

# Pressure, Flow and Work

- Continuity Equation says fluid speeds up going to smaller opening, slows down going to larger opening

Recall:

$$W = F d$$

$$= P A d$$

$$= P \text{ Vol}$$

- Acceleration due to change in pressure.  $P_1 > P_2$

→ Smaller tube has faster water and LOWER pressure

Demo

- Change in pressure performs work!

$$\rightarrow W = P_1 A_1 \Delta x_1 - P_2 A_2 \Delta x_2 = (P_1 - P_2) \text{ Volume}$$

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