

# Rigidbody2D - Scripting

Use `AddForce` [script ref] for “pushing” a dynamic Rigidbody2D

Use `MovePosition` instead of using `transform.position`

Frequently used properties and functions of Rigidbody2D:

```
rb = GetComponent<Rigidbody2D>();  
  
rb.velocity = Vector2.right; // set the velocity directly, ignore mass  
rb.AddForce(Vector2.right); // push the object, include mass  
rb.isKinematic = true; // "freeze" the object  
rb.MovePosition(new Vector2(0, 0)); // set the world position directly
```



# Unity Documentation

## 1. Unity Manual

“Tutorials” on how Unity’s systems work

The screenshot shows the Unity Documentation website for the Manual section. The top navigation bar includes the Unity logo, 'Manual', 'Scripting API', and a search bar. Below the navigation bar, the version is set to '2022.3' and the language is 'English'. The left sidebar lists the 'Unity Manual' with a tree view showing categories like 'Unity User Manual 2022.3 (LTS)', 'New in Unity 2022 LTS', 'Packages and feature sets', 'Working in Unity', 'Asset workflow', 'Input', and '2D game development'. Under '2D game development', 'Introduction to 2D' is selected, leading to '2D game development quickstart guide', '2D Sorting', 'Work with sprites', 'Create Tilemaps', 'Physics 2D Reference', and 'Rigidbody 2D'. The main content area shows the breadcrumb 'Unity User Manual 2022.3 (LTS) / 2D game development / Physics 2D Reference / Rigidbody 2D / Introduction to Rigidbody 2D'. The title 'Introduction to Rigidbody 2D' is prominently displayed. Below the title, there is a 'SWITCH TO SCRIPTING' button. The text explains that a Rigidbody 2D component can be attached to a GameObject to control it with the physics system, noting its similarities to the standard Rigidbody and its adaptation for 2D development. A 'How a Rigidbody 2D works' section is also visible, starting with 'The Unity Editor's Transform component defines how to position, rotate, and scale a GameObject (and its child GameObjects) within the Scene. When you change this'.

## 2. Unity Script Reference

Overview of Scripting API

The screenshot shows the Unity Documentation website for the Scripting API section. The top navigation bar includes the Unity logo, 'Manual', 'Scripting API', and a search bar. Below the navigation bar, the version is set to '2022.3' and the language is 'English'. The left sidebar lists the 'Scripting API' with a tree view showing categories like 'Resource request', 'Resources', 'Resources API', 'Rigidbody', 'RuntimeAnimatorController', 'ScalableBufferManager', 'Screen', 'ScreenCapture', 'ScriptableObject', 'SecondarySpriteTexture', 'Security', 'Shader', 'ShaderVariantCollection', 'SkeletonBone', 'SkinnedMeshRenderer', 'Skybox', 'SleepTimeout', 'SliderJoint2D', 'Snapping', and 'Social'. The main content area shows the title 'Rigidbody2D' and its class hierarchy: 'class in UnityEngine / Inherits from Component / Implemented in UnityEngine.Physics2DModule'. There is a 'SWITCH TO MANUAL' button and a 'Leave feedback' link. The 'Description' section states that the Rigidbody2D class essentially provides the same functionality in 2D that the Rigidbody class provides in 3D. It explains that adding a Rigidbody2D component to a sprite puts it under the control of the physics engine, meaning it will be affected by gravity and can be controlled from scripts using forces. It also notes that the sprite will respond to collisions with other sprites. The 'Properties' section lists 'angularDrag' with a value of 'Coefficient of angular drag'.

