

Work Notes

What is Work?

- In science work is done whenever a force is applied to an object that causes the object to move
- If something does not move, no work was done
- Even if you use a lot of energy and feel tired, if it did not move, there was no work
- For work to happen, the force must be in the same direction as the force
- Think about when you carry a heavy box...
 - You are using an upward force to hold the box
 - You are using a forward force to move the box
 - Did you do any work?
- What about pushing a cart...
 - You use a forward force to push the cart
 - The cart moves forward
 - Did you do any work?

How do we measure work?

- We know that work only happens when a force makes something move
- So we need to know something about the force used and the distance traveled to know how much work was done
- We use the following formula to calculate work:
 - $W=FD$ (Work = Force x Distance)

Units for Work

- We use the Newton to measure force and Meters to measure distance
- The unit for work is the product of these or a Joule (J)