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mangobot Instruction Book

little tinkerer

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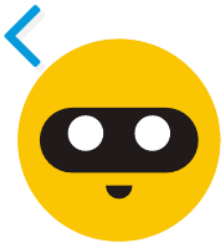
Welcome to the magic world of coding!

What is coding?
What is computational thinking?



What is coding? What is computational thinking? Coding is to tell a computer what you want it to do in a way that a computer understands. There are many languages a computer could understand, but the way of thinking for writing commands in those languages is similar. It is called computational thinking (CT). CT involves putting actions together in a certain sequence, recognizing similarities and dissimilarities, abstract thinking etc. For a programmer, writing the codes is not the most difficult part, coming up with the algorithm is.The latter builds on a foundation of good computational thinking.

What can Mangobot teach?

Mangobot helps children with many areas of early learning:

- Motor skills
- Creativity
- Socio-emotional development
- Language skills
- Logical skills
- Math skills
- Reasoning skills
- Problem-solving skills

and more...

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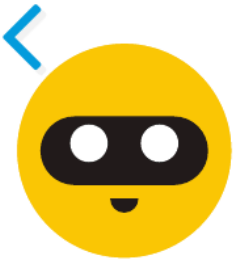
How can you help?



Thank you for taking the interest in teaching your child computational thinking. Here is how you could best help:

- Play together with them.
- Do not tell them right or wrong. Encourage them to discover errors by watching Mangobot act.
- Learn together with them.

Pieces Included

Mangobot Core Coding Kit

- 35 Animal and Plant Cards
- 18 Core Blocks
- 1 Coding Processor
- 1 Map
- 1 Mangobot
- 1 Coding Guidebook

Mangobot Complete Coding Kit

- 35 Animal and Plant Cards
- 18 Core Blocks
- 9 Conditional Logic Blocks
- 7 Function Blocks
- 1 Coding Processor
- 1 Map
- 1 Mangobot
- 1 Coding Guidebook

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The Core Set includes the following coding blocks.

A "FORWARD" block makes Mangobot move forward one square on the map.

A "BACK" block makes Mangobot move back one square on the map.

A "TURN RIGHT" block makes Mangobot turn right 90 degrees.

A "TURN LEFT" block makes Mangobot turn left 90 degrees.

A "TURN BACK" block makes Mangobot turn 180 degrees.

A "HAPPY" block makes Mangobot express a HAPPY emotion.

A "SAD" block makes Mangobot express a SAD emotion.

An "ANGRY" block makes Mangobot express an ANGRY emotion.

A "SCARED" block makes Mangobot express a SCARED emotion.

A "PLAY REC" block makes Mangobot play the last recording.

A "REPEAT 2X{" block paired with a "}" block makes Mangobot repeat twice the commands in between.

The end of a loop, used with a block that includes a "{"

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A "REPEAT 3X{" block paired with a "}" block makes Mangobot repeat three times the commands in between.

A "FOREVER{" block paired with "}" makes Mangobot repeat the commands in between forever.

An "IF{ " block paired with a "}" marks a conditional loop. For example:

The program above makes Mangobot move forward one square if it has detected a sound (at the beginning of the loop), and if not, then not do anything (remain still).

An "}ELSE{" block is used in a conditional loop to tell Mangobot what to do when the condition is not met.
For example:

The program above makes Mangobot move forward one square if it has detected a sound at the beginning of the loop, and otherwise turn left

A "WAIT UNTIL" block makes Mangobot wait until it receives the input specified by the following block, before continuing with the rest of the program.

A "SOUND DETECTED" block is an input block that usually follows "WAIT UNTIL" or "IF{" .

A "FUNCTION" block can be defined as a sequence of commands. After it is defined, it can be used in a new program where it represents the sequence of commands.

An "=" block is used after the function block and before the sequence of commands, to define the function block.

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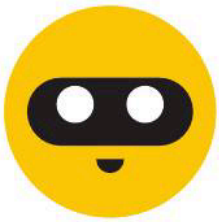


Press the "Power" button once and Mangobot will be powered on.

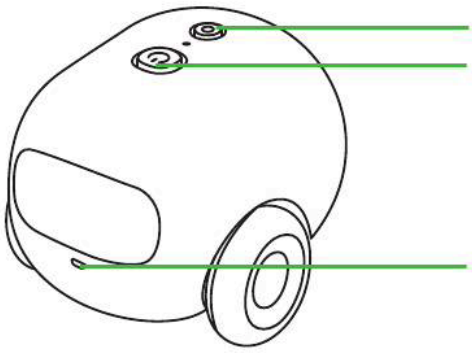
Press and hold the "Power" button for 5 seconds and Mangobot will be switched off.

Press the "Run" button on the Processor and the Processor will be switched on. The light will be flashing in white and red alternatively.

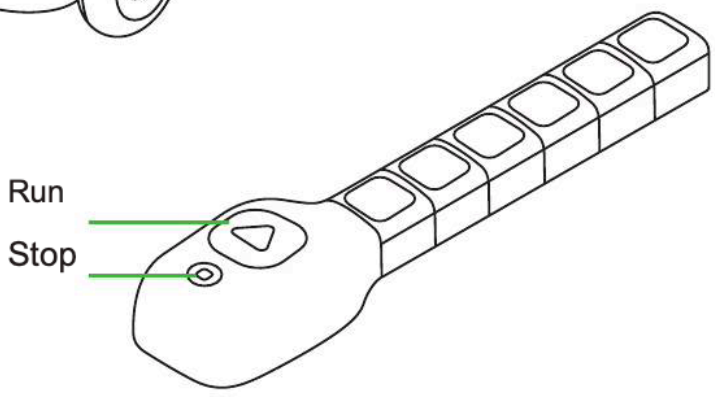
Press and hold the "Stop" button for 5 seconds on the Processor and the Processor will be switched off.

If either Mangobot or the Processor stands idle for longer than 10 minutes, it will be automatically switched off to save power.

Mangobot



Coding Processor



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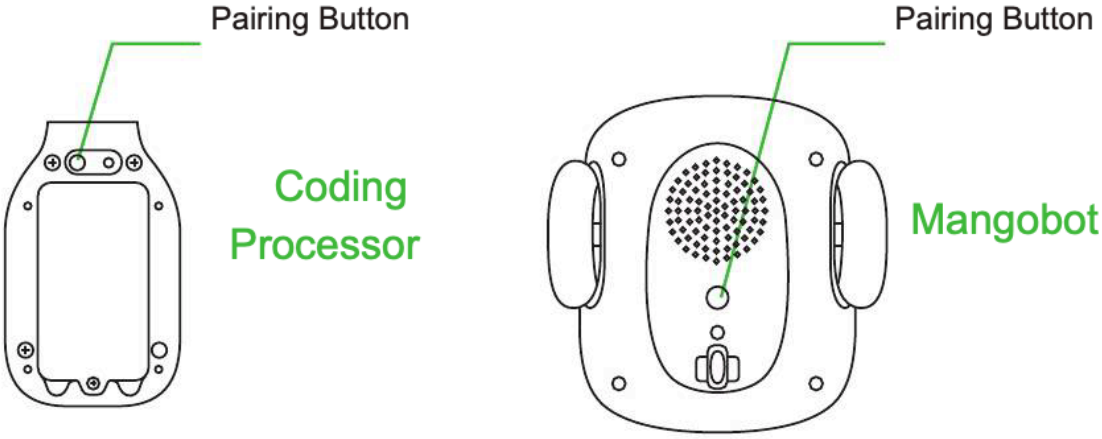
Mangobot and Coding Processor will pair automatically by Bluetooth once both are turned on. The light on the Processor will flash in white once the pairing is successful.

When you want to use your Processor to control another Mangobot than the one included in the package,, you need to pair them manually. Press the "Pairing" button on both Processor and Mangobot, both indicator lights flash in green when they are pairing. The lights go off when the pairing is successful.



Running Mangobot!

The Coding Blocks flash in white alternatively when they are connected to the Coding Processor and with each other.

Once you have the block sequence ready, press the "run" button on the Coding Processor to run Mangobot.

The block being executed lights in white, while others remain dim.

If there is a bug in your program, the problematic block will light in red, after you run the program.

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Please read these instructions before using.

If Mangobot displays four empty squares , it indicates low battery power. Please recharge.

The Coding Processor is powered by 2x1.5V AA batteries. Batteries should be installed or replaced by an adult. Please make sure that the Processor is powered off when replacing or installing the batteries.

Mangobot running abnormally?

If your Mangobot does not run normally, these are things to check:

If Mangobot/Coding Processor cannot power-on:

- Please check whether it has too low battery power. If so, replace the batteries or recharge it.

If Mangobot cannot pair with Coding Processor:

- Please check if they are placed too far apart.
- Manually pair them by pressing the pairing buttons on both Mangobot and Processor. See the previous Bluetooth Pairing instructions.

If Mangobot cannot be controlled by Coding Processor:

- Please make sure that both Mangobot and Processor are powered on.
- Please make sure the blocks are sequenced correctly, i.e. there is no bug in your program.
- Please restart Mangobot and Coding Processor and try again.

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- Be sure to insert batteries correctly(with adult supervision) and always follow the toy and battery manufacturer' s instructions.
- DO NOT mix new and used batteries.
- DO NOT short-circuit the supply terminals.
- DO NOT disassemble Mangobot, Coding Processor or Coding Blocks.
- Insert battery with the correct polarity. Positive (+) and Negative(-) ends must be inserted in the correct directions as indicated inside the battery compartment.
- Remove batteries if product will be stored for an extended period of time.
- Store at room temperature and a dry environment. Avoid sunlight, fire and water.
- To clean, wipe the surface of the unit with a dry cloth.

Dare to Explore!