Unity Physics

http://docs.unity3d. com/Documentation/Manual/Physics.html

Unity Physics

http://answers.unity3d.com/questions/47613/difference-between-collider-and-collision.html

"If you want your cubes to move through each other, and not hit each other, you will probably want to check "Is Trigger" on the colliders. The physics engine won't then bounce the cubes off each other when the collision occurs. Instead of getting the three messages OnCollisionEnter/OnCollisionExit/OnCollisionStay, you will get OnTriggerEnter/OnTriggerExit/OnTriggerStay."

Unity Physics

http://docs.unity3d.
com/Documentation/Components/comp-DynamicsGroup.
html

RaycastHit

http://answers.unity3d.
com/questions/13577/using-raycast-to-get-
mouse-input.html

Physics Manager

http://docs.unity3d.
com/Documentation/Components/class-
PhysicsManager.html

Physics Manager

1. Bounce Threshold：Two colliding objects with a relative velocity below this value will not bounce. This value also reduces jitter so it is not recommended to set it to a very low value.
2. Sleep Velocity：The default linear velocity, below which objects start going to sleep.
3. Sleep Angular Velocity：The default angular velocity, below which objects start going to sleep.

Rigidbody Sleeping

1. http://docs.unity3d.com/Documentation/Components/RigidbodySleeping.html
2. "Sleeping is an optimization which allows the Physics Engine to stop processing those rigidbodies"
3. Rigidbodies automatically wake up when:
   - another rigidbody collides with the sleeping rigidbody
   - another rigidbody connected through a joint is moving.
   - when modifying a property of the rigidbody
   - when [adding forces](#).

Physics Manager

1. Max Angular Velocity : The default maximimum angular velocity permitted for any Rigidbodies. The angular velocity of Rigidbodies is clamped to stay within Max Angular Velocity to avoid numerical instability with quickly rotating bodies. Because this may prevent intentional fast rotations on objects such as wheels, you can override this value for any Rigidbody by scripting Rigidbody. maxAngularVelocity.

2. Min Penetration For Penalty : How deep in meters are two objects allowed to penetrate before the collision solver pushes them apart. A higher value will make objects penetrate more but reduces jitter.

3. Solver Iteration Count : Determines how accurately joints and contacts are resolved. Usually a value of 7 works very well for almost all situations.

Physics Manager

1. Raycasts Hit Triggers：If enabled, any Raycast that intersects with a Collider marked as a Trigger will return a hit. If disabled, these intersections will not return a hit.
2. Layer Collision MatrixDefines how the [layer-based collision](#) detection system will behave.
   a. http://docs.unity3d. com/Documentation/Components/LayerBasedCollision.html

Joint

http://www.3dbuzz.com/training/view/unity-fundamentals/physics/11-spring-joint