## Directed Reading for Content Mastery <br> Overview Work and Machines

Directions: Complete the concept map using the terms in the list below.



## Work

Directions: Use the formula work $=$ force $\times$ distance to calculate the answers to each of the following questions.

1. A box is pushed 40 m by a mover. The amount of work done was $2,240 \mathrm{~J}$. How much force was exerted on the box?
2. A person expended 500 newtons to move a full wheelbarrow 30 meters. How much work was done?

Directions: Use the formula power = work/time to calculate the power required in each of the following.
3. A weightlifter lifts a $1,250-\mathrm{N}$ barbell 2 m in 3 s . How much power was used to lift the barbell?
4. A crane lifts a $35,000-\mathrm{N}$ steel girder a distance of 25 m in 45 s . How much power did the crane require to lift the girder? Write your answers in kilowatts.

