

Chores are things we must do; things our parents tell us to do, like: make your bed, tidy up your room, wash the dishes, set the table, ... things we sometimes do not like.

So, let's train a robot to do our chores for us.

First:

Now you_
Draw your robot:

1_name

Name your robot. The name can be numbers (1, 2, 3, ...), letters (A, a, B, b, ...) and signs (_, +, #, ...), for example:

“Robo_Me“

A name of numbers (1, 2, 3, ...), letters (A, a, B, b, ...) and signs (_, +, #, ...) is a **string**.

Now you_ Name your robot: “	“
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2_how robots think

We want to teach robots how to do chores: small chores and big chores, small problems and big problems, and small tasks and big tasks.

One big task really is: many small tasks. One big problem is: many small problems.

Like “tidying up your room“. The big task of “tidying up your room“ really is: many small tasks: put the clothes in the closet, put the books on the shelf, put the toys in the toy box, ...

If you want to teach your robot how to do a big task, you have to tell it, what the small tasks/steps are.

Robots do what **programmers** tell them to do.
Step by step the robot will do these small tasks/steps.

At the end the robot learns how to do this big task.
Then the robot can help other robots to do this task.

3_programming

If you want to teach your robot something, you need to

- make a big problem or task into smaller ones.
- write a list of smaller steps the robot has to do.
This is **programming**.
This list is called an **algorithm**.

If you want to teach your robot, how to “set the table“, programming an algorithm could look like this, for example:



Task: "set the table"

Things you need: plates, napkins, forks, knives, soup spoons, tea spoons, glasses

Definitions (*new vocabulary the robot has to learn*):
"to fold" = form a triangle (↘), "above" = on the top of

Steps:

Step 1: put the plate on the table, in front of a chair;

Step 2: "fold" the napkin;

Step 3: put the napkin to the left side of the plate;

Step 4: put the fork between the plate and the napkin;

Step 5: put the knife to the right side of the plate;

Step 6: put the soup spoon to the right side of the knife;

Step 7: put the tea spoon "above" the plate;

Step 8: put the glas "above" the soup spoon;

Step 9: do steps 1-8 until everybody's dinner table is set.

Now you_

Teach your robot how to do one of your chores, for example: making the bed.
Make this big task into smaller steps, program an algorithm.

Task:

Things you need:

Definitions:

Steps:

Step 1:

...

useful vocabulary

verbs: to take out, to put, to shake out,

nouns: corner, blanket, duvet, pillow case, clean sheets, stuffed animal, wrinkles, ...

Now you_
Get up. Get together with a partner.
One of you is the robot. One of you is the programmer.

As the programmer: read out your algorithm,
As a robot: do what the programmer says. If a step is not clear enough, make mistakes.

Change roles.

Teach this vocabulary to your robot.

vocabulary	English definition
string	
algorithm	
programming	