



WE ARE ELECTRONS

LYRICS AND CHORDS



Verse 1:

E A
Let's talk electricity,
 C# B
It makes the lights shine, gets you online, powers kettles for your tea.
And when you talk about the charge in a circuit you mean,
Electrons that are free, My brothers, sisters and me!
Physicists will agree that a coulomb will be,
About 6 billion billion of us. That's a big family!

Chorus:

We are electrons getting pushed around in a wire,
if we get faster or there's more of us our current is higher,
Potential difference is the reason that we are a-flowing,
but we get stuck, we stop flowing if that circuit is broken.

Verse 2:

Current's the rate that we flow, the number of us that go,
Charge over time, one coulomb per second is one amp you know,
And the reason that we move is, we're getting pushed to do this,
By negative charge and pulled to positive charges, but you knew this,
We're always working as a team to transfer energy,
The joules transferred per coulomb, is the potential difference, p.d.
Yo, it is measured in volts, so the work done is Q times V
If volts go higher, then our current increases.

Verse 3:

We get obstructed though, yeah, we collide as we go,
With the ions in the wire which heats up, that's why a bulb glows,
So, we make a ratio, between p.d. and current flow,
V equals I times R, which is resistance, measured in ohms.
You can make resistance low by making wires wider,
Or made of copper, there are more electrons free inside them.
If you keep your wires cool, and keep them shorter too,
We collide less with the ions and glide right through.

Verse 4:

When we're pushed by the mains, our current alternates,
But we flow in one direction when a cell's the one to blame,
A diode stops our flow, if the wrong way, we should go,
And fixed resistors make my sisters and my brothers slow.
Sensor circuits are, made with thermistors and LDRs,
That change resistance when there's a change in light and temperature,
If you want fade or turn up the volume then use,
Variable resistors to control our flowing, right away.

Verse 5:

When we're in series, we're on a single loop,
Resistances get added, and we flow the same the whole way through,
When we're in parallel, there's more than one route,
There's more of us to flow so we can transfer more energy too,
The rate that we transfer the energy,
E over t is power, P, it also equals I V,
And what about safety, when I get too lively,
Earth me, insulate my wires, use a fuse to stop me.

