



PARENTS: LEARN CODING WITH YOUR CHILDREN AT HOME

Parents are considered the first educators of children and educators are considered the second parents of children at school. During this pandemic, parents are once again taking the role of teachers to their children as they [learn remotely](#).

Learning how to code with your children at home can be a good way of spending quality time with them during lockdown while helping them learn. The process of learning alongside your children can also be a fun and productive way to encourage and support them at home.

Sound daunting? The answer is probably “yes” for a lot of parents but there are some ways to make it easier - and you don’t need any previous experience.

WHAT IS CODING?

[Coding](#) is relatively easy to learn even if you do not have any knowledge of computer science - we promise! Many educational kits and toys, like [Arduino](#), need coding for them to work. Oftentimes, especially at beginner level, the actual code is provided and all you have to do is simply enter it.

Coding is basically the language that computers understand. Coding is used to develop apps, websites and software. Different programming languages have different sets of coding and ways to arrange them.

Computers “understand” binary codes of 0s and 1s, but writing code just made up of 0s and 1s would be impractical and time-consuming. Coding simplifies the task by allowing human-readable instructions instead. For example, the binary code for the letter ‘A’ is 01000001. Just imagine how difficult and confusing it would be to type your name or an entire paragraph using binary codes.



WHAT ARE THE DIFFERENCES BETWEEN CODING AND PROGRAMMING?

For some people, [coding and programming](#) may seem interchangeable, but they are two different things. Coding can be considered as part of programming. You will need computer languages (coding) to write programs that can be executed by computers.

Programming follows certain logical sequences that are highly structured - it's a bit like writing a recipe.

HOW TO LEARN CODING WITH YOUR CHILDREN AT HOME

There are several ways you can learn coding with your children. It could be a trial and error process - but it's going to be fun! Here are our top tips:

1. Drag and drop – you can start with [block drag and drop computer languages](#). You do not need to memorize complex or weird codes to use these programming languages. You only need to be logical and analytical. [Scratch](#) is probably the most well-known drag-and-drop software and it's a great starting point.
2. Use programmable toys – you can purchase programmable toys and project kits like [Arduino](#) to create various programmable toys like remote-controlled robots or SONAR/RADAR. Once you've got the hang of it, challenge yourself and your child to construct more sophisticated projects.
3. Invent codes – before you actually study coding or programming, you may want to try to invent analog codes that you and your child can use to communicate secretly. This will demonstrate the basic concept of coding.
4. Play algorithm games – using the codes you've invented, design a set of rules (called an algorithm in coding) that can be translated and executed by your child as the pretend computer. For example, you could create a modified scavenger hunt around your house.
5. Brainstorm – encourage your child to brainstorm with you about the things that can be solved using coding or programming. It could be as simple as basic arithmetic problems.

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6. Just give it a try! Choose a programming language and sample coding – start with the visual-oriented languages like drag and drop before moving on to something more advanced. Compile some sample coding and experiment with it.

WHY IS IT IMPORTANT FOR MIDDLE SCHOOL KIDS TO LEARN HOW TO CODE?

Learning coding with your children at home is a productive and fun way of bonding with your kids. It is also a great way to teach them critical and logical thinking. It is practical learning that students need to learn to acquire higher knowledge and employable skills later in life.

Coding is part of computer science subjects in school that your child might be required to learn, especially if he or she is taking a STEM course. Mastering basic coding skills is excellent preparation for college.