

3RD LAW IN FREE FALL (ORBIT)

Take a look at the ISS-3rd Law video at mrmont.com



First the two astronauts push on each other. Why do they get approximately the same acceleration?



Next, the one Astronaut pushes a massive battery pack back & forth. When he pushes it to the left, what happens to him? When he pulls it back to the right, what happens to him?

The 3rd Law can create a lot of issues for astronauts, since there's no friction with the floor to hold them in place. Explain what would happen to the astronaut in each situation, according to the 3rd Law.

An astronaut pushes a button.

An astronaut pulls a drawer.

An Astronaut turns a bolt with a wrench.

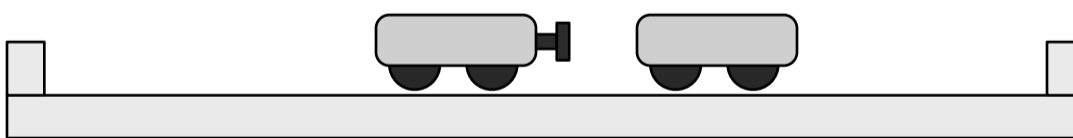
An astronaut sneezes.



Finally, the two astronauts push on each other again, but this time the one with the battery pack moves more slowly.

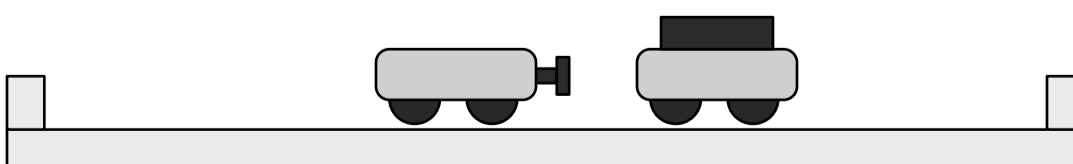
Why? Is it because he gets less force?

3RD LAW ON A PASCO TRACK



Push in the plunger in. Place the carts next to each other in the middle of the track.

Why do the two carts get approximately the same acceleration?



Now put extra mass on one cart and try again.

Why do the two carts get different accelerations? Is it because they got different forces?