

# Overview

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In this lesson, you will learn how to change basic turtle settings. You will control how the turtle **looks**, how **big** it is, how **fast** it moves, and what **color** it appears on the screen. These settings affect the turtle itself, not the lines it draws.

## Important Information

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The turtle is an object, and many of its properties can be changed using built-in methods. Changing these settings helps make programs easier to understand and more visually interesting.

### Changing the Turtle's Shape

The turtle can appear in different predefined shapes. You can change the shape using:

```
t.shape("shape_name")
```

Python's turtle library includes these built-in shapes:

- "classic" – the default arrow-style turtle
- "arrow" – a sharper arrow pointer
- "turtle" – a turtle icon with legs and a shell
- "circle" – a circle
- "square" – a square
- "triangle" – a triangle

The shape only affects how the turtle looks, not how it moves.

### Changing the Turtle's Color

You can change the turtle's color using:

```
t.color("color_name")
```

Examples of common color names include:

- "black"
- "red"
- "blue"
- "green"
- "purple"
- "orange"

The color you set applies to the turtle itself and (later) to the lines it draws.

### Changing the Turtle's Size

You can resize the turtle using:

```
t.shapesize(stretch_wid, stretch_len)
```

- `stretch_wid` controls the height
- `stretch_len` controls the width

Example:

- `t.shapesize(2, 2)` makes the turtle twice as large
- `t.shapesize(1, 3)` makes it wider but not taller

The size values are **scale factors**, not pixels.

### Changing the Turtle's Speed

You can control how fast the turtle moves using:

```
t.speed(value)
```

Valid speed values are:

- 1 → slowest
- 10 → fastest animated speed
- 0 → **instant movement (no animation)**

Important notes:

- Lower numbers move more slowly.
- Higher numbers move faster.
- Speed 0 ignores animation and is the fastest possible option.

## Set Up

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Create a new Python file called `turtle_settings.py`.

## Copy, Change, Challenge

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### Copy

Copy and run the following code.

```
import turtle

t = turtle.Turtle()

t.shape("turtle")
t.color("blue")
t.shapesize(2, 2)
t.speed(5)

turtle.done()
```

Observe how the turtle looks and how quickly it moves.

### Change

Modify the program so that:

- The turtle uses a different shape
- The turtle is a different color
- The turtle is either taller or wider than before
- The speed is noticeably faster or slower

Run the program again and observe the changes.

### Challenge

Create a turtle that:

- Uses the fastest possible speed
- Is much larger than the default size
- Uses a shape that is **not** "classic"

Be ready to explain which settings you changed and what each one does.