Circular Gravity Force

UNITY 3D ASSET

BY: LANE GRESHAM, AKA LANEMAX

LANEMAX.BLOGSPOT.COM

Intro

The Circular Gravity Force allows you to easily create a customizable positive or negative force without having to write any code, giving you more time to be creative in your work.

DEMOS: HERE, TUTORIALS: HERE

Features include:

- Circular Gravity Force tool, useful for creating objects on the fly.

- Customize the Size, and Force Power of the object.

- Customize the shape of the force object to ether a Sphere, Capsule, or even a RayCast.

- Circular Gravity Force has its own Gizmo so you can easily customize your object within the Unity Editor.

- Use the animator to animate the Circular Gravity Force object.

- Align to Force option allows you to make objects align to the Circular Gravity Force object.

- Customizable Special Effects allowing you to add Special Effects to objects using the Circular Gravity Force.

- Customize Force Points gives you the flexibility to set one or multiple points where the force is coming from within the effected area giving you tons of ways to customize your effect.

- Tag and trigger filtering allows you to filter out or include unwanted objects.

Circular Gravity Force makes it incredibly easy to add force to explosions, cannons, magnets, planets, tractor beams, or even rail guns. The demos and tutorials show just how easy and powerful this package can be.
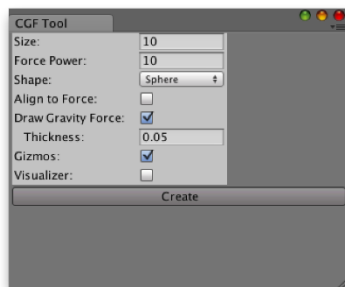
How to Use:

There is two different ways to use Circular Gravity Force

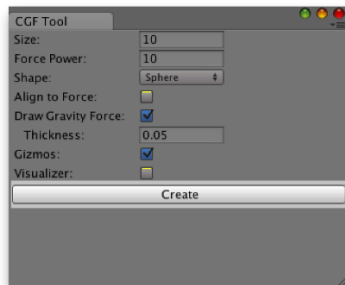**How to Use with Circular Gravity Force with tool:**

Step 1) Open the tool under Tools->Circular Gravity Force.

Step 2) Fill out the Property for customizing your Circular Gravity Force object.

Step 3) Once you are ready to create the Circular Gravity Force object press the Create button.

Note: When creating, the object will be created where the unity editor camera is focused.

How to Use with Circular Gravity Force using scripts:

Step 1) Pick any GameObject you want to use.

Step 2) Add the 'CircularGravity.cs' script to the GameObject.

Step 3) If you want to see the Circular Gravity Force in Edit Mode add the 'CircularGravityGizmos.cs' script to the GameObject.

Step 4) If you want to see the GUI visualizer while running add the 'CircularGravityVisualizer.cs' script to the GameObject. Also make sure to set the 'Circular Gravity Force GameObject' to the current GameObject.

Circular Gravity Force Tool Properties

Size: Radius of the force.

Force Power: Power for the force, can be negative or positive.

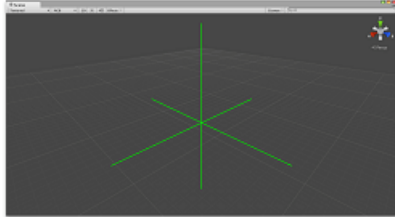**Shape**: Shape of the CirularGravity, can be a Sphere, Capsule, or Raycast.
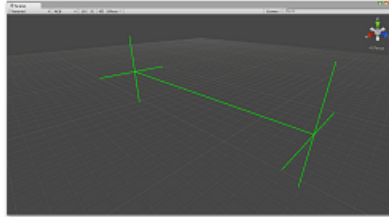

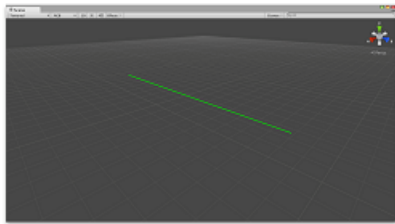*Figure: Shows the Sphere Shape*

Figure: Shows the Capsule Shape

Figure: Shows the Circular Gravity Force Tool

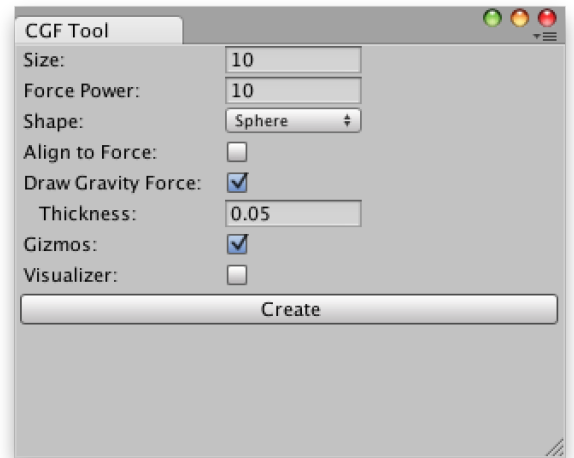*Figure: Shows the Raycast Shape*

Capsule Radius: Radius of the capsule, only available if shape is Capsule.

Align To Force: Enables objects to always angle towards the force point.

Draw Gravity Force: Draws a line when running.

Thickness: Thickness of the line drawn, only available if Draw Gravity Force is selected.

Gizmos: Adds a gizmos component so you can see the Circular Gravity Force in edit mode.

Visualizer: Adds a GUI component for the Circular Gravity Force.

X, Y: The location on screen where the GUI will be, only available if Visualizer is selected.

Create: Used when wanting to create the Circular Gravity Force object.

Circular Gravity (Script) Properties

Enable: Enable/Disable Circular Gravity Force.

Size: Radius of the force.

Capsule Radius: The Capsule Radius used only when using the capsule shape.

Force Power: Power for the force, can be negative or positive.

Shape: Shape of the CirularGravity, can be a Sphere, Capsule, or Raycast.

Force Point: Force Point where the force is created, if not supplied it will use this.transform.position instead.

Force Points: Force points allowing you to add multiple force points, be careful this can affect performance if not used correctly.

Constraint Properties:
  Align To Force: Enables objects to always angle towards the force point.

Special Effect:
  Time Effected: Time the effect lasts.
  Attached GameObject: Attach GameObject to effected object.
  Physics Effect: Physics Effect.

Pulse Properties:
  Pulse: Enable a Pulse.
  Speed: Pulsing speed.
  Min Size: Minimum pulse size.
  Max Size: Maximum pulse size.

Trigger Area Filter:
  Trigger Area: Trigger Object.
  Trigger Area Filter Options: Trigger Options.

Tag Filter:
  Tag Filter Options: Tag filter options.
  Tags List: Tags used for the filter option.

Draw Gravity Properties:
  Thickness: Thickness of the line drawn.
  Gravity Line Material: Material used for drawing the line.
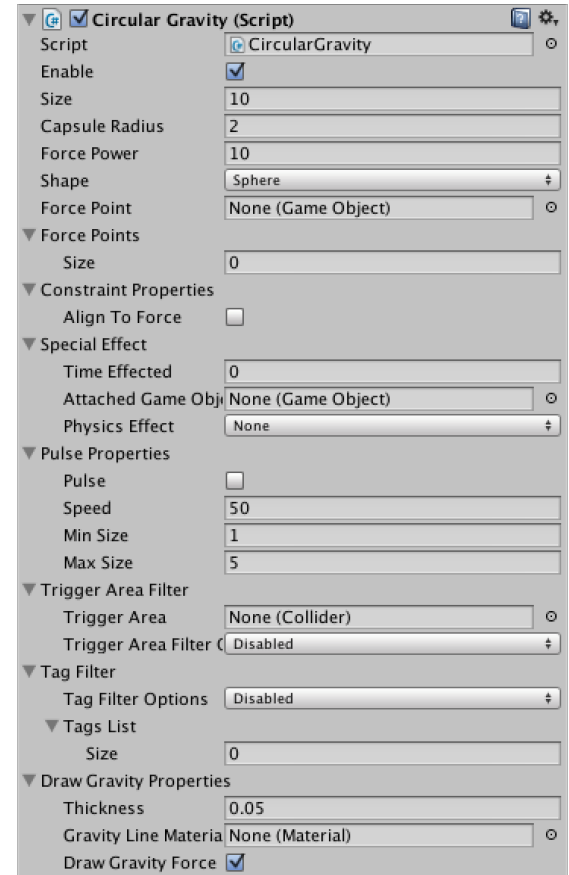 **Draw Gravity Force:** Used to see gravity area of gravity.

Figure: Shows the Circular Gravity (Script) Properties

Circular Gravity Visualizer (Script) Properties

Circular Gravity Force GameObject: Set this to the GameObject that contains the CircularGravity.cs

Gui Location: Used to set the GUI location.

Size Properties: Size of the object properties.
   Min: Min size of Size.
   Max: Max size of Size.

Force Power: Force power of the object properties.
   Min: Min size of Force Power.
   Max: Max size of Force Power.

Capsule Radius: Radius of the Capsule shape properties.
   Min: Min size of Capsule Radius.
   Max: Max size of Capsule Radius.

Pulse Speed: Pulse speed properties.
   Min: Min size of Speed.
   Max: Max size of Speed.

Size Min Size: Pusle min size properties.
   Min: Min size of Min Size.
   Max: Max size of Min Size.

Size Max Size: Pusle max size properties.
   Min: Min size of Max Size.
   Max: Max size of Max Size.

Scene Time Scale: Scene time scale properties.
   Min: Min size of Time Scale.
   Max: Max size of Time Scale.

Default Attached GameObject: Sets the default effect for when using the visualizer.

Toggle Align To Force: Toggles cool gravity effect.

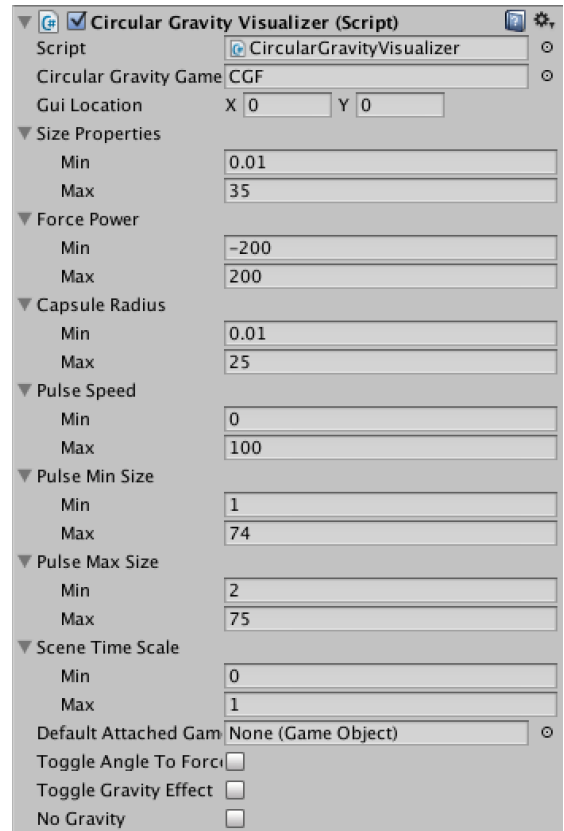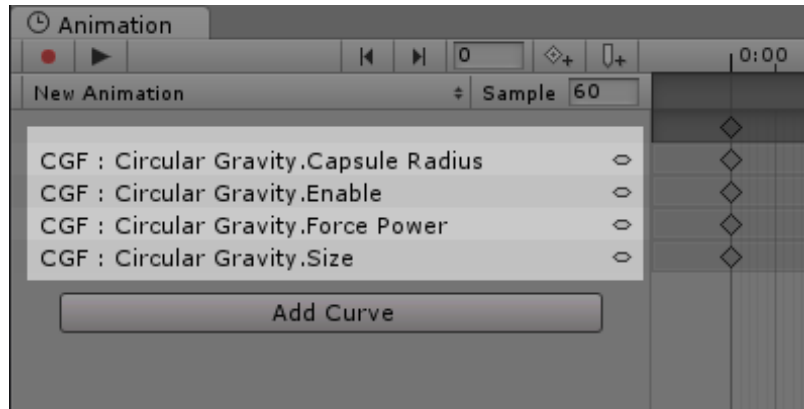**Toggle Gravity Effect:** Defaults if to use no gravity or not on start.

Figure: Shows the Circular Gravity Visualizer (Script) Properties

Animating Circular Gravity Force:

You can currently animate these properties in the Circular Gravity Force

Versions:

04-21-14

Version 2.50 Released

-- Added 'Circular Gravity Force' tool under Tools->Circular Gravity Force.

-- Added 'Angle To Force' under Constraint Properties.

-- Added 'Angle To Force' to the CircularGravityVisualizer.

-- Updated properties so that they can be used to animate.

-- Updated all scripts to be in its own namespace.

-- Updated all scenes for the new changes.

01-02-13

Version 2.25 Released

-- Added Special Effects, allowing you to add Special Effects to objects effected by the Circular Gravity.

-- Added Time Effected to Special Effects, allowing you to set a time for the Special Effect.

-- Added Attached Game Object to Special Effects, allowing you to attach an effect in the form of a GameObject.

-- Added Physics Effect to Special Effects, allowing you to add a physics effect effected by the Circular Gravity.

-- Added CircularGravityGizmos class, allows you to see the CircularGravity in EditMode/Gizmos.

-- Added TimeScale class to CircularGravityVisualizer allows you to slow down time during a scene for fun.

-- Added Special Effects to the CircularGravityVisualizer.

-- Updated and changed Added Play Area scene to Performance Cube Test

-- Updated some shape performance issues.

12-01-13

Version 2.00 Released

-- Added Shapes to the properties, allowing you to pick between three different shapes sphere, capsule, or raycast.

-- Added ForcePoint, allows you to set where the force/gravity is in the shape area, rather than always being in the center. If not supplied, will default to center of the assigned GameObject.

-- Added ForcePoints, allows you to set multiple Force Points rather than just one.

-- Added CapsuleSize to the SizeProperties, only relevant when shape is a capsule.

-- Added to DrawGravityProperties now draws the appropriate shape sphere, capsule, or raycast.

-- Added to DrawGravityProperties now rotates with the assigned Gameobject.

-- Added Railgun scene.

-- Added Tractor Beam scene.

-- Added Invention scene.

-- Added Play Area scene to tutorials.

-- Updated CircularGravityVisualizer class to include v2.0 changes.

-- Updated all scenes to use the new v2.0 features.

-- Updated Maze scene to use the capsule shape.

-- Updated code for better performance.

09-18-13

Version 1.60 Released

-- Fixed Line Rendering material problem, sometimes hindering workable builds.

-- Added Material drawing the force area.

-- Added a new material look to the scenes.

06-07-13

Version 1.52 Released

-- Fixed a problem when dynamically creating CircularGracity object.

06-05-13

Version 1.51 Released

-- Added Draw Gravity Properties.

05-24-13

Version 1.50 Released

-- Added a big feature in 1.50 that allows you to shape the force to whatever form you want using triggers, giving you the ability to effect anything within or outside the trigger shape.

-- Added Vacuum Scene Demo Using Trigger.

-- Added Maze Scene Demo Using Triggers.

-- Added Tutorial Trigger scene.

-- Added MoveVacuum script.

-- CircualrGravityVisualizer now defaults start values based on what's setup in the CircualrGravity correctly.

-- No Gravity now defaults based on what the Physics.Gravity is in the scene.

-- Fixed line rendering problem with Draw Gravity Force toggle.

-- Condensed LINQ code.

04-25-13

Version 1.20 Released

-- Properties have been cleaned up in the CircularGravity script, now better organized.

-- Added tag filtering options to the CircularGravity script.

-- Added property options for setting up slider min and max values within the CircularGravityVisualizer.

-- Added a tag filter scene tutorial.

04-19-13

Version 1.01 Released

-- Fixed input problem with up/down for Marble controls, you can now use the scrollwheel.

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