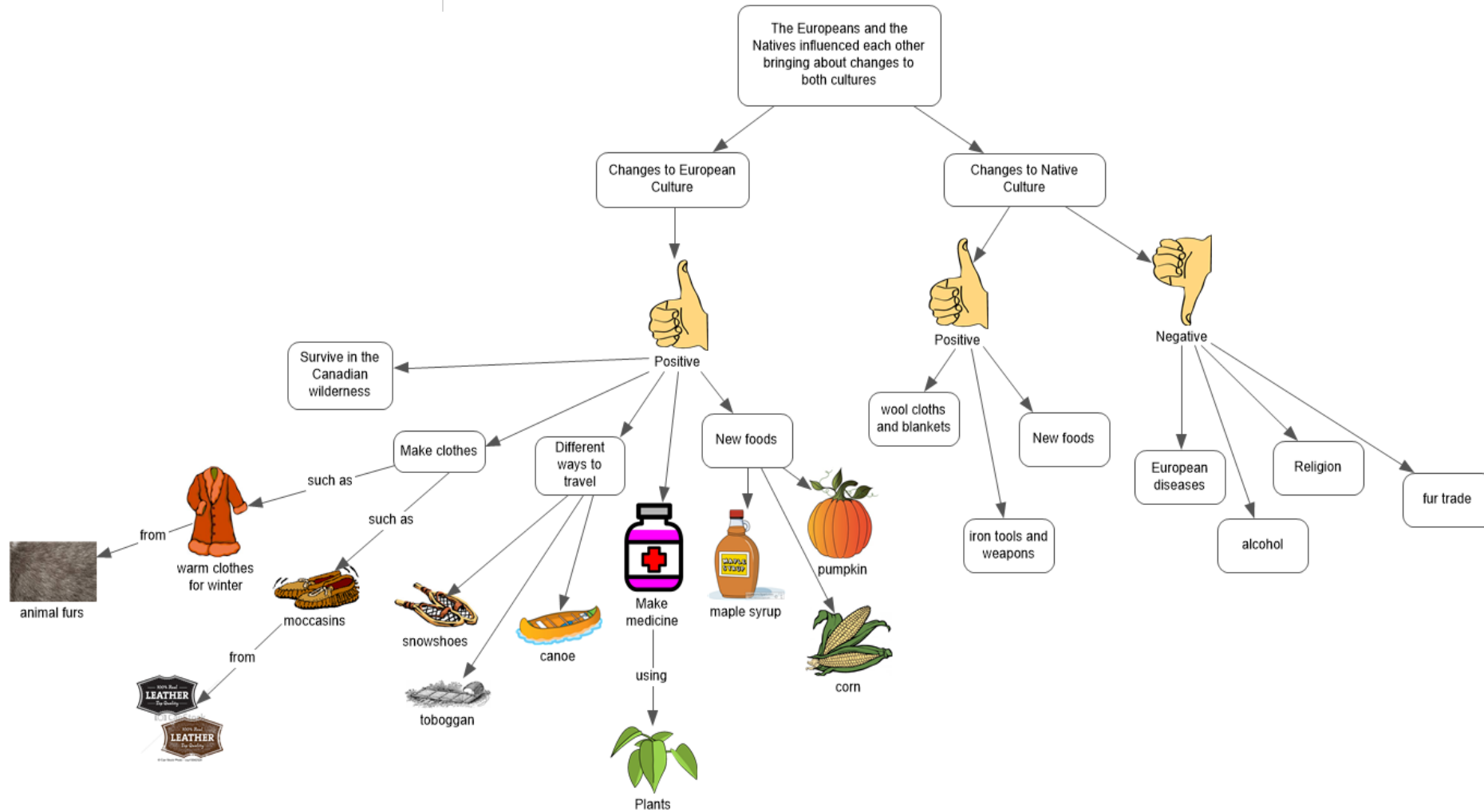
Reflection

How Could Mind Map AT Help Students with Learning Difficulties?

- Show relationships
- Structure/Organize ideas
- Create outlines
- Learn content
- Reading comprehension
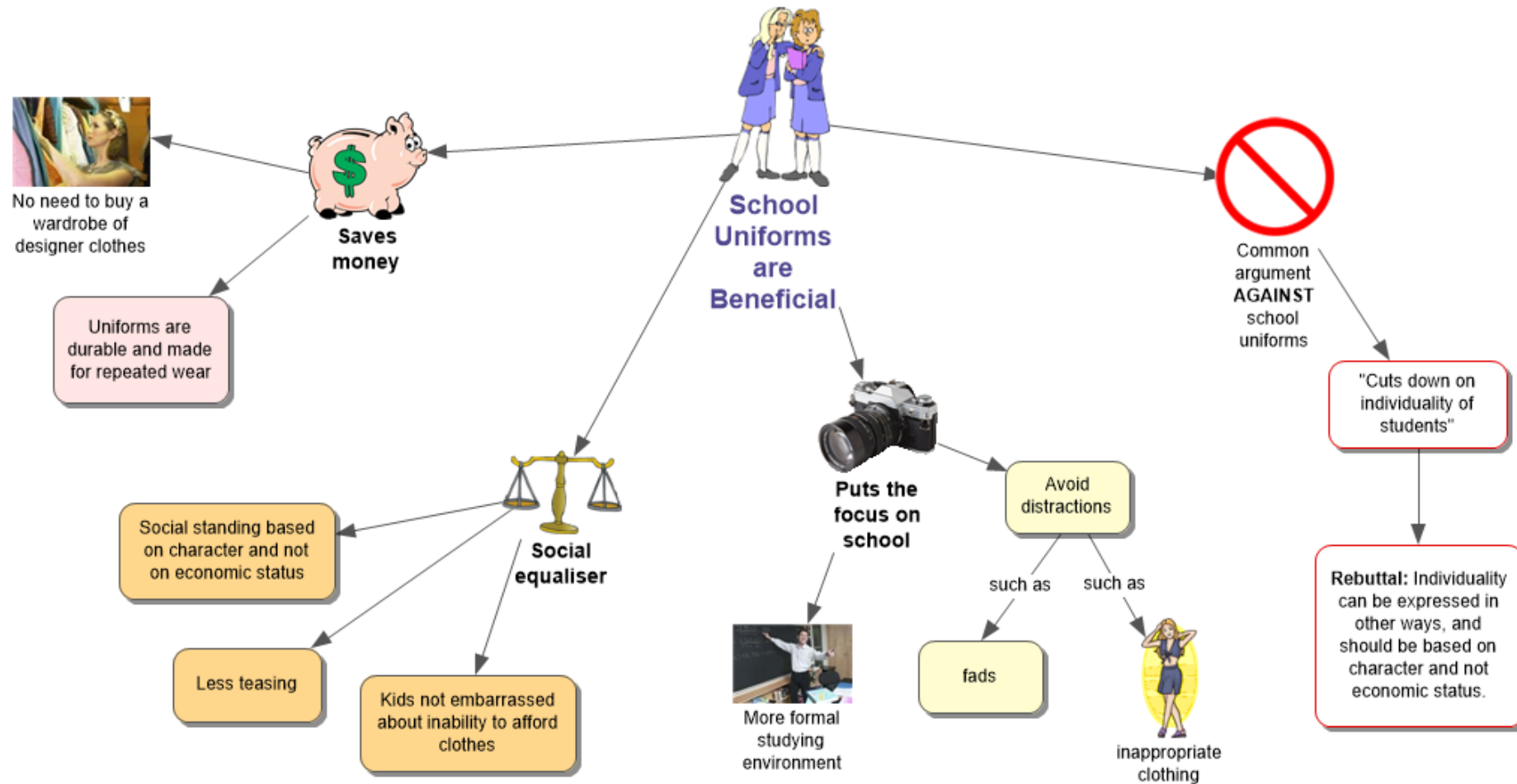- Use more pictures than words

Reading Comprehension – Story Map

Content Learning - History

Organizing an Essay

Outline View - School Uniforms are Beneficial

I. Saves money
- A. Uniforms are durable and made for repeated wear
- B. No need to buy a wardrobe of designer clothes

II. Social equaliser
- A. Social standing based on character and not on economic status
- B. Less teasing
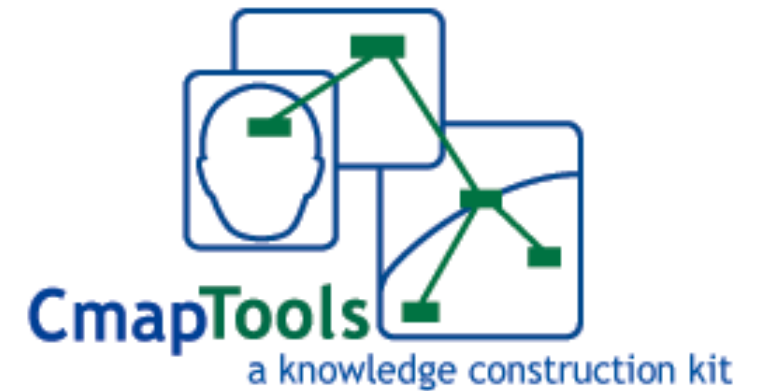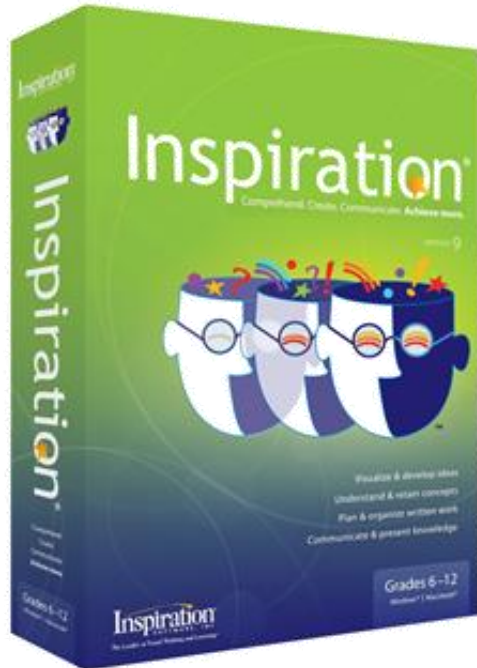- C. Kids not embarrassed about inability to afford clothes

III. Puts the focus on school
- A. More formal studying environment
- B. Avoid distractions

IV. Common argument AGAINST school uniforms
- A. "Cuts down on individuality of students"
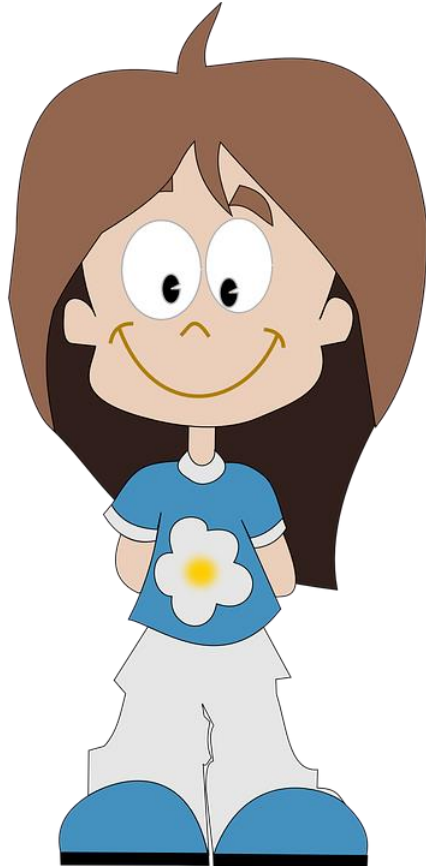
Popular Mind Mapping Software

Some Mind Mapping Apps

- Inspiration maps

- DrawExpress

- Mindomo

- Mindjet

- Popplet

Let's Complete Our AT Plans

Which students would benefit the most from Mind Mapping AT?
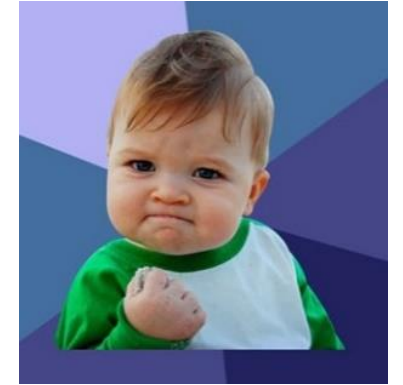
Kira

Jeremy

Melanie

Take Home Messages

- We need close the gap for students and for staff!

- The right AT is empowering

- Success is possible for all!

- Steep learning curve, but with knowledge and practice, it should get easier!

We made it!

Questions?

Contact Information

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