

Issue 2

# ShiftClick!

an educational technology magazine

11 Apps, Books and Courses to learn Web Design for Kids

NetsBlox - create advance web apps with graphical programming

**From beginner to advance** - learn Python, the number one programming language of the world.

websites ♦ apps ♦ softwares ♦ MOOCs ♦ reviews

# Shift Click Educational Technology Magazine

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# Few words about this magazine

This magazine is a collection of the latest educational technology resources from around the web. Its emphasis is on topics like problem solving and computer science, web and media literacy, design, collaboration etc. These are all crucial skills in a changing world but are not widely taught in traditional educational setups. That's why you will not find apps to practice multiplication tables here. **Our twitter handle** shares more traditional stuff as well so check it out.

While this magazine can be used by both educators and learners, our target audience are the learners, especially the self learning kind. Hence in this magazine you will find resources which can not only be taught in a classroom setting or in a homeschooling family's living room but can also be learnt by an independent learner on his own. Resources are not categorized age-wise.

If you like this magazine **subscribe to the mailing list** and the next issue will be delivered to your inbox, for free.

Happy learning!

*Naveera*  
(Editor)

## Naveera Ashraf

Muslim, unschooling mother of three, writer, coder, wannabe hacker and maker. When not bullying my brain into learning something new I bake sourdough bread and try to grow vegetables. Learn more about me at:

**naveeraashraf.com**

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# **Web Design for Kids**



# Spot Light

## DETECTIVE DOT

*"Inspiring the next generation to be coders, not Kardashians."*

**"Detective Dot is a nine year old coder on a mission with the Children's Intelligence Agency. She eats binary for breakfast, logic for lunch and HTML for tea."**



A British technology startup is hoping to encourage children to learn programming skills through a series of stories that avoid traditional stereotypes around engineering, science and technology.

**These sets of stories** will see Dot and Tumble travelling the world finding out how objects including memory chips and footballs are made, using computer science to solve problems they encounter along the way.

In addition to books they also sell a lifelong membership of the Children's Intelligence Agency. As well as super spy agent gear, kids get seven top secret missions to complete, with a focus on critical thinking, computer science and creativity. The CIA pack is delivered in a top secret envelope addressed to your kid. Exciting and mysterious!

This resource is suitable for kids 7-9 years.



# Web Designing for kids

Websites are such an integral part of today's life that making a website is almost like cooking food. You may not be really good at it (not everyone can make Granma's famous cookies) and it may not be a career choice for you (like becoming a chef) but knowing how to make a website from scratch or edit a previously existing one with code is going to come in very handy (like making a quick meal for yourself).

And the best part is that learning HTML, CSS and JavaScript (the building blocks of modern websites)

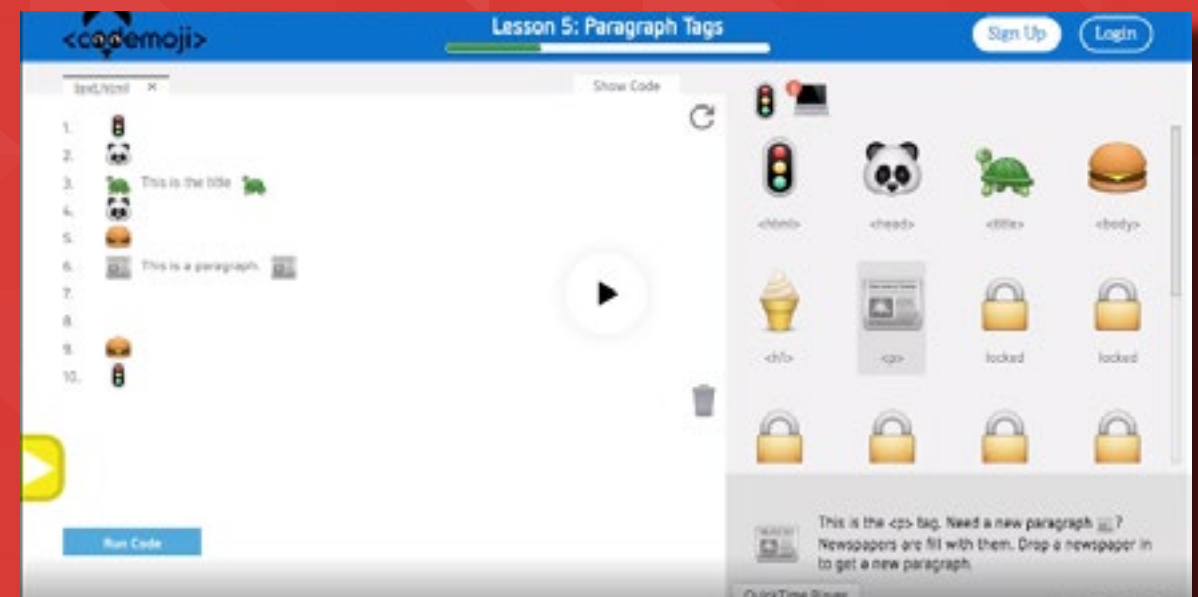
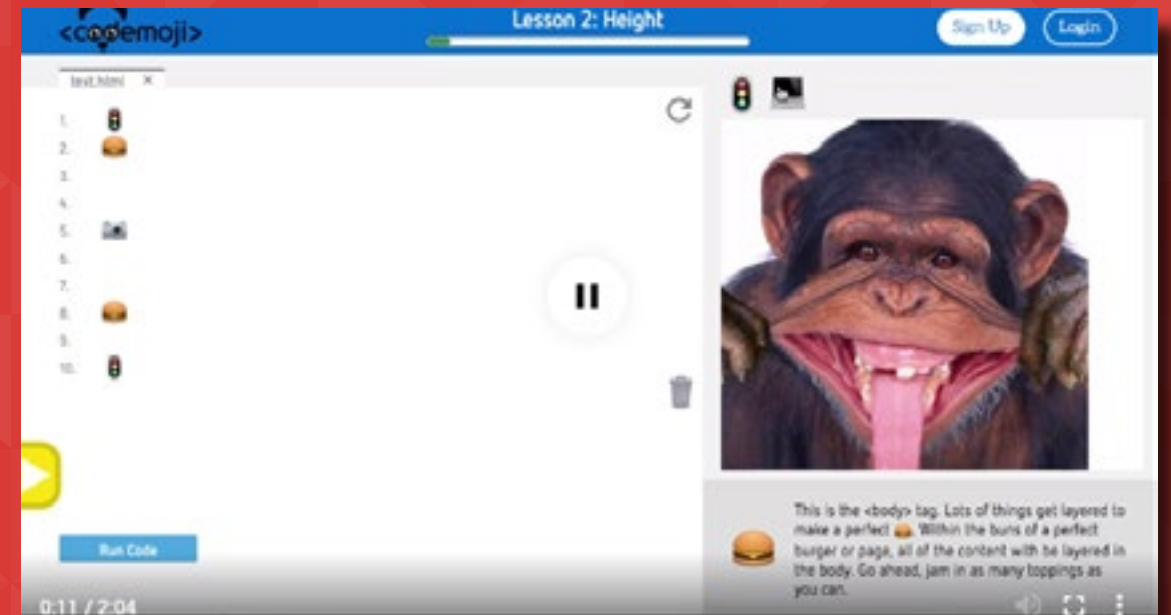
is not difficult. In our first issue we discussed some resources which teach these building blocks very thoroughly. But those were geared more towards older kids or adults. And kids may find them a bit boring if not downright overwhelming.

So here are a few resources which are especially made for kids and even for adults who are not planning on taking web development as a profession but just want to learn a few basic skills.



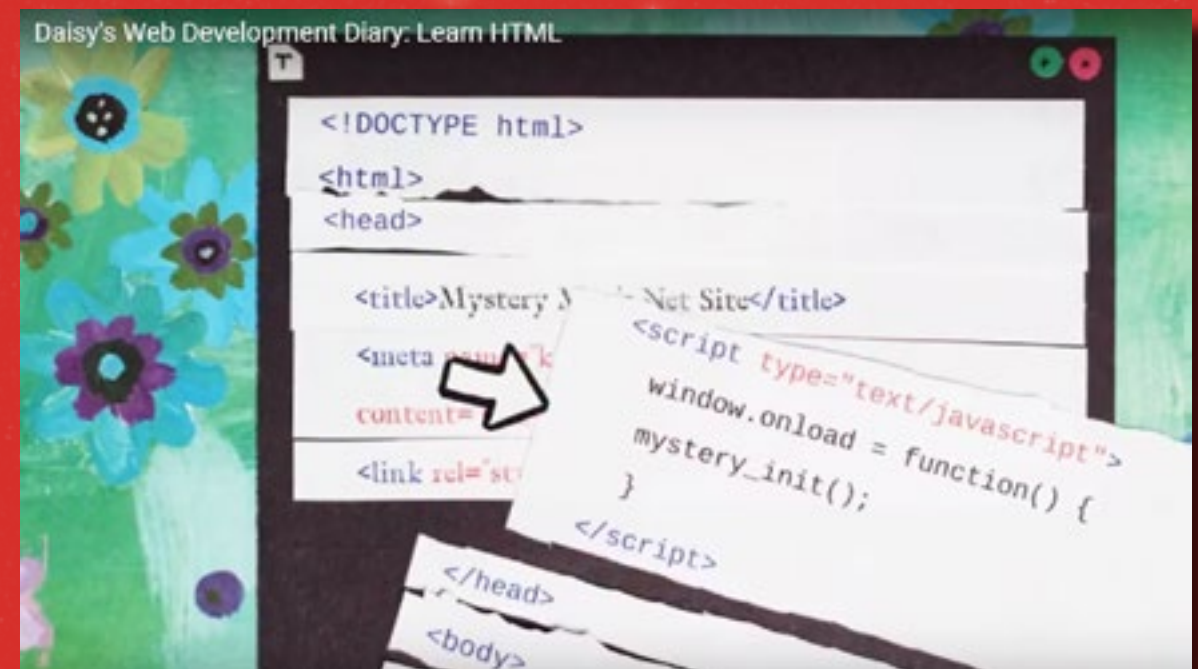
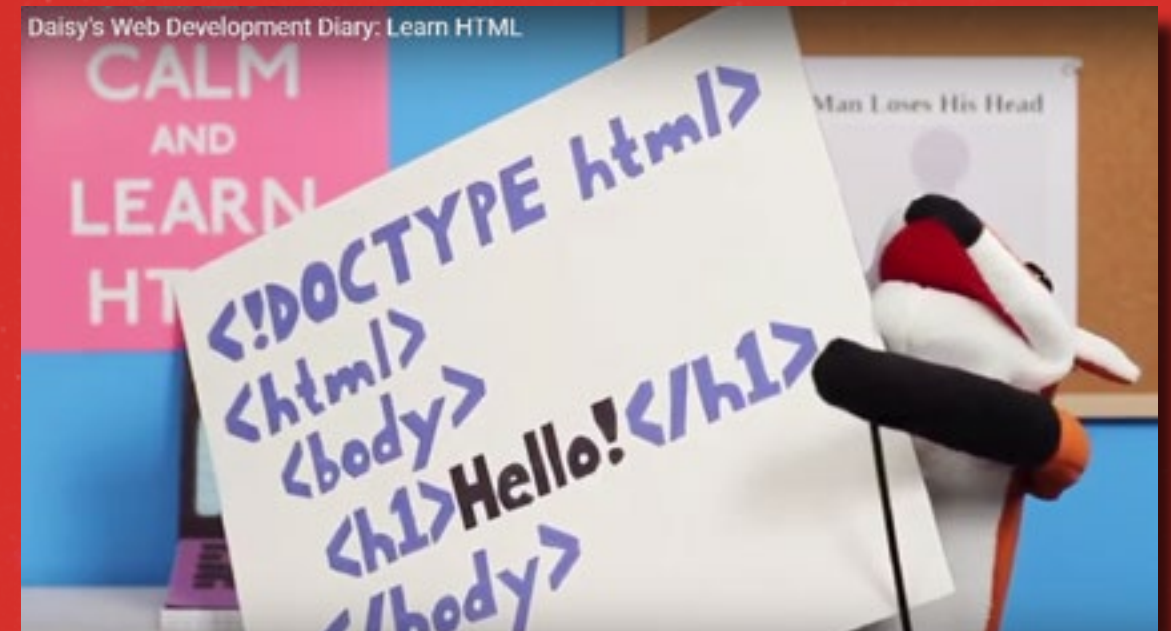
# Codemoji

Experience building web pages, animations and much more in a hands-on way. The “emoji” part of Codemoji is exactly that, a set of emojis that function and work like real HTML, CSS and JavaScript tags. Emojis are added together to build a website, and this makes it super fun.



# Daisy Web Development Diary

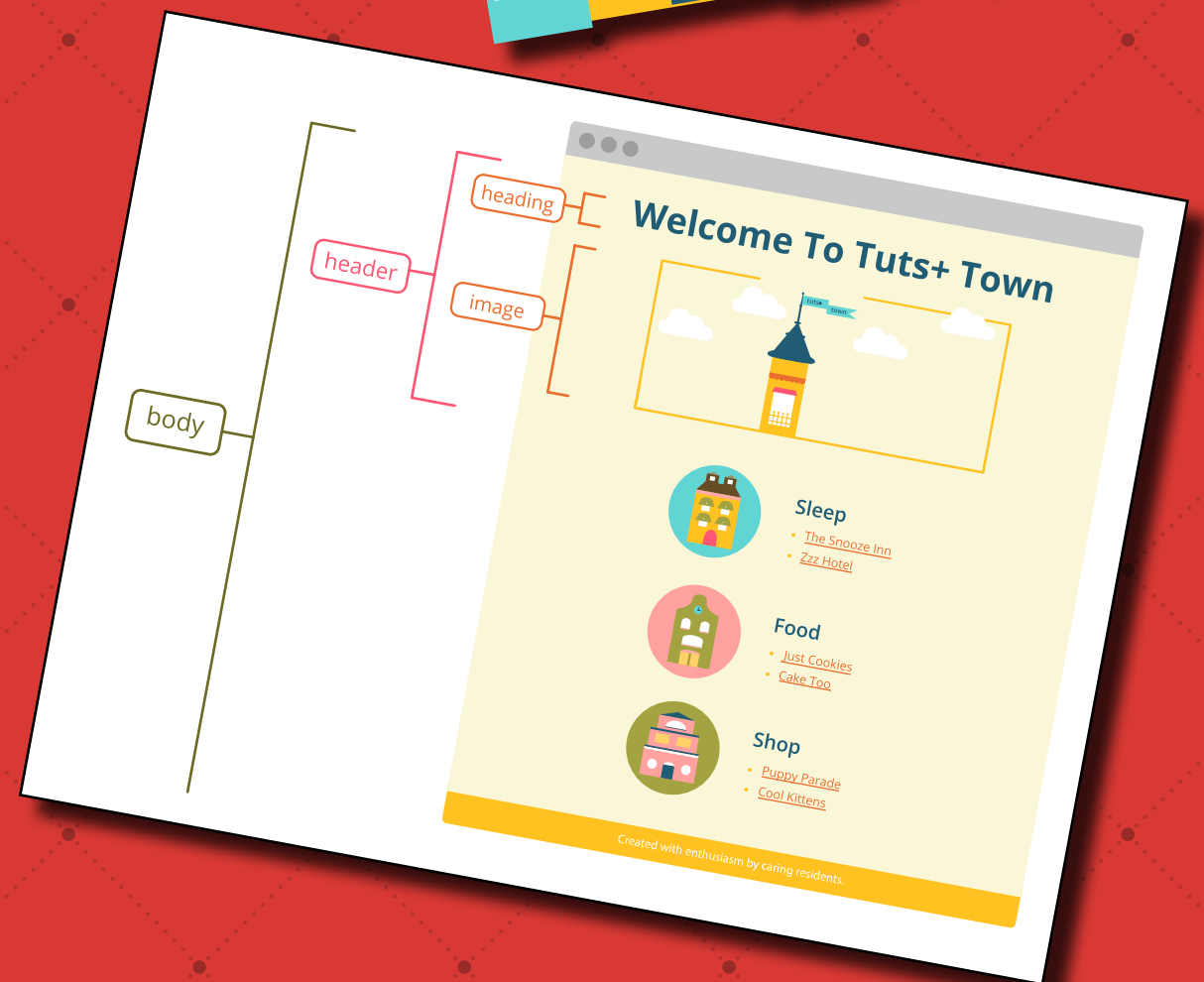
Conquer dragons explore the depths of the ocean, and link to exotic locations as you embark on the adventures in Daisy's Web Development Diary. This free video series explores the foundational web language, HTML. Or you can download the course in PDF from [here](#).





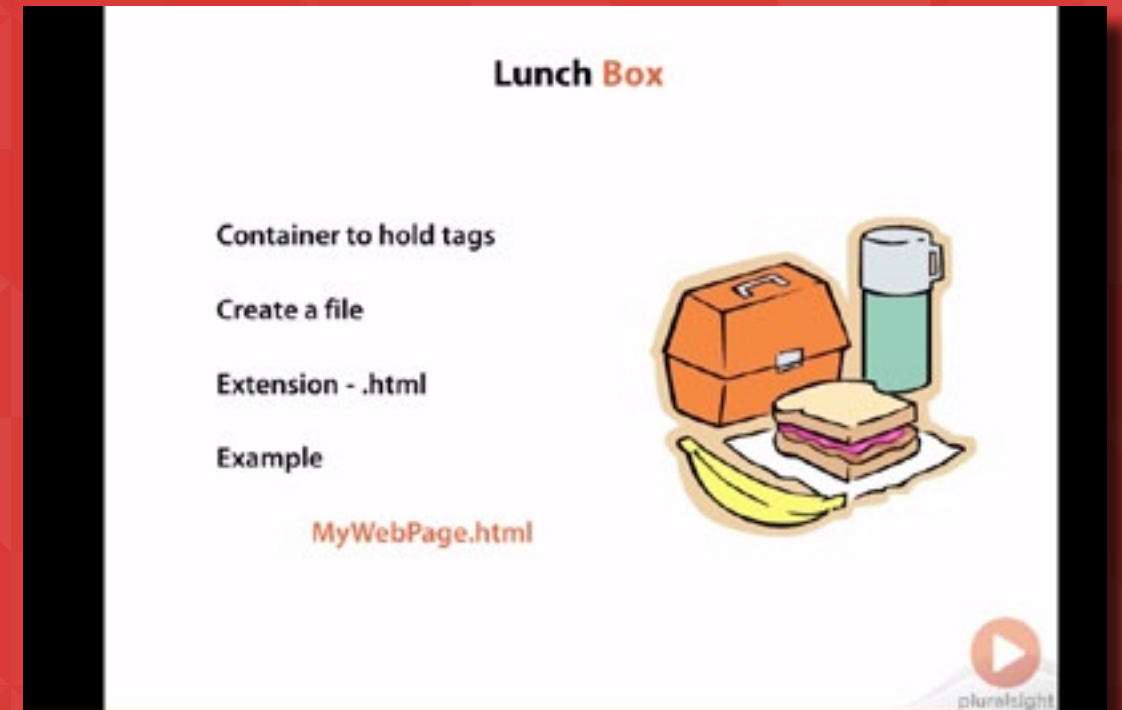
# WebDesign for Kids

Web Design for kids is a series of step by step free tutorials written specifically for kids. These tutorials are on the Tuts+ website, the same people who brought us the Adobe Photoshop and Illustrator tutorials for kids, shared in **our first issue**. Follow **Joni** (the author of the tutorials) as she leads you through Tuts+ Town, learning about web design along the way. The tutorials are super colorful and instructions and explanations are very easy to understand.



# Basic HTML for Kids

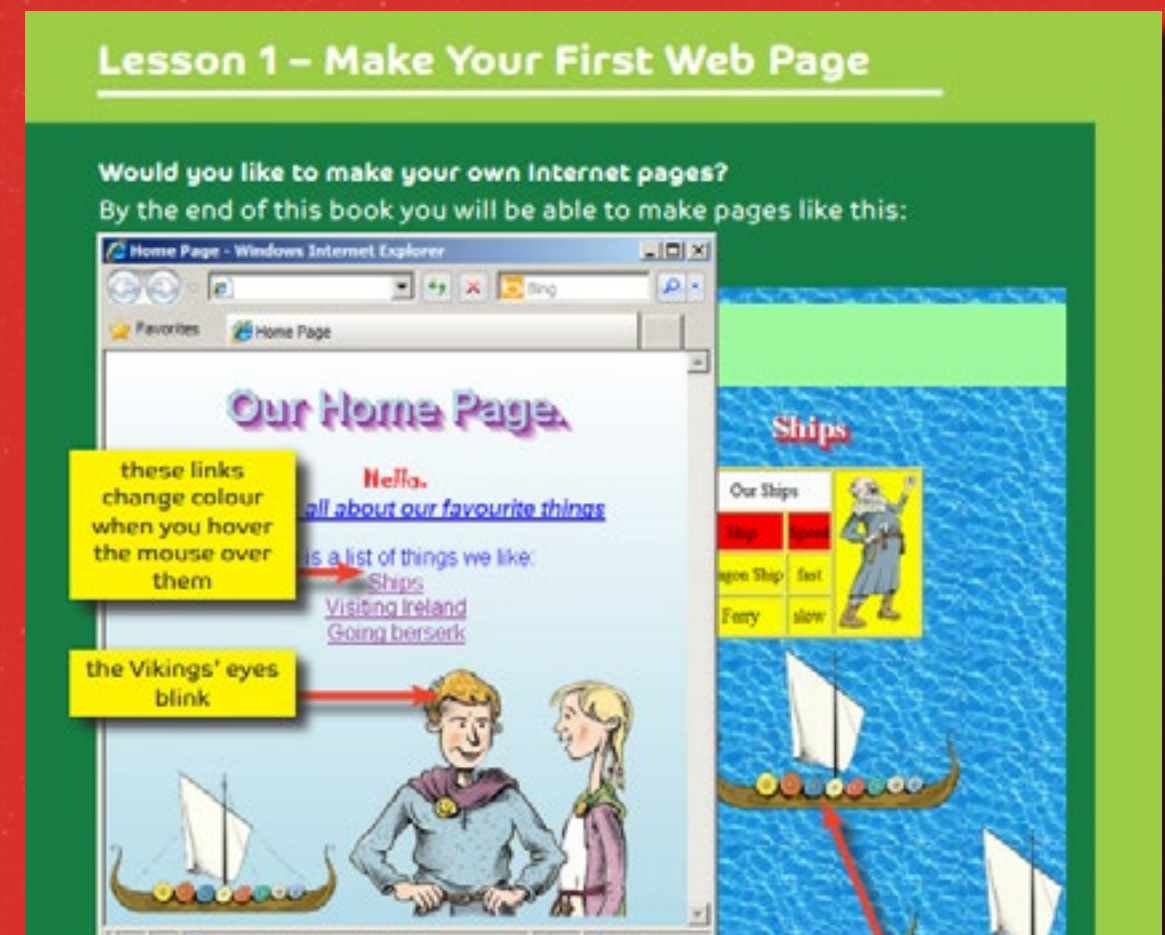
Basic HTML for kids is a free course. It is for you if you prefer video tutorials. Start by learning the basics of HTML, the publishing language of the web. This course teaches you the most used tags in HTML5 and then takes you through creating your very own website using those tags.





# Go Berserk

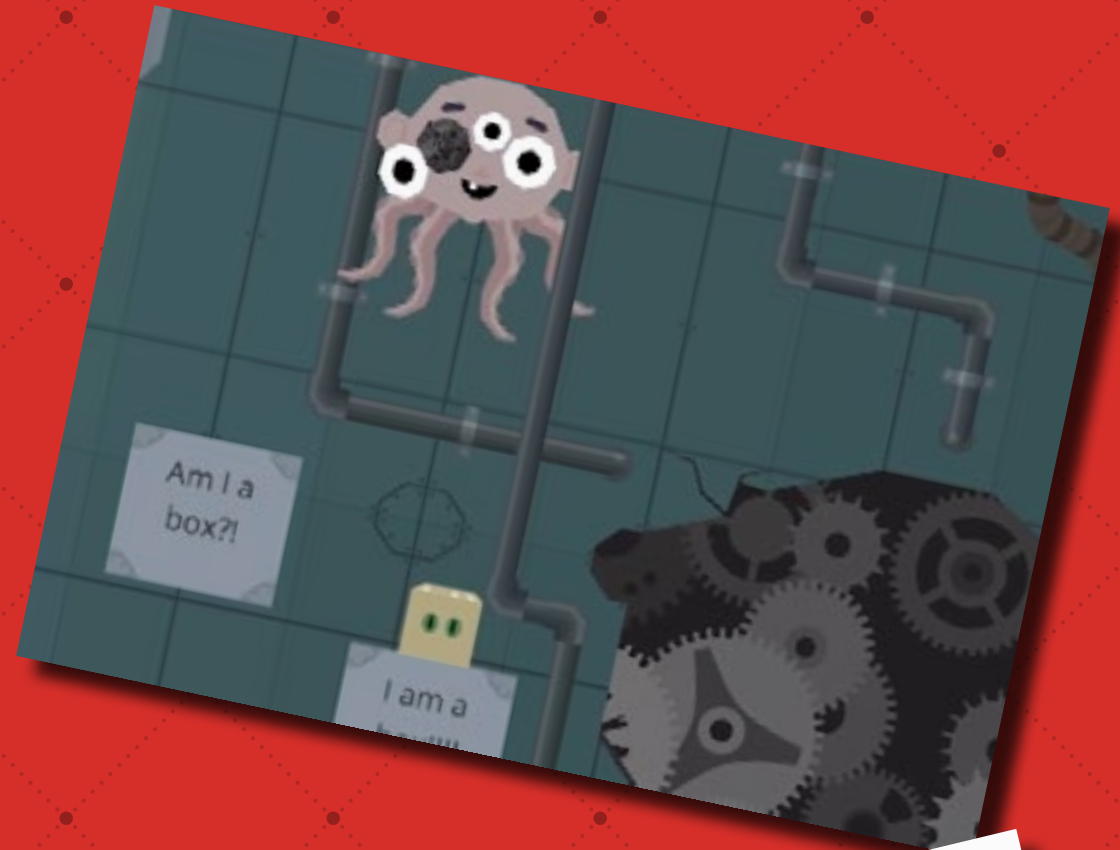
Go Berserk is a collection of books (available in print and as an ebook) which teaches kids to make websites with HTML and CSS. They also plan to write more books and make apps to teach kids Mobile application development and to program in other languages like Python, Java, PHP and more. They also have a companion tutorial on their website and some of their ebooks are free.





# Erase All Kittens

Erase all kittens is a story-driven game that provides you with knowledge of both computational thinking and professional coding languages. Learn HTML, CSS and JavaScript by building and fixing real levels and practice your newly learned skills by building your own simple creations on web. There is a free demo to play before you decide to buy it.



# Drag and Drop Programming

In our first issue, we listed a few popular drag and drop programming environments for beginner coders. There are many more drag and drop programming websites and below are a few more we have found for you. Happy coding!

# Rapid Router

Code the best possible route and become a delivery hero in this fun coding game. It is built on Blockly, an easy-to-use visual programming language that's similar to Scratch. It leads you on to coding in Python. So once you have mastered all the levels, you can start coding in Python.



**Launch Site**



# Blockly Games

Blockly is an open source project by Google to create visual block programming languages and editors. Some folks have made many different kinds of programming challenges for beginner programmers using Blockly. The games include simple puzzles for very young learners and some more advance mazes and art-with-code type of activities.



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# Monster Coding

Draw monsters with  
code all the while  
learning about the basics  
of programming like  
loops, conditionals and  
functions.

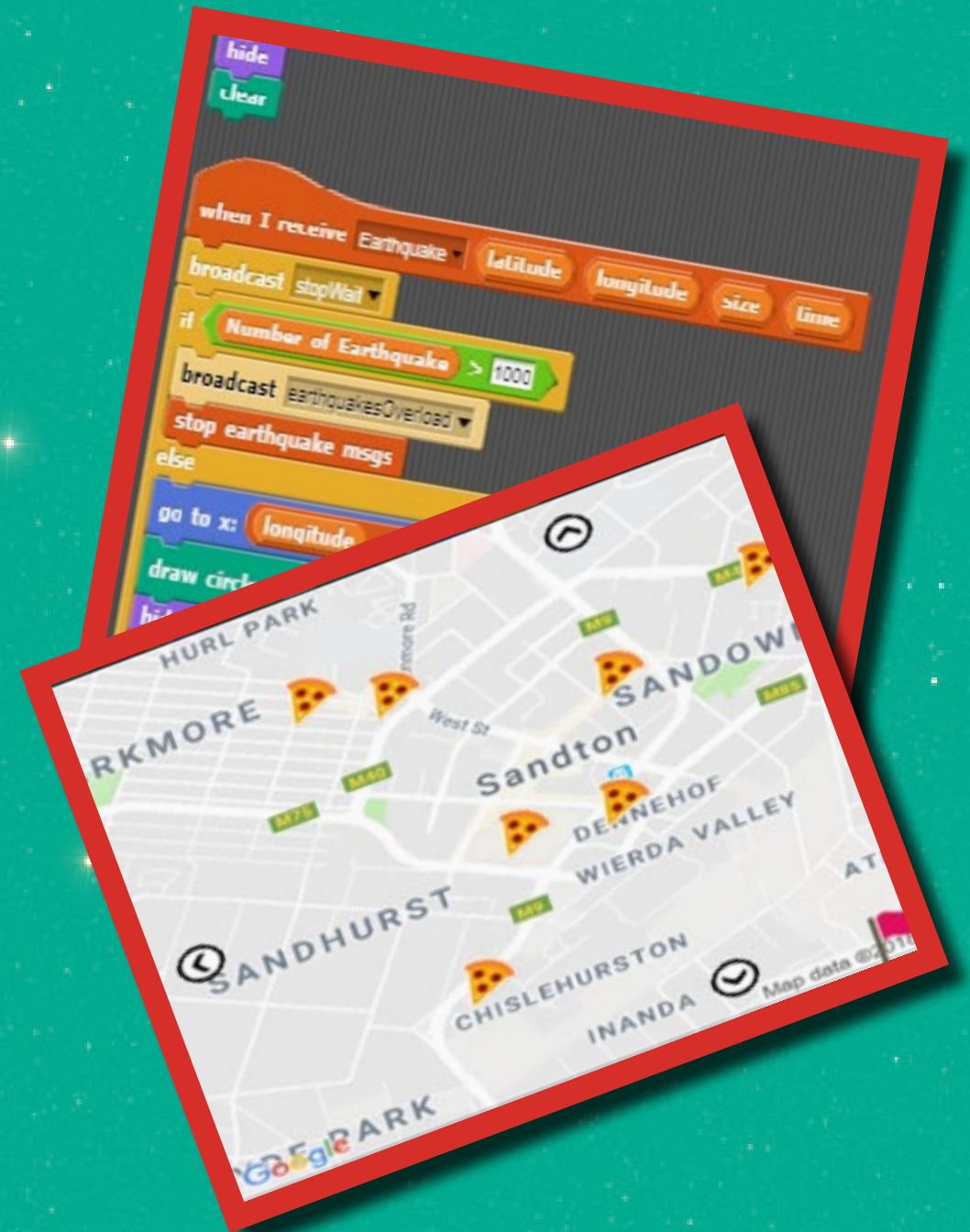


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# NetsBlox

If you think block programming is only for small kids, think again. NetsBlox is a visual programming language that enables you to create networked programs such as multi-player games. But the coolest part is that it lets you access a vast array of public domain scientific and other data sources like the Sloan Digital Sky server. This means you can create advanced apps such as displaying seismic activity, weather, air pollution and more anywhere on Earth using interactive Google Maps, navigate the skies, or make an app to find all the pizza shops around you.



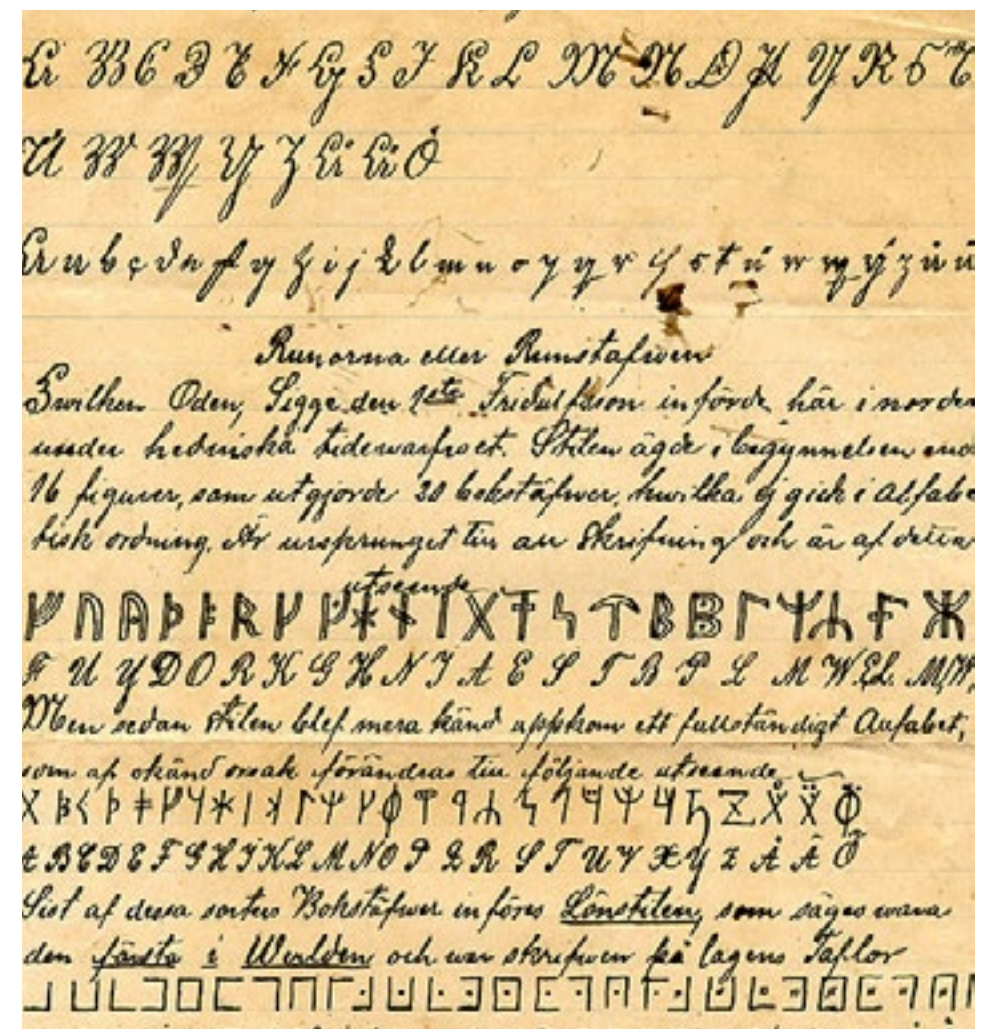
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# Three Resources

Cypher and Encryption is a vital part of computer science. Having some knowledge about how computers hide vital information before saving and sharing it is extremely necessary.

Given it's importance it's no wonder that the web is full of resources explaining cypher and encryption to kids. In **our first issue** we discussed a few of them but this issue is going to go much deeper.

So here are a few top quality videos, games and resources to let you penetrate the mysteries of encryption.



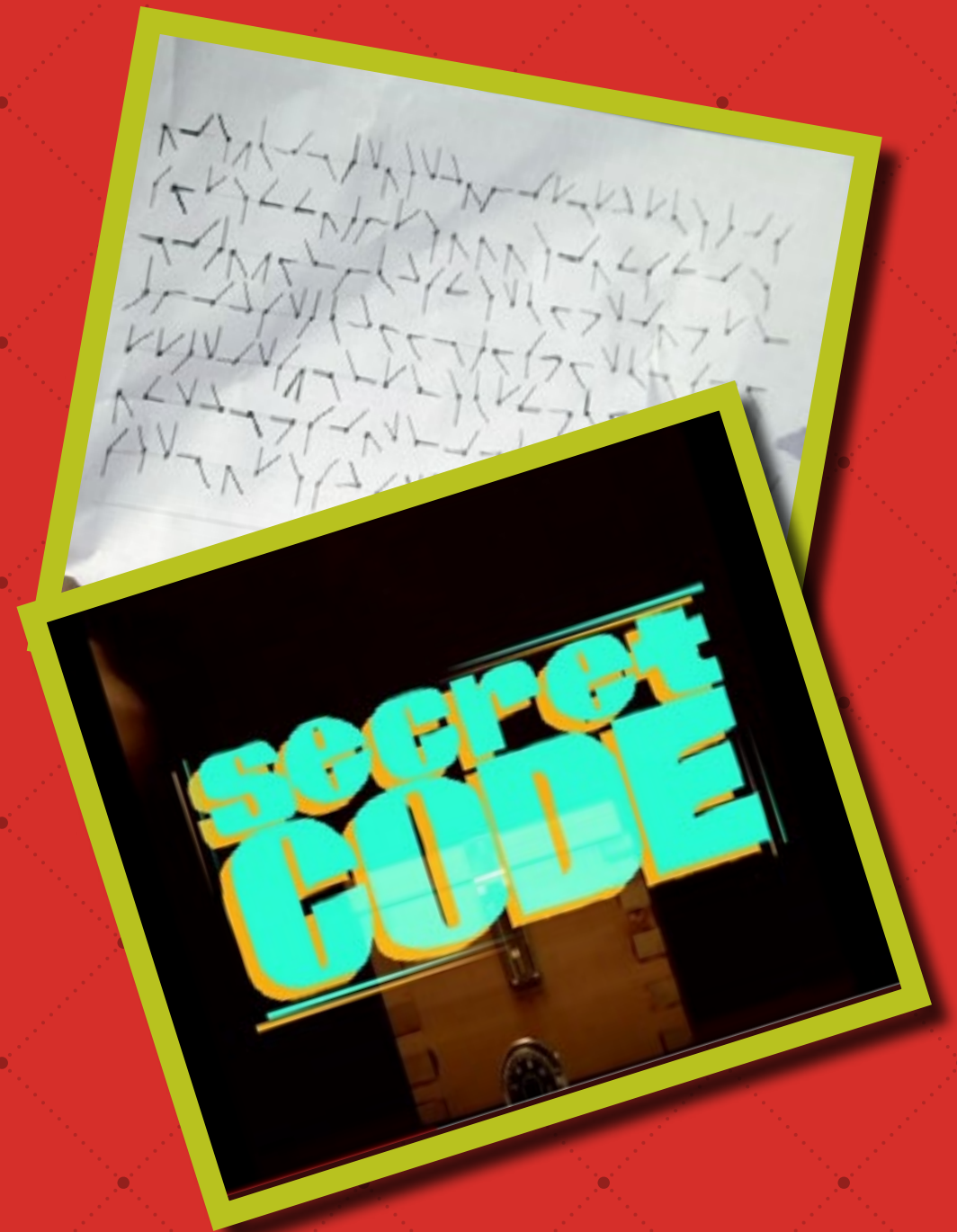
By Edward Larsson - First published in DAUM-katta in 2003.,  
Public Domain, <https://commons.wikimedia.org/w/index.php?curid=551611>



# Journey into cryptography

Journey into cryptography is a computer science module from Khan Academy. It takes you all the way from ancient cryptography to the modern day challenges, lets you try your hand at solving real-world code breaking and discusses the mathematics and algorithms behind the scenes.

P.S. If you want to test the waters before diving in have a look at the [Youtube playlist](#) of this module.



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# Break the Code

If all the mathematics and algorithms are too much for you and if you would rather break some code then head over to CIA and help them break some code. Code levels start from easy and then go all the way to breaking an **Enigma** code.



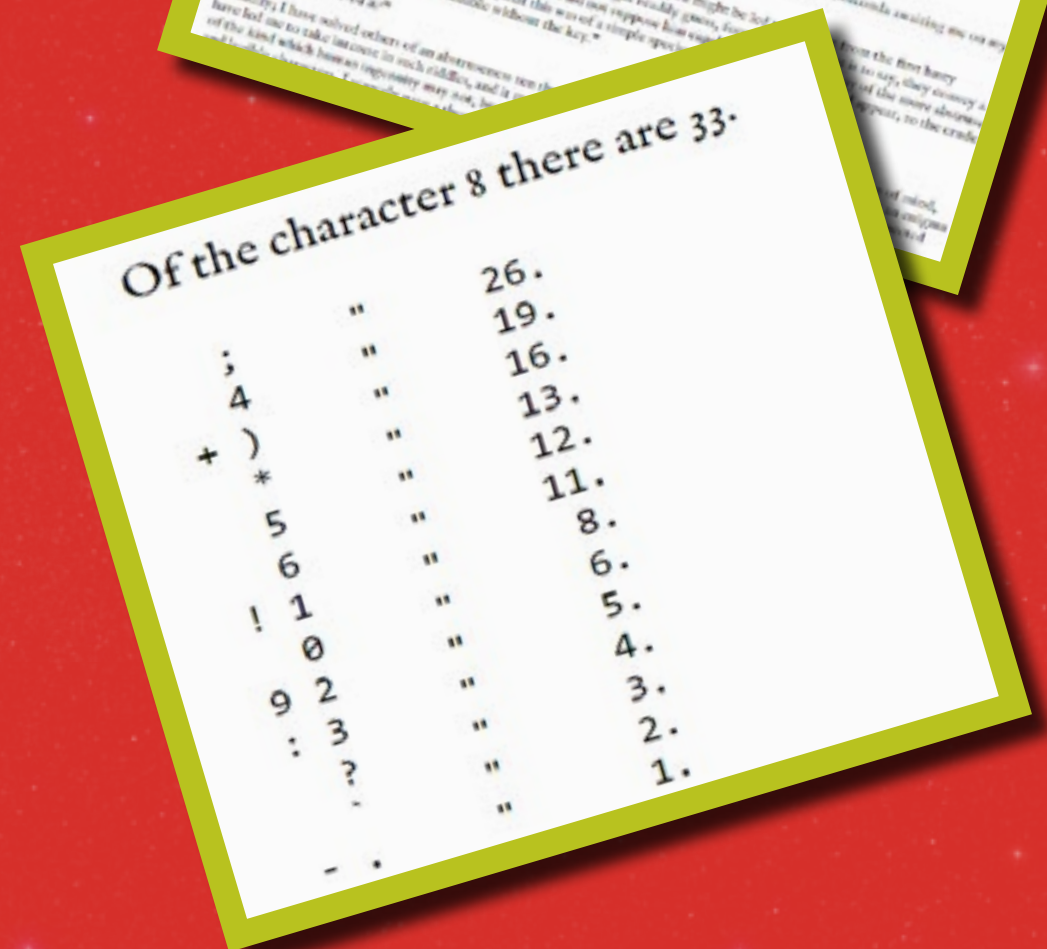
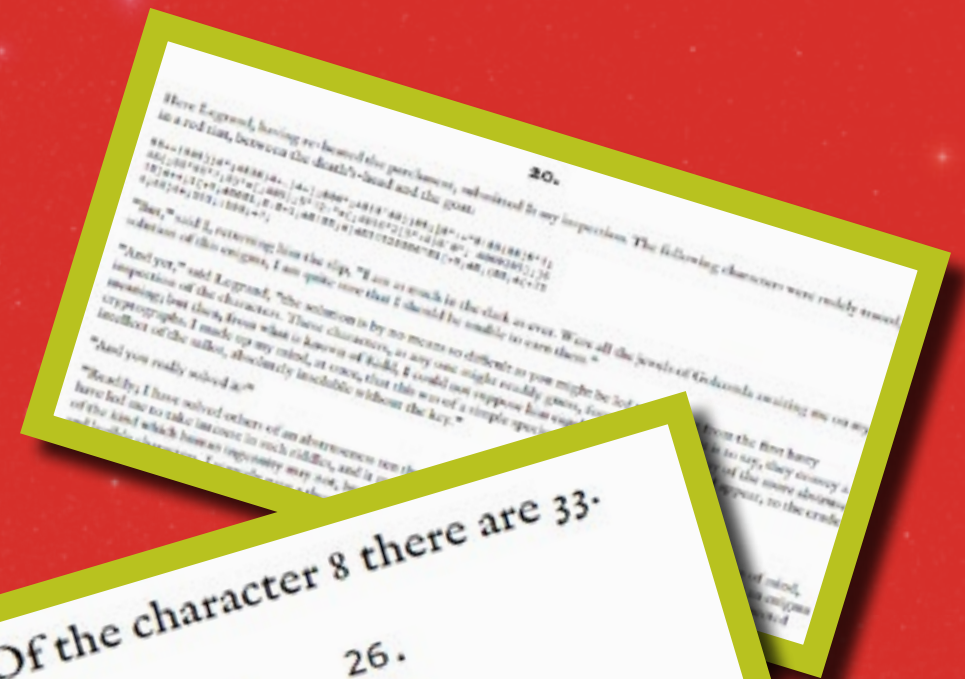
**Launch Site**



# Crypto for Kids

Ready to crack more complex codes and dive deeper into the world of crypto? Then read this book. The book itself is a mystery, or a puzzle. It's split into smaller pieces and the correct ordering of the pieces will be revealed only by solving small crypto puzzles. This book is an open-source project and free to read however it is still in a beta stage.

P.S. Want to contribute to the book? Visit [their github page](#).

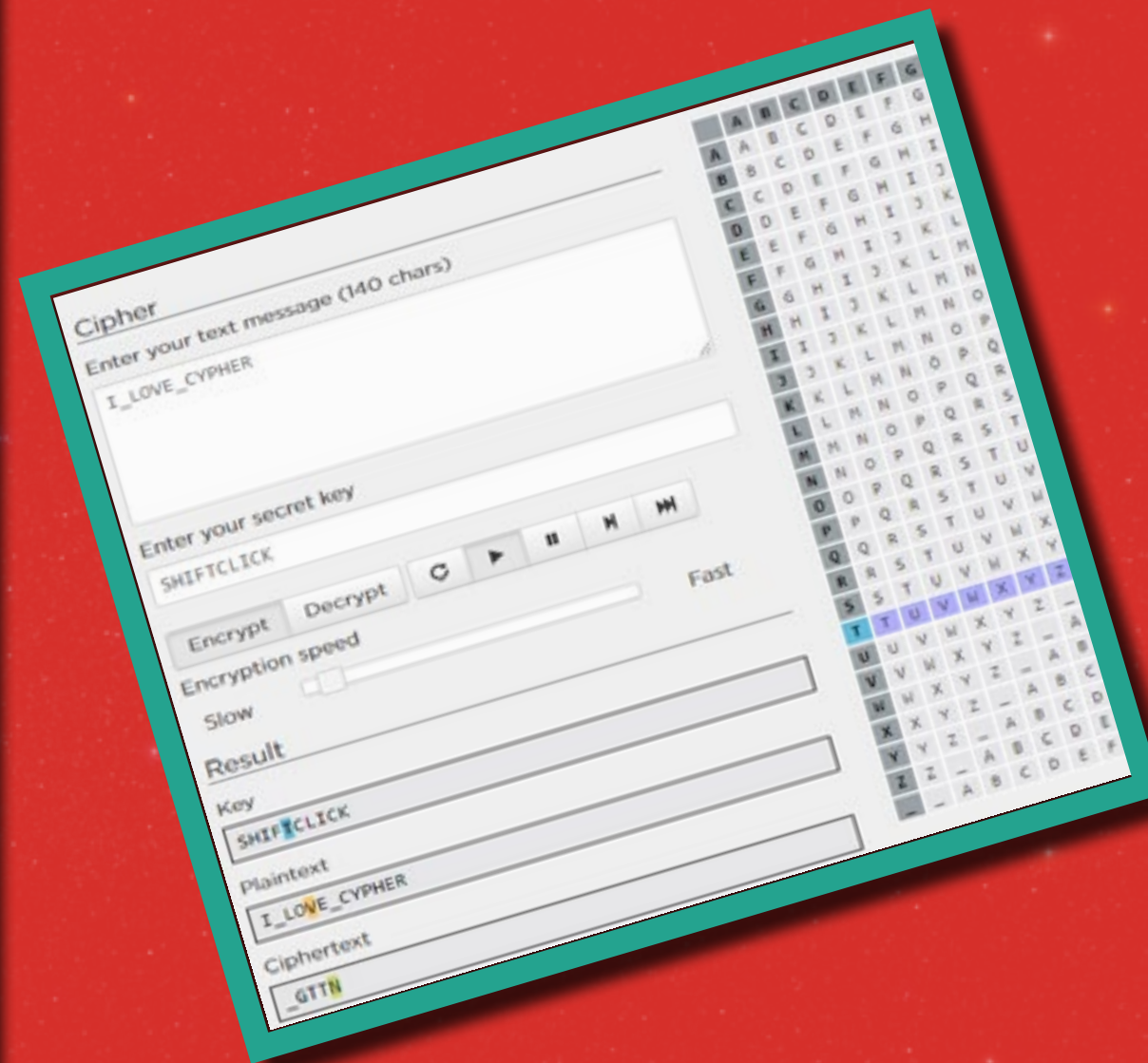


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# Vigenere Cipher Widget

What does “\_GTTNGKK\_ZZLZ” mean? Using Vigenere Cipher Widget you can find out. And you can encrypt and decrypt your own messages as well. Pay attention to how the letters are being changed.

P.S. The secret key to decrypt the above message is shiftclick



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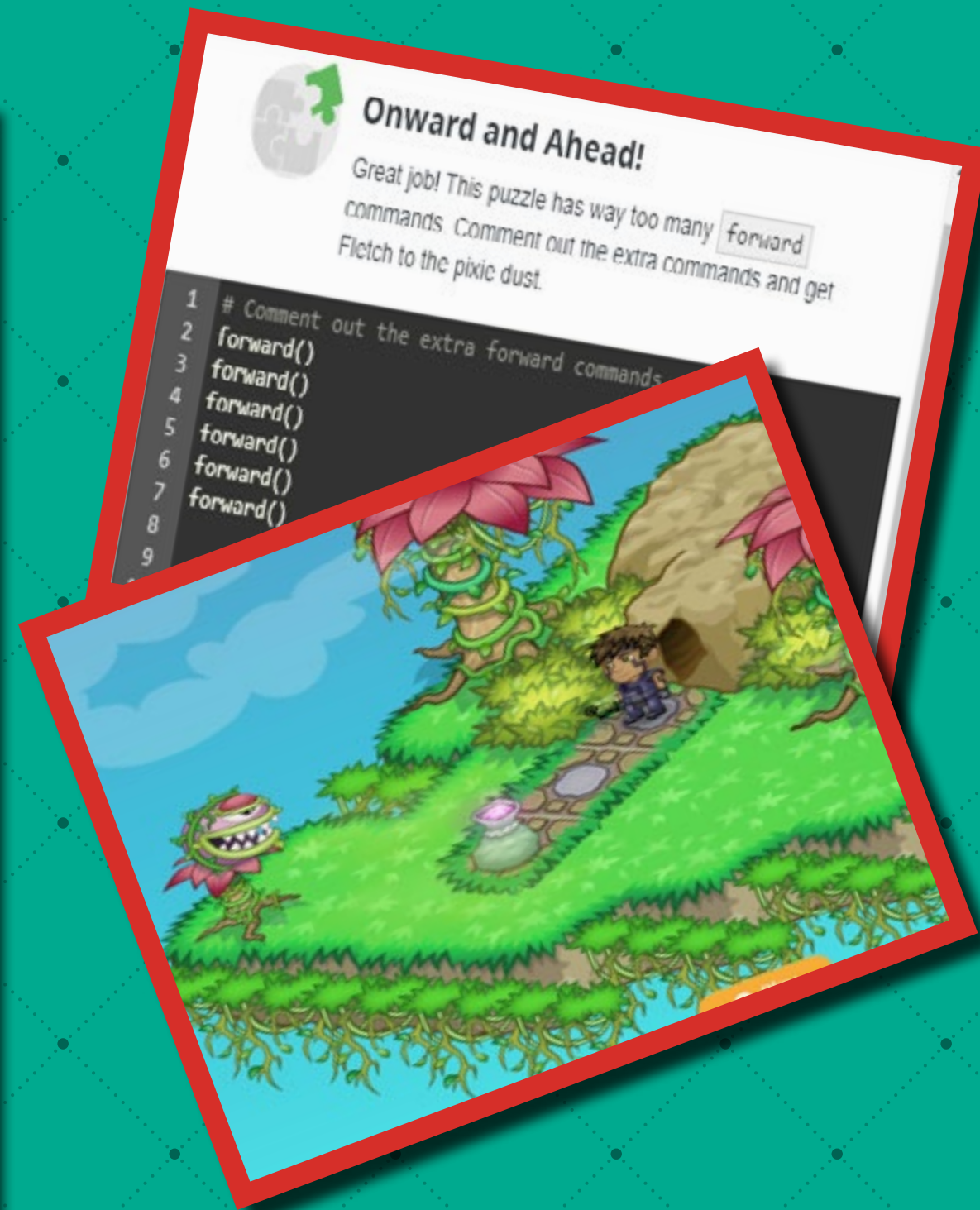
# Programming with Python

Python is the most beginner friendly programming language out there. But it is also one of the most learned and used language in the world. It is being used in all sorts of fields like web development and data science. We have some cool resources for you to learn Python. Happy coding!

# Tynker

Learn Python in an hour of code activity, saving the floating islands from the toxic haze by solving fun coding puzzles.

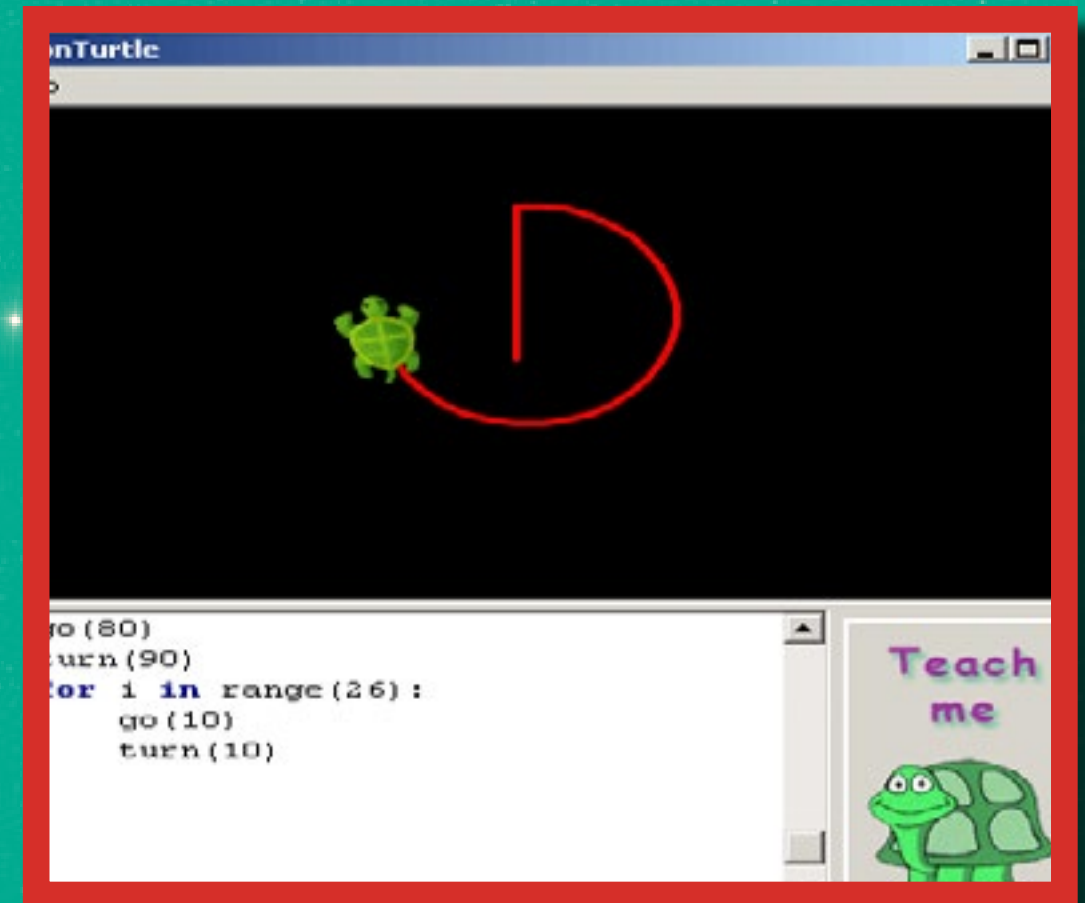
All the while you will learn core programming concepts such as loops and conditionals, as well as Python syntax.



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# Python Turtle

PythonTurtle strives to provide the lowest-threshold way to learn software development in the Python programming language. Use Python functions to move a turtle displayed on the screen. An illustrated help screen introduces you to the basics of Python programming while demonstrating how to move the turtle.

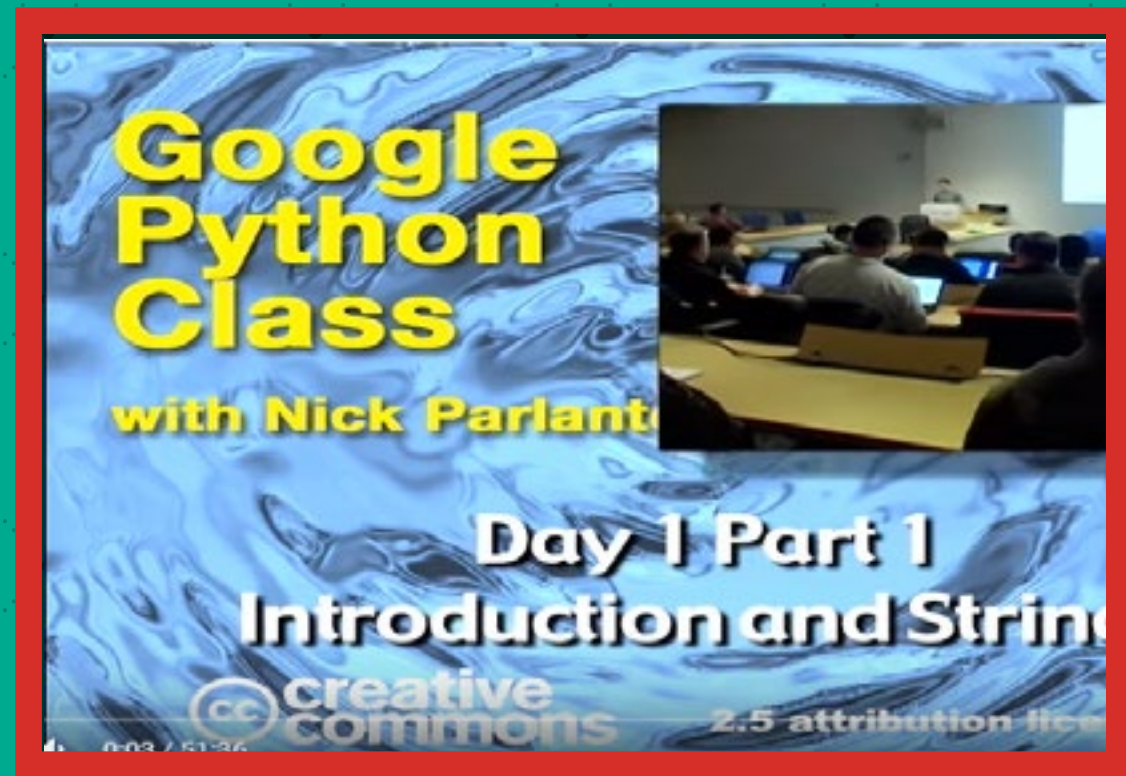


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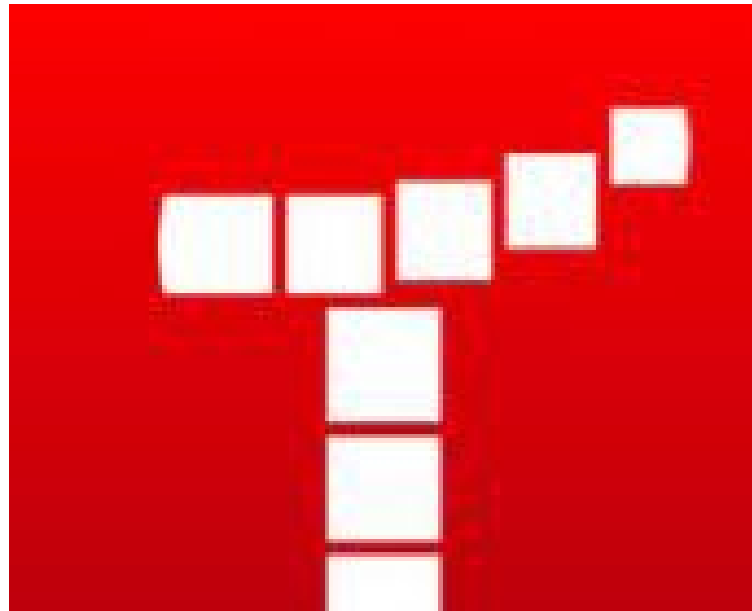
# Google's Python Class

If you want to take your Python skills to the next level and would prefer a more serious set of tutorials, then Google's Python Class is for you. The class includes written materials, lecture videos, and lots of code exercises to practice Python coding.



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# Apps for Beginner Coders



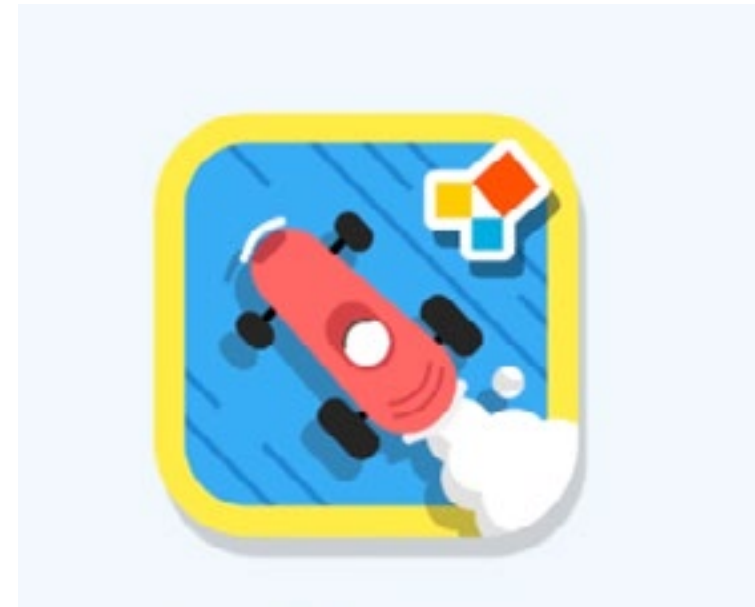
**Tynker**



**Cato's Hike**



**Grasshopper**



**Code Karts**