

Activity Guide - Card Sorting

Processing Uses Algorithms

Processing is anything a computer does to turn input information into output information. Humans can process information, but usually they're making lots of assumptions or mental leaps to do it. To get computers to solve information problems, computer scientists create **algorithms**, or sets of instructions, that will always turn an input into a desired output.

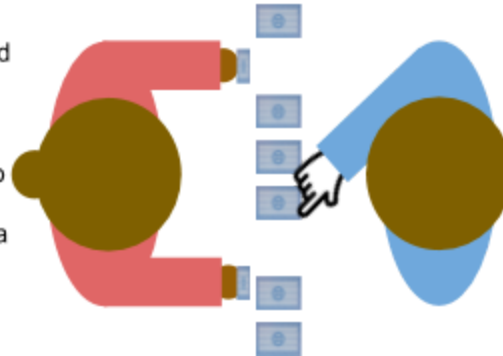
Objective

Develop an algorithm that will always sort a row of cards, following the rules in the diagram.

Tips

- Start with only 3 or 4 cards and work up to 8.
- Switch roles frequently.
- Practice with the cards face up to find useful patterns.
- Test your work and even try to "break" your solution.
- Stick with it! There's no "right answer" and many possible solutions. The point is to find YOURS!

Sorter: Can touch, pick up, put down, and swap cards in any order they wish. May not look at the cards but may show them to the pointer. Only one card in each hand at a time. Cards need to go back into empty spots on the table.



Pointer: When shown two cards can point to the bigger one. For a tie point to either. No other communication is allowed

Your Algorithm

Once you've developed your algorithm for processing cards write the steps of your way of processing the cards in the space below. Feel free to draw pictures, number steps, or do anything else that helps communicate your algorithm.

Reflection

What step of the problem-solving process did you think was most important in this activity? Why?

Why would someone create an algorithm to process information if they already know how they would do it by hand?
