Work and Potential Energy

- Work done by gravity *independent of path*
  - $W_g = -m\,g\,(y_f - y_i)$
- True for any CONSERVATIVE force
  -gravitation, spring, etc.
- Define potential energy $U_g = m\,g\,y$
- Modify Work-Energy theorem

$$\sum W_{nc} = \Delta K + \Delta U$$

Work done by non-conservative force

Example of non-conservative force
-frictional force