



Computational Thinking At Home

What is computational thinking?

The problem-solving process that includes a number of characteristics, such as logically ordering and analyzing data and creating solutions using a series of ordered steps (or algorithms)

Computational Process:

- **Decomposition:** Breaking down data, processes, or problems into smaller, manageable parts
- **Pattern Recognition:** Observing patterns, trends, and regularities in data
- **Abstraction:** Identifying the general principles that generate these patterns
- **Algorithm Design:** Developing the step by step instructions for solving this and similar problems

Activities to Do at Home

- Organize Clean Dishes Computationally

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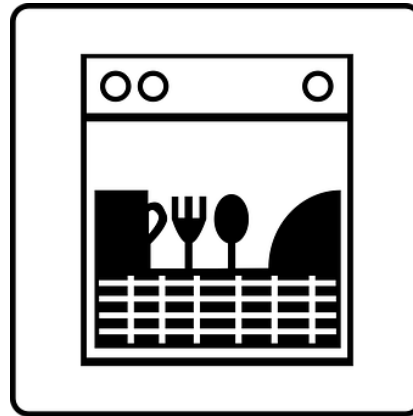
The STEM way of organizing clean dishes

What are the Learning Outcomes?

- Optimization
- Sequencing
- Conditionals

What age is it for?

4-11 year olds



How to Play

Time to unload clean dishes from the dishwasher to put them in the most accessible drawers and cabinets.

There are too many clean dishes to put away. let your children brainstorm and come up with solutions while applying computational thinking concepts and practices.

First thing: Have a back and forth conversation. What is the most accessible and efficient way to put clean dishes in a drawer and cabinets? In doing so, each family member can grab any dishes they need in the future.

For example, if you need a fork, spoon, bowl, or plate, it should be at the most accessible place to find.



Step 1: Getting strategic

Instead of unloading the dishwasher, allow your children to unload the dishwasher and put clean dishes in the most accessible place.

Start asking questions like, what is your task here? What can your children do to solve it the most optimum way?

Step 2: Conditional Statements

Tell your children that it's time to put their strategic plan in action. For example, will it really be the most optimum place to put a fork or coffee maker? If you place the fork in the top drawer... then...

Step 3: Reflection

Encourage your child to reflect as they organize. When they completed organizing, have them go through the cabinets and drawers to have experience if there is any challenge.