

Week 5 - From Blocks to Code II



Learning Outcomes:

- Learning how to make text with Tina the Turtle
- Make a pizza for Fat Tony's Pizza company
- Make a house scene with various shapes
- Converting block python into typed python code (Grade 2)

N.B. Have you washed your hands before getting started?



Revision - Shapes and Angles

A few lessons ago we asked you to try and make a miniature house similar to the one on the right. Today we're going to expand on this to make a **house scene** that contains a list of essential items.

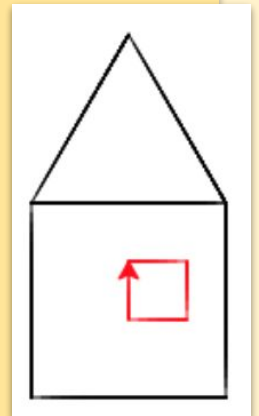
Click on one of the links below and for practice draw **and fill** each one of the shapes on the right.

Block Version:

<https://taoc.ie/turtle4>

Code Version:

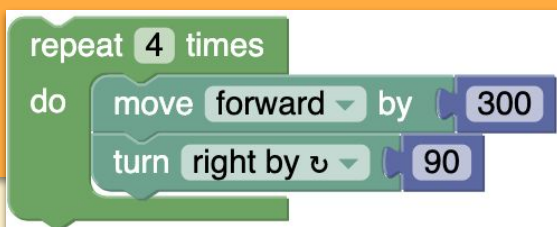
<https://taoc.ie/replturtle4>



| Sides | Shape | Each Angle | Turn Angle 180° - Angle |
|-------|-------|------------|----------------------------|
| 3 | | 60° | 120° |
| 4 | | 90° | 90° |
| 5 | | 108° | 72° |
| 6 | | 120° | 60° |
| 8 | | 135° | 45° |
| 9 | | 140° | 40° |

Want to save time? Use For Loops

They can help us save time here. Instead of using many lines of code to draw a square for example, we could just say:





House Scene Challenge

Grade 2:

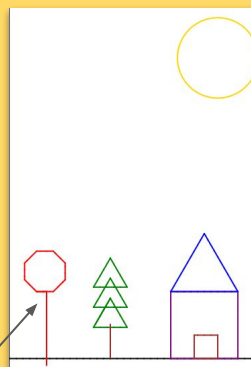
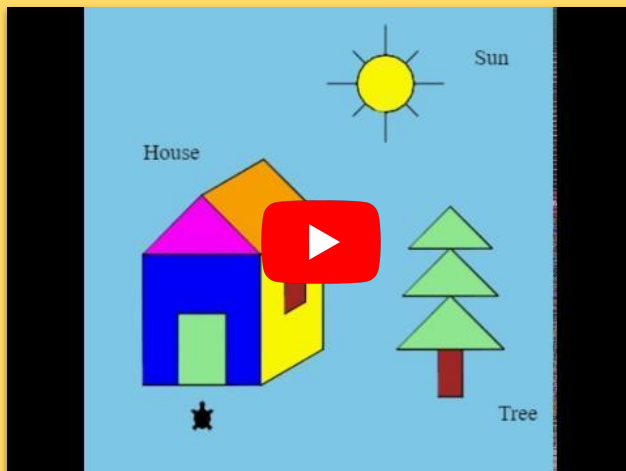
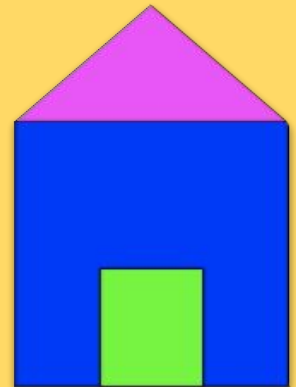
Grade 2/3:

<https://trinket.io/embed/blocks/563fe95f6b>

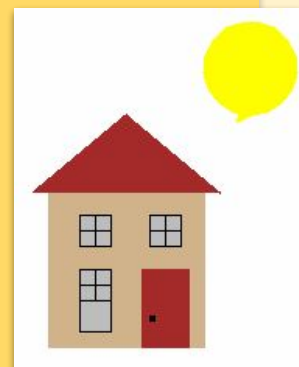
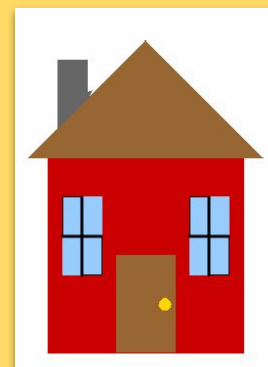
<https://repl.it/@DamienAOC/Python-House>

Your challenge is to use everything you've earned to make a house. Around this you could have a road, a car, a UFO or whatever you feel like but your scene **MUST HAVE** the following:

- a **house** with a roof, door and windows
- a **tree** (a rectangle with circles or triangles)
- a **sun** (a circle)
- **Stop sign** (a line/rectangle with a **red octagon** on top as in the second example on the second row below)



Stop Sign



Extra Challenge

Try recreating some of the advanced art cards at:

https://wiki.sugarlabs.org/go/Activities/Turtle_Art/Turtle_Cards

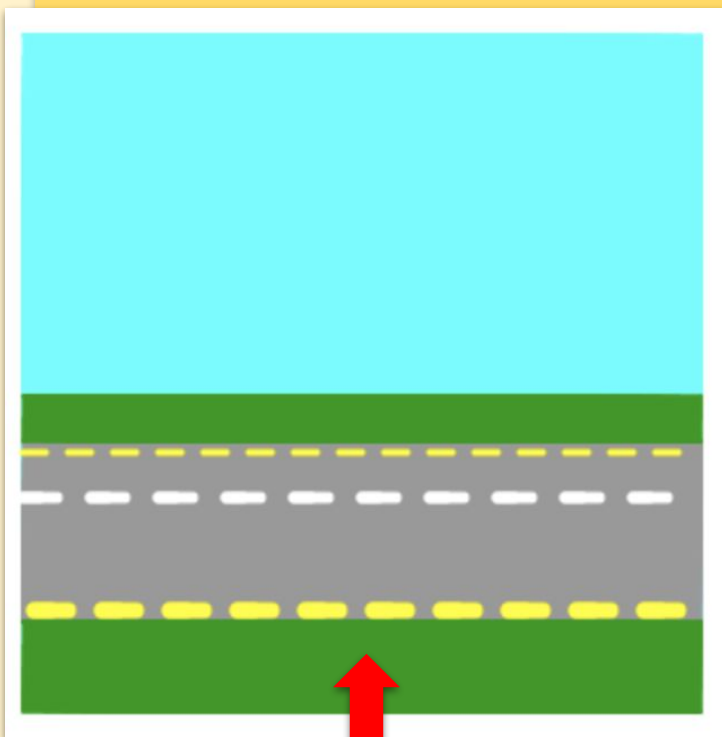


Traffic Scene (to be worked on over two lessons/ for homework)

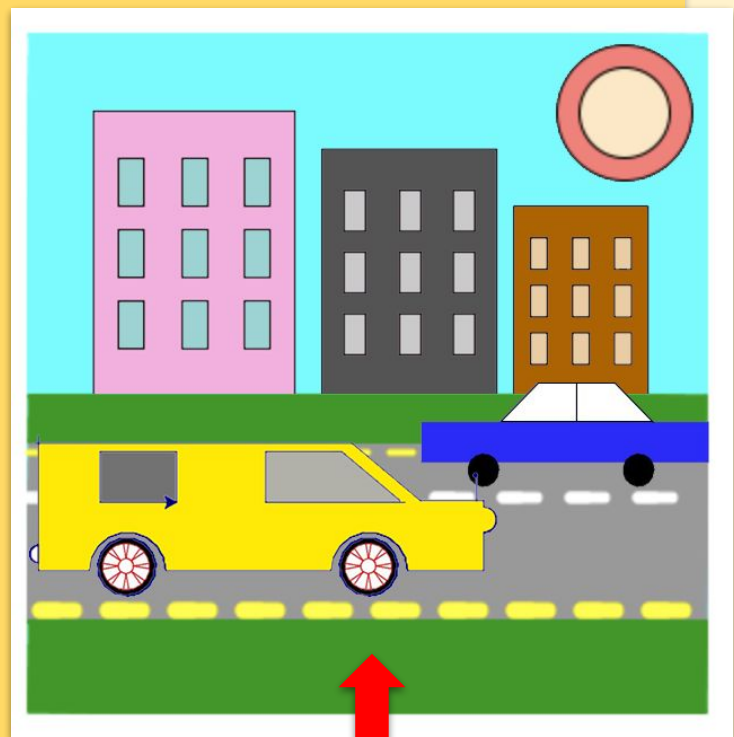
Grade 2: <https://taoc.ie/trafficstarter> (Only use if you really need)

Grade 2/3: <https://taoc.ie/repltrafficstarter>

Here a scene you'll most likely need to **save** to work on over two lessons. Have a look at this digital artist's **HUGE AND AMAZING** code of a 3D city scene, made using Turtle Graphics. This isn't what we're looking for, but it may give you some inspiration.



Your Starting Code



What you do is up to you!

Start by trying to draw a car or maybe a skyscraper. Then after that, it's up to you!

NB: If you intend to do a big scene or even if you just feel like being lazy and calling upon your two best mates 'Copy' and 'Paste' to save you time (find me someone who doesn't?!)

PLEASE PLEASE PLEASE USE THE CODE VERSION instead of the block version.

It will save you so much time and hassle and you'll be coding like a pro!

YOU CAN DO THIS!!