

HOW DOES VOLTAGE AFFECT
BRIGHTNESS?

It is impossible to live without electricity.

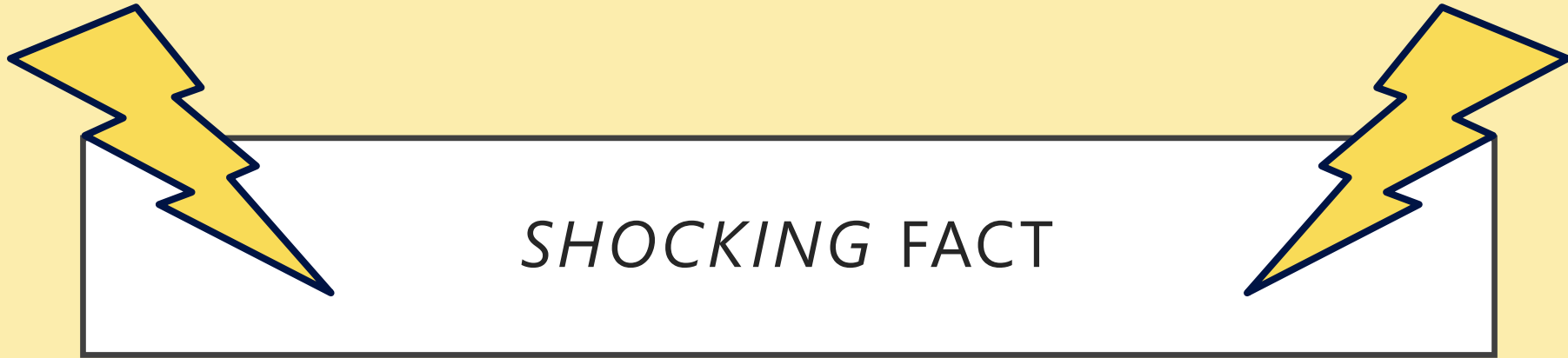
Agree or disagree?

Consider how people used to live a few hundred years ago.

Think about your favourite ways to have fun.

Think about important jobs around the home that do or do not **need** electricity.

Starter: Which electrical items did you use this morning? Make a list.



**The first successful electric
car was built in 1891 by
American inventor William
Morrison!**

THE CURRENT IS THE SAME EVERYWHERE IN A SERIES CIRCUIT

- Current is the flow of electricity down a wire.
- This means that a bulb will be the same brightness wherever you place it in a circuit.

HOW CAN WE ALTER THE
BRIGHTNESS OF A BULB?

YOU CHANGE THE CURRENT THAT IS
FLOWING THROUGH THE CIRCUIT

- **How can this be done?**

Write down your suggestions before moving to the next page.

YOU CHANGE THE CURRENT THAT IS
FLOWING THROUGH THE CIRCUIT

- **How can this be done?**
- This can be done by increasing either the number of cells or the number of bulbs in the circuit.

ADDING MORE CELLS?

- This will increase the electric current flowing in the circuit.
- Therefore, the bulbs will be... **brighter or dimmer?**

ADDING MORE CELLS?

- This will increase the electric current flowing in the circuit.
- Therefore, the bulbs will be...

Brighter

ADDING MORE BULBS?

- This will reduce the electric flowing in the circuit.
- Therefore, the bulbs will be... **brighter or dimmer?**

ADDING MORE BULBS?

- This will reduce the electric flowing in the circuit.
- Therefore, the bulbs will be...

Dimmer

ACTIVITY

- **Propose** what the safety issues are with having too much current flowing in a circuit.
- What do you think would happen if we kept adding cells to a circuit with just one bulb?