Exploring the Role of Gravitational Forces in the Sun/Earth/Moon System

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| TABLE V.16  Developing Additional Central Ideas about the Sun/Earth/Moon System | | | |
| URL | Sketch of set up Evidence | Central Ideas | Vocabulary |
| <https://theory.uwinnipeg.ca/mod_tech/node24.html> |  | When two objects interact, each exerts an equal but opposite force on the other. | Newton’s Third Law |
| <http://www.physics.uwyo.edu/~davec/teaching/Astro1050Summer2013/10_Newton.pdf> |  | A gravitational force is exerted by one mass on another mass that depends on the size of the masses and the square of the distance between them:  F = GMm/r2 | Newton’s Universal Law of Gravitation |
| <http://scienceline.ucsb.edu/getkey.php?key=770> |  | When one object is revolving around another, the gravitational force by the larger object on the smaller object is keeping the smaller object in its orbit. |  |
| <http://earthsky.org/earth/tides-and-the-pull-of-the-moon-and-sun>  <http://oceanservice.noaa.gov/education/kits/tides/tides06_variations.html> |  | Gravitational forces from the Moon and Sun influence the ocean’s tides on Earth |  |
| <http://galileo.rice.edu/sci/theories/on_motion.html> |  | Light objects and heavy objects speed up at the same rate as they fall near the surface of the Earth. | Aristotle  Galileo  inertia |
| <https://www.youtube.com/watch?v=5C5_dOEyAfk>  <http://nssdc.gsfc.nasa.gov/planetary/lunar/apollo_15_feather_drop.html> |  | Light objects and heavy objects speed up at the same rate when falling near the surface of the Moon. |  |

Highest and lowest tides Smallest tidal effects

Diagrams of Arrangements of the Sun/Earth/Moon System that influence tides on Earth