

## Student Revision Notes (age 11 – 14): Electric Appliances Energy Usage

There are big differences in the amount of electricity various electrical appliances use. To illustrate this we have listed:

### How long some appliances would run on 1 unit (1 kWh) of electricity

Appliance	Energy used
Radiant heater	1 hour
Iron	2 hours
Vacuum cleaner	2 hours
Colour TV - operating	3 hours
Hair drier	3 hours
Power drill	4 hours
Unlagged hot water tank	6 hours
Slow cooker	8 hours
Light bulb (100W)	10 hours
Lagged hot water tank	12 hours
Fridge	24 hours
Freezer	24 hours
Storage heater (2kW)	24 hours
Extractor fan	24 hours
Strip light (40W)	24 hours
Mains radio	30 hours
Colour TV – on standby	3 months
Mains clock	3 months

### What some appliances would achieve for 1 unit (1 kWh) of electricity

Appliance	Energy used
Blender	Blend 300 litres
Carving knife	220 joints of meat
Electric blanket	Warm bed for a week
Electric shaver	2000 shaves
Kettle	Boil 8 litres
Knife sharpener	Sharpen 15000 knives
Microwave	Cook 3kg joint of meat
Sandwich toaster	38 sandwiches
Tumble drier	Dry 2kg of clothes
Toaster	Toast 70 slices

The electricity used by various types of television of the same screen size.

Type of TV	Power on	Standby
Traditional CRT TV	192 W	1.9 W
LCD TV	200 W	1.00 W to 40 W !
Plasma TV	250 W	1.3 W to 12 W

For a TV on for 6 hours a day and standby for 18 hours a day, an average plasma TV would use approximately 140 kWh more electricity than a traditional CRT TV in a year.

eleanor.hazlewood 14/5/09 15:26

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#### Linked Resources

[www.twothirtyvolts.org](http://www.twothirtyvolts.org):

Electric Current (11-14) Student Quiz