

Four Corners:

What happens to mass when an actual space rock hits a planet?

Name: _____

Period: _____ Date: _____

After the completing the Dropping Objects lab, four students were debating about what really happens when a rock from space hits a planet. When thinking about the mass of the planet after the collision, this is what they each said:

Angie: "The mass of the planet definitely increases by the mass of the space rock."

Ricardo: "I think the mass of the planet increases a little but that some mass is converted to energy."

Terrance: "The planet's mass doesn't really change because matter from the space rock and on the ground is vaporized."

Yubi: "The mass of the planet could decrease because the speed of impact converts lots of the matter into heat or other forms of energy."

With whom do you agree the most? Answer and explain why on your Doodle Sheet.

Adapted from Page Keeley's *Uncovering Student Ideas in Life Science*, VOL.1, NSTA press, 2011



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