**Work and Energy**

**Work**: Displacement as a result of Force Applied.

\[ W = F \cdot d \cos \theta \]

**Not Work**:

There will be questions where work=0. You must understand when work is not done.

**Who Does the Work?**

A student lifts a book
Student does \( + \) work onto book

A student lowers a book
Student does \( - \) work onto book

This is because the book is doing the work!

If we include both up and down motion, the total work on the book is **ZERO!**

However, if we just talk about the student, the work is **NON-ZERO**.