

Lesson Plan: Year 4

Maths

Objectives:

- To order and compare numbers beyond 1000.
- To convert between units (watts to kilowatts).
- To solve 2 step problems.

Resources:

- Table of Appliances. (Resource A).
- Place value tables.
- Numicon or multilink.

Teacher Input:

Explain that Ecobot has been looking at his electrical appliances to see how much electricity they use and how he could save some money. The amount of electricity used to run an appliance is measured in watts (W). Use Resource A to give children some examples e.g a fridge = 80W, a washing machine = 1800W and a microwave = 850W. Can they estimate the values for a games console, a vacuum cleaner and a laptop?

Look together at the Table of Appliances (Resource A) and discuss some further examples. In pairs, children to solve some simple addition and subtraction problems e.g. How much electricity do a freezer and a hairdryer use? What is the difference between how much an electric mower and an immersion heater use? What is the difference between the appliance that uses the most and the least electricity?

How much does an LCD TV and a toaster use?

Explain that electricity is charged in kilowatt hours so we have to convert watts to kilowatts before we can find out how much electricity an appliance has used.

Ask how many m in a km? How many g in a kg? So there are 1000 w in a kw. So, to convert watts to kilowatts we have to divide by 1000.

Demonstrate how to do by moving the digits 3 columns to the right using a place value chart. (Resource B)

Independent Activity:

Children to complete differentiated worksheets to convert watts to kilowatts and solve addition and subtraction problems.

Differentiation:

H.A. Complete worksheet converting w to kw and kw to w (Resource D).

M.A. Complete worksheet converting w to kw (Resource C).

L.A. Complete worksheet by using numicon or multilink to move amounts on a large place value table (Resources B and C).

Plenary:

Look again at the Table of Appliances. Are there any readings that are surprising? Has this given you any ideas of how you could help Ecobot to save electricity at home or at school?