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Using Blender 2.7 for Animation - **Advanced 2 - Deformable Object Physics**

GOAL: Make a falling piece of gelatin with gelatinous behavior and material.



Setup Physics Simulation:

* Save As **3dad2deformable**
* Make a floor (Cube)
* With the floor selected: in the Physics button tab on right, click **Collision**
* Make another object hover above the object (Add Mesh, then choose any—it is best to avoid cube and sphere since they are not very squishy due to shape)
* With the gelatinous object selected: in the Physics button tab on the right, click **Soft Body**  to make it behave in a gelatinous way
* Press Play. You’ll notice it wobbles but stays in place.
* Uncheck “Soft body goal” so the object falls.
* Under “Soft body edges,” increase “**Bending**”Stiffness to make it able to try to keep its shape (about 0.13 for a large gelatinous object, of bigger number to represent smaller objects more able to stay the same shape).
* To increase the accuracy of collisions while object is deformed, under “Rigid Body” choose:
	+ Shape: “Mesh”
	+ Source: “Final”

**Change Material:**

* Change engine from Blender Game to **Blender Render**
* Make sure you are in Object Mode, then select the soft body object you want to be gelatin
* In the Material button  tab, scroll down & check Transparency, Raytrace
* Change Alpha to 0.200 (mostly clear but color still visible)
* Change IOR to 1.2 or so. On the left, click **Smooth**

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| TIP: make only certain edges sharp regardless of how object is deformed during animation: Edit Mode, edge selection mode, select edges that should be sharp such as with Alt Right Click, Ctrl E (shortcut for Mesh Edges) then Mark Sharp, then repeat for all edges that should be sharp, Object Mode, Add Modifier, Edge Split, then Uncheck “Edge Angle” so that only marked Sharp Edges will be sharp (since edge angles will change during any deform animation) |

* Under **Diffuse**, click the white box then change it to any other color (gray slider controls brightness)
* See the result by pressing **Render**, **Render Image**

**Make sure the camera is positioned so that you can see everything**:

* Push ‘n’ (shortcut for clicking View, Properties) then Check the “Lock Camera to View” box
* **Press ‘0’ on the NUMPAD** to change to camera
* Now you can change your view & it will move the camera:
	+ Scroll wheel to truck camera toward and away
	+ **Click** scroll button & hold it down then move the whole mouse to pan around object
* **Render**, **Render Image**, then when it finishes and you can see the gelatinous object, Image, Save As Image, your home drive (such as T:\*username* or H:\), then in the second box name it 3dad2jello.png