

## Unity 3D Quick Guide

### Monobehaviors

MonoBehaviour is the base class from which every Unity script derives. When you use C#, you must explicitly derive from MonoBehaviour. Basically, it lets us use numerous built-in methods and properties (See the documentation above).

As the MonoBehaviour-name implies, they are behaviors, not data classes. If your class does not actually have any impact on the GameObject or the game world at large, then it is better to not extend MonoBehaviour.

You can work with non-MonoBehaviour classes in Unity as you would in any software development: normal classes deriving from System.Object. The only difference to a MonoBehaviour class is that you cannot add them to GameObjects as they are not Components. ([Unity Forum](#))

[Creating Classes that don't use MonoBehaviour](#) (Unity Forum)

Side note: Most of the time we will be using a MonoBehaviour script so I suggest leaving that part as it is.

### Physics in Unity

#### [Colliders](#)

- [Box Collider](#)
- [Sphere Collider](#)
- [Capsule Collider](#)
- [Mesh Collider](#)

Rigidbody and colliders are the most important components of Unity Physics and are commonly used. (See the documentation above to see how you can use them.)

Side note: Make sure to enable the Convex checkbox to make the Mesh Collider collide with other Mesh Colliders. Convex Mesh Colliders are limited to 255 triangles.

#### [Rigidbody](#)

Adding a Rigidbody component to an object will put its motion under the control of Unity's physics engine. Even without adding any code, a Rigidbody object will be pulled downward by gravity and will react to collisions with incoming objects if the right Collider component is also present.