

Apparatus for 'Activities around Specific Heat Capacity'

Item	Description	image
Immersion heater	This is a standard in car immersion heater (making tea in your car!) It is a 12/24V compatible device. Simply cut off the in-car connector and replace with 4mm plugs Typically £5-10 through Amazon but 'Light in the box.com'	
Postal tubes	Davpack.co.uk 787mm long approx. £20 for 25 (more than enough) (called 'light duty' postal tubes)1.5mm wall Or transpack who do a thicker walled tube (3mm)	
Lead shot	Mikes's Dive mikesdivestore.com as one example 1mm diameter shot is good for this	
Digital thermometer	Simple kitchen thermometers (respond quickly, accurate & sensitive enough) approx. £5 These are Kitchen Craft (though 'trouva') https://www.trouva.com/search/digital%20thermometer But 'betterequiped' good for these and much else https://www.betterequipped.co.uk/	
Ceramic connector block	Screwfix https://www.screwfix.com/p/hylec-double-pole-24a-steatite-ceramic-terminal-blocks-pack-of-5/70278 set of 5 for £4.59 <i>ceramic connector block a bit better than plastic for heaters</i>	
Nichrome wire &/or constantan	Various swg about £10 for 125g reel from 'betterequiped'. Obviously Rapid or RS useful for making a heating element (with ceramic block) for simple heating; care with heating effect and pupils touching these Nb ratio of areas 2;1 (approx.) 26swg;30swg or 28swg;32swg	
12V filament bulb (sbc) and holder	Rapid supply a unit of base (with 4mm sockets) and lamp 12V/21W	
SEP energymeter	This is a really 'nice' energymeter designed for the original SEP programme A bit costly (£83ish) but simplifies lots of needs Product Code: SEP-044	
Plug in power/volt/current	These are cheap £10-15 units (from Amazon for example). These plug into a mains socket and then a power supply may be plugged into them and its input to it when in use is monitored <i>This is in contrast to the SEP energymeter (above) which monitors the output from the power supply.</i>	
Calorimeter blocks	Each 1kg with two drilled holes for respectively an immersion heater and a liquid in glass thermometer. Use either a liquid (water or preferably oil (or thermally conductive silicone grease) Steel (iron block) cheapest (approx. £7) aluminium ~£15	
Copper, brass and aluminium rivets	SciChem sell these in 100gm amounts for approx. £2 Can be used to extend the 'lead waterfall' experiment (Brass R1016) Also R1010 & R1020	

The above are just example of suppliers but there are many others