

9| Energy and electricity...Using electricity

level 5
level 6
level 7





starter one

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Look at the four pictures below. Estimate how much electricity each activity uses in the home. Why does the amount of electrical energy used for heating and lighting depend on the time of year:

 Click mouse to reveal answer

	Heating	Lighting	Cooking	Other
Diagram				
	4%	4%	4%	4%
	47%	47%	47%	47%
	42%	42%	42%	42%
	7%	7%	7%	7%
	Answer:			

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Answer:

	Heating	Lighting	Cooking	Other
Diagram				
			4%	
		47%		
	42%			
				7%
<p>Answer: In the winter the majority of energy is used for home heating and lighting. In the summer there is less demand because of the warm temperatures and long light evenings.</p>				

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level 6
level 7

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Look at the five pictures below. The power rating (measured in watts) tells us how many joules per second of electrical energy a device uses. A 100 watt light bulb uses 100 joules per second when it is switched on. Estimate for each device its power rating in watts:



Click mouse to reveal answer

	PS2	Hearing aid	Hair dryer	Kettle	Vacuum
Diagram					
	200 watts	900 watts	900 watts	900 watts	900 watts
	1500 watts	1500 watts	1500 watts	1500 watts	1500 watts
	2000 watts	2000 watts	2000 watts	2000 watts	2000 watts
	0.001 watts	0.001 watts	0.001 watts	0.001 watts	0.001 watts
	500 watts	500 watts	500 watts	500 watts	500 watts

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level 5

level 6

level 7

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Answer:

	PS2	Hearing aid	Hair dryer	Kettle	Vacuum
Diagram					
	200 watts				
			1500 watts		
				2000 watts	
		0.001 watts			
					500 watts

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starter three

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Look at the four pictures below: Using electricity in the home is convenient, clean and normally safe, however there are some dangers to using mains electricity. Match each picture with their correct statement:

 Click mouse to reveal answer

	Socket	Fuse	Plug	Device
Diagram				
	This object is made from strong insulating plastic and has three pins. It contains a fuse and should always be replaced if damaged in any way.	This object uses the electrical energy to perform a useful function. It has an Earth wire which returns stray current safely to Earth.	This object is found in sockets and plugs. If the current surges, it causes this object to melt, breaking the circuit and protecting the device.	This object takes a three pinned plug. It is Earthed and made from very strong plastic. It should never be overloaded with too many plugs.

Answer:

	Socket	Fuse	Plug	Device
Diagram				
	<p>This object takes a three pinned plug. It is Earthed and made from very strong plastic. It should never be overloaded with too many plugs.</p>	<p>This object is found in sockets and plugs. If the current surges, it causes this object to melt, breaking the circuit and protecting the device.</p>	<p>This object is made from strong insulating plastic and has three pins. It contains a fuse and should always be replaced if damaged in any way.</p>	<p>This object uses the electrical energy to perform a useful function. It has an Earth wire which returns stray current safely to Earth.</p>