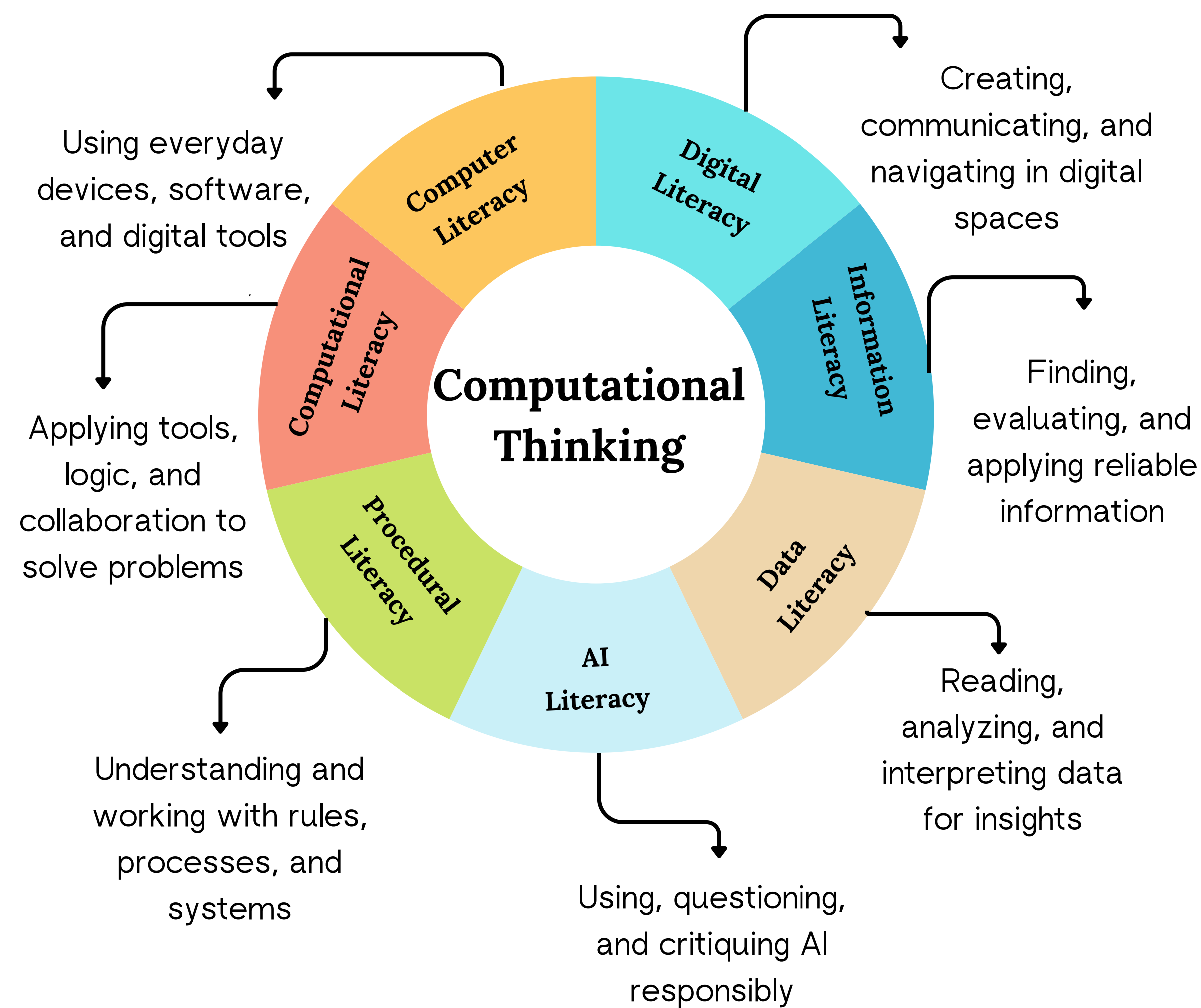


AI Literacy ↔ Computational Thinking

Building 21st Century Skills

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“ Learning how AI works is an opportunity for learning computational thinking skills
(TeachAI) ”

What Is Computational Thinking?

“ Computational thinking involves solving problems, designing systems, and understanding human behavior, by drawing on the concepts fundamental to computer science.”
(Wing, 2006, p. 33)

“ A way of solving problems and designing systems that draw on concepts fundamental to computer science and are applicable to various disciplines.”
(TeachAI)

Characteristics of Computational Thinking (ISTE)



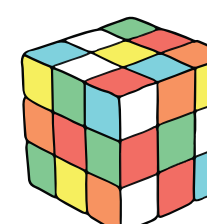
Formulating Problems

→ Framing challenges so they can be tackled with computer-based tools and approaches.



Organizing Data

→ Logically structuring, sorting, and analyzing information to make it useful.



Using Abstractions

→ Simplifying complexity through models, patterns, or simulations.



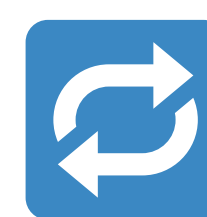
Algorithmic Thinking

→ Creating step-by-step procedures that lead to workable solutions.



Evaluating Solutions

→ Testing and refining options to achieve the most efficient and effective result.



Generalizing

→ Applying successful methods to new situations and a wide variety of problems.

AI Literacy ↔ Computational Thinking

- 1 **Decomposition:** Breaking complex problems into smaller parts.
- 2 **Abstraction:** Highlighting the essential details and ignoring irrelevant ones.
- 3 **Algorithmic Thinking:** Designing step-by-step solutions to problems.
- 4 **Pattern Recognition:** Identifying trends and regularities in data.
- 5 **Reflection (Debugging):** Spotting and fixing errors in AI outputs.
- 6 **Evaluation:** Testing and refining solutions for the best result.

“ One of the major benefits of learning about AI is developing computational thinking
(TeachAI) ”

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