

Combined science - Physics

Key stage 4 - Magnetism

**Case Study : Nikola Tesla**  
***Distributing Electricity***  
***Big Business, Big Inventions***

Mr van Hoek



# **Pause the video to complete your task**

**Tesla's strength and weakness**

**1. What was Tesla good at doing?**

**2. What was Tesla not very good at doing?**

**Resume once you're finished**



# The advantages and disadvantages of AC and DC

## AC

## DC

Transformers allow the potential difference to be increased and decreased.	These systems are very simple - generate the electricity at the same potential difference that the consumer needs, so long as the consumer is close to the power station.
High potential differences can be used, so lower currents will be needed over long distances, increasing the efficiency of the system.	
These systems result in cheaper energy bills.	When transmitting over long distances, large amounts of energy are lost due to resistance in the wires.
A well made transformer is nearly 100% efficient.	
Transformers are heavy and expensive to build.	These systems result in more expensive energy bills.



# **Pause the video to complete your task**

## **AC vs DC**

**Write a paragraph to compare the advantages and disadvantages of AC and DC, and why Tesla eventually succeeded.**

**Resume once you're finished**

