Hello, this is short video for Principles of Engineering System unit, learning outcome 5, compare mechanical with electrical quantities.

This is a set up here with spring, mass and a damper. You can see we have a spring here, the actual beam itself has got some stiffness to it, so two spring elements. The beam is the mass. The damper has oil in the cylinder here, with a piston with hole in it, so when that piston goes up and down the oil tries to get through the holes and gets rid of the energy. We have the spring here so when we pull down the spring wants to pull back so it is storing energy and it is the same with the mass when we lift it up it wants to drop down, so it is storing potential energy. The differences between the spring as a storage device in the form of spring energy and the mass is a storage device as potential energy. The damper dissipates energy as heat and flow energy because the oil will get warm as the oil is forced through the holes.

Thank you for listening.