

Newton's Third Law of Motion Demonstrated in Space

Welcome to the International Space Station I'm NASA astronaut Mark Vande Hei today we're going to talk about Newton's third law how do you think it will hold up in microgravity for every action there is an equal and opposite reaction this means that in every interaction between two objects there are a pair of opposite forces acting on each object at the same time a force pair you can see that there are many examples on earth in space the statistics about one way and the vehicle is steered in the opposite way Hello again more basketball stunts that I can't do on the ground at least not while getting this much hang time alright back to serious business I've got a basketball right here it's gonna be one object one I'm the second object if object one applies a force to object two then that same force will be applied according to Newton's third law by object two on to object one however there's a big disparity in the mass object one is a very light mass object two is that larger mass object so I'm gonna try to make myself about the same shape of this ball see how that works for us and I'm gonna apply that for us we saw that force applied to the ball made it accelerate quite a bit it really didn't accelerate me much at all Newton's third law again but this time we're gonna use two similarly mass objects Joe and I have about the same mass so Joe get into a ball I'll do the same gonna face you this way so I don't throw you into something you can't see now I'm gonna get into a ball behind Joe and I'm gonna play a force to him notice that the when I apply the force to Joe it puts accelerated Joe away from me but I got accelerated away from him as well because the force applied to Joe ended up being the same force that was applied to me now you see Newton's third law in space now test it out on earth see you next time subscribe for more space you.

<https://www.youtube.com/watch?v=ZkVU-bj9bDk>

1. Watch the video and add punctuation to this transcription.
2. Find example in movies or real life of the third law of Newton.
3. Present your findings and discuss with the other if they are really an example of Newton third law.