

Power: The rate of doing work.

Power = Work(J) / Time(s)

Units for Power = Watt

Calculating your Windmills Power:

Use the equation above and your previous results to calculate the how much power was generated by your windmill.

How would the wind speed affect the amount of power generated?

An incandescent light bulb uses 60 watts of power. How many of your windmills would be needed to power it?

An LED light bulb uses only 8.5 watts. How many of your windmills would be needed to power it?

Work: Work is done when a force applied to an object, moves the object.

Work = Force (N) x Distance (m)

Units for Work = Joules

Calculating Work done by your Windmill:

1. Calculate the Force: **Force = Mass(Kg) x Acceleration(m/s²)**

Maximum amount of Mass lifted by your windmill: _____ g → convert to kg → _____ kg

Acceleration due to gravity = 9.8 m/s²

2. Now calculate the amount of Work: **Work = Force (N) x Distance (m)**

Distance = 0.5 meters