

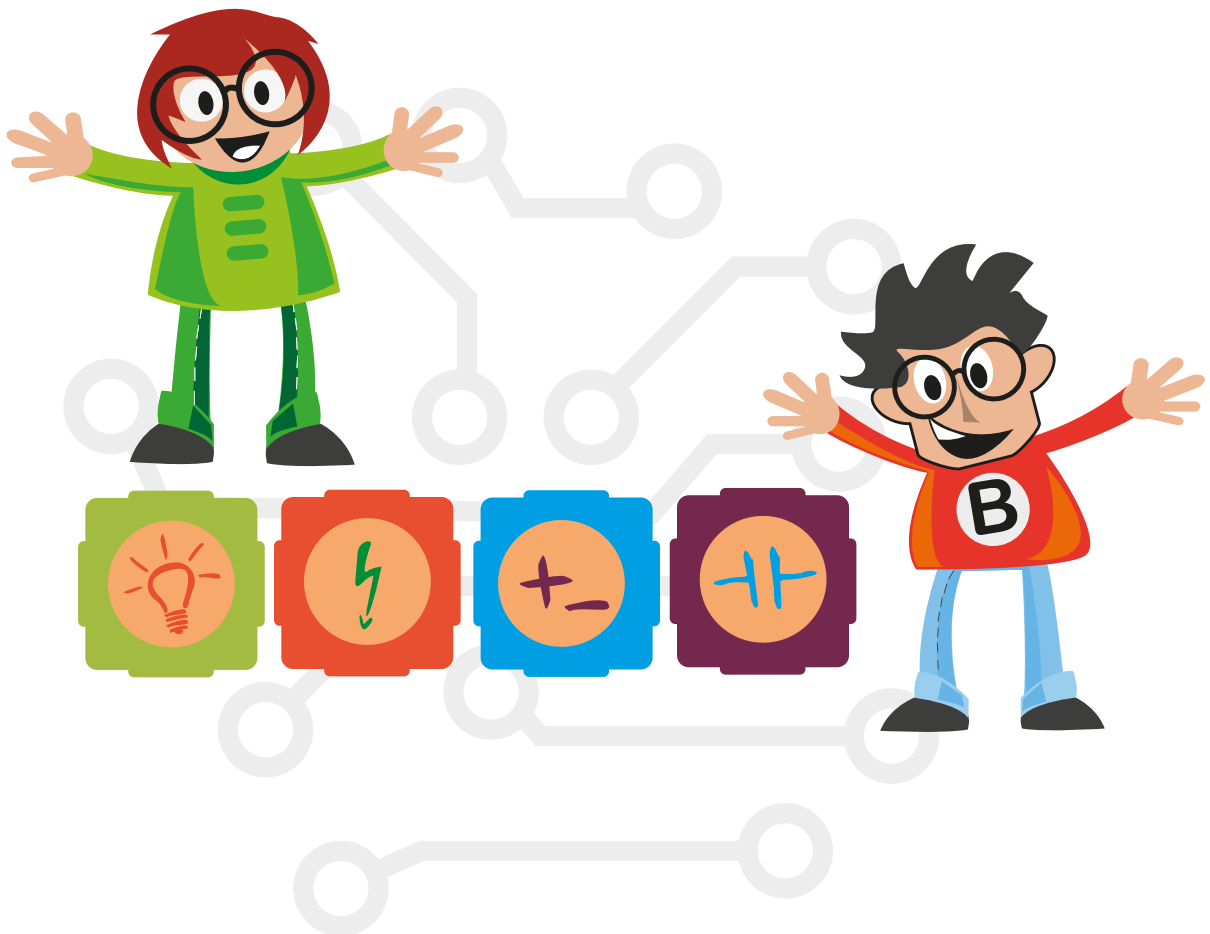
Brick 'R'
knowledge

Name:

Class:

Date:

Exercise booklet - Basics

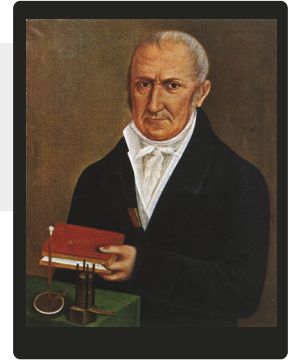


Worksheet with excercises and repetitive
tasks for students and learners



1

How is the unit of the electrical voltage called?



Hint: The unit is called after this Italian physicist. He's said to be the founder of the electricity science and his first name is Alessandro.

2

Mark the materials that conduct electricity very well with a cross.

plastic

iron

glass

ceramic

copper

gold



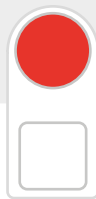
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How do we call the resistors that we use to protect LEDs from getting destroyed?



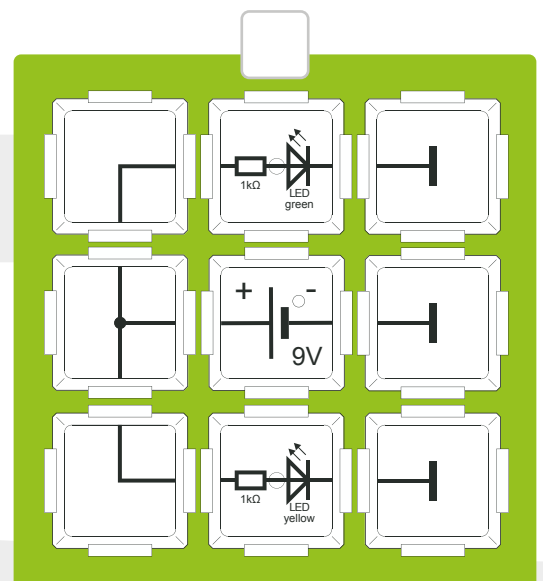
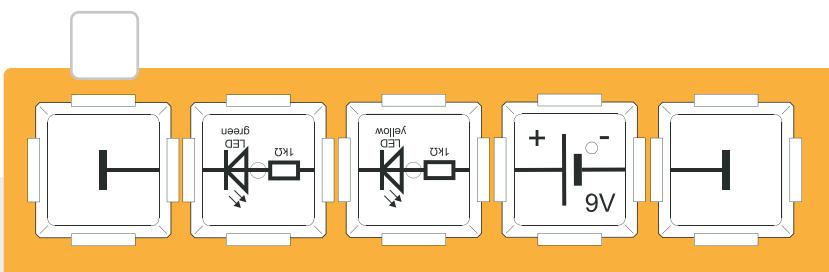
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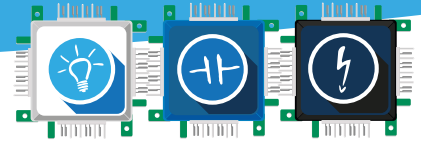
Bring the LEDs in the right order. Start with the color with the lowest operating voltage.



5

Mark the circuit that represents a series connection with a cross.





6

Fill in the gaps:

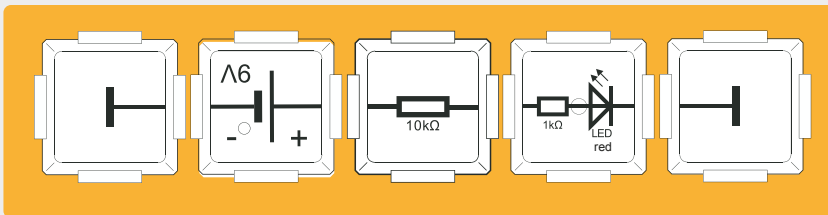
The isolator has ideally an infinite resistance, the superconductor resistance.

7

Can you calculate the current flow if the voltage is 9V and the resistance is 10Ω?

8

Here you can see a circuit with a 10kΩ resistor. How would the lighting intensity change if you used a 20kΩ resistor instead?



Tipp: Georg Simon Ohm has discovered the connection between voltage, current flow and resistance. That's why you call the relationship of those three parameters Ohm's law.



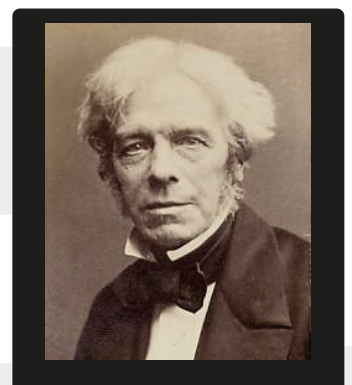
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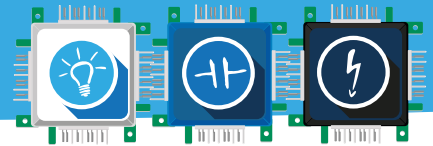
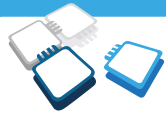
Which changeable resistors do you know?

10

How do you call the unit of the capacity of capacitors.

Tipp: This unit was called after the English natural scientist Michael Faraday and sounds very similar...





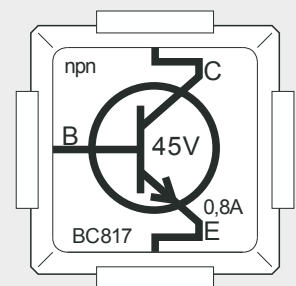
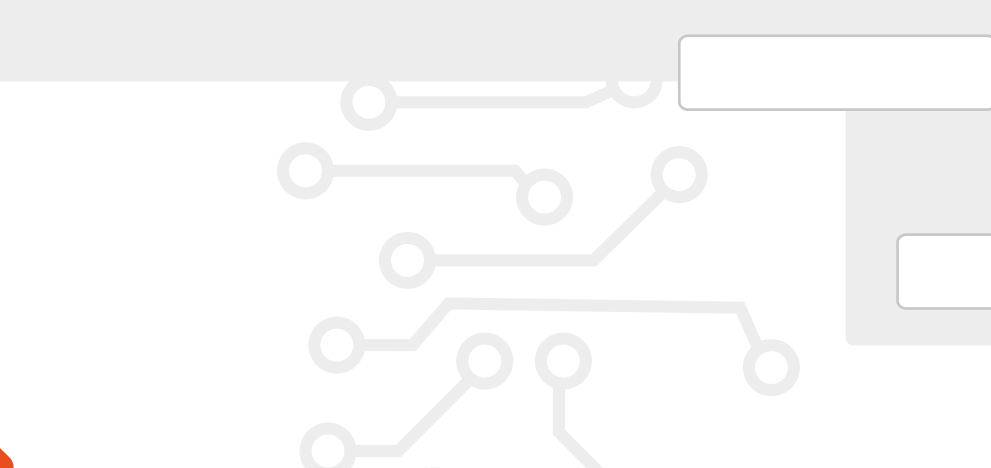
11

What's special about an electrolytic capacitor?



12

How do you call the three contacts of a bipolar transistor?



13

Between which contacts does the base current flow in a npn transistor?

| B | C | E |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

14

With which special resistor are you able to build a nightlight?

