PS: Resources

In the Modules Resources section, we present an annotated list of additional resources.

- **Knights and Knaves Problems** **(https://philosophy.hku.hk/think/logic/knights.php)** : Binary riddles, Knight and Knaves puzzles involve a mythical kingdom in which knights always tell the truth and knaves always lie. Each riddle provides clues to determine how many knaves are present, which characters are knaves, etc. The provided link houses a database of available puzzles.

- **Computational Thinking with Scratch -** **(http://scratched.gse.harvard.edu/ct/assessing.html)** An excellent site linking computational thinking to beginning programming, written by the authors of Scratch

- **Computational Thinking Resources for Teachers** **(https://id.iste.org/docs/ct-documents/ct-teacher-resources_2ed-pdf.pdf?sfvrsn=2)** : Arguably the best investigation of K-12 Computational Thinking: ISTE (International Society for Technology in Education) Computational Thinking Teacher Resources, 2nd edition.

- ISTE (International Society for Technology in Education) makes the Who's Who list in Computer Science education. In the realm of Computer Science, you can find many resources, such as this document on **Computational Thinking** **(https://www.iste.org/explore/Solutions/Computational-thinking-for-all?articleid=152)** , currently displayed on the main ISTE webpage.

- CSTA (Computer Science Teachers Association) is another entry on the Who's Who list. Here is their **one page summary of computational thinking** **(https://id.iste.org/docs/ct-documents/computational-thinking-operational-definition-flyer.pdf)**

- Jeanette Wing, often recognized as the "Mother of Computational Thinking" through publication of this **famous article** **(https://www.cs.cmu.edu/~15110-s13/Wing06-ct.pdf)** .

- The University of Waterloo offers a short overview of **cross-disciplinary problem solving teaching tips** **(https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/developing-assignments/cross-discipline-skills/teaching-problem-solving-skills)** .

- Polya, known as the "Father of Problem Solving, published a brief, but impactful book about problem solving: ***How to Solve It* (https://math.hawaii.edu/home/pdf/putnam/PolyaHowToSolveIt.pdf)** .

- Australia offers a downloadable **Computational Thinking poster (https://www.digitaltechnologieshub.edu.au/resourcedetail?id=4ee74b98-09f9-6792-a599-ff0000f327dd#/)** (from Australia Department of Education).

- Google supports a free, online course for educators called **Exploring Computational Thinking** **(https://edu.google.com/resources/programs/exploring-computational-thinking/)** . It is a respectable short curriculum.

- There are many online resources for project (and problem) based learning. One of our favorites is **PBLworks** **(https://www.pblworks.org/what-is-**

pbl#:~:text=Project%20Based%20Learning%20is%20a,question%2C%20problem%2C%20or%20chall enge.) , where you will find many useful resources.

- **5 Algorithms that Changed the World** **(https://www.linkedin.com/pulse/5-algorithms-changed-world-murat-durmus/)** : A very brief look at five algorithms.
- Building up your CS bookshelf? Here are a few interesting and easy-to-read books:
  - ***Nine Algorithms that Changed the Future: The Ingenious Ideas That Drive Today's Computers*** **(https://www.amazon.com/Nine-Algorithms-That-Changed-Future/dp/0691158193)** by Chris Bishop; ISBN-13: 978-0691158198
  - ***Algorithms to Live By: The Computer Science of Human Decisions*** **(https://www.amazon.com/dp/B01D24NAL6)** by Brian Christian and Tom Griffiths; ISBN-13: 978-1250118363
  - ***Once Upon an Algorithm: How Stories Explain Computing*** **(https://www.amazon.com/Once-Upon-Algorithm-Stories-Computing/dp/0262036630/)** by Martin Erwig: ISBN-13: 978-0262036634
- For the littles: A read aloud for children: What Do You Do with a Problem:

What Do You Do With A Problem? A READ ALOUD **(https://youtu.be/fYeHODPyfno)**

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