

Activity Answer

- 1 = C. **Gravity**
Theorized force carrier: graviton.
- 2 = A. **Electromagnetism**
Force carrier: photon.
- 3 = B. **Strong Force**
Force carrier: gluon.
- 4 = D. **Weak Force**
Force carrier: W^- , W^+ , and Z^0 .

The weak force governs the decay of a neutron into a proton (a process known as beta decay). The strong force binds quarks together into protons and neutrons (the residual strong force holds protons and neutrons together in the nucleus). Gravity governs the motion of an apple falling from a tree. Students are made of matter, which is organized into cells. Cells, in turn, are made of molecules, which are composed of atoms. Atoms are held together by electromagnetism (the residual electromagnetic force also binds atoms into molecules). On a more subatomic level, students are held together by the strong force that binds quarks into protons and neutrons and holds protons and neutrons together in an atom's nucleus.

