**6** A student uses a 2400W electric kettle to obtain a value for the specific heat capacity of sunflower oil.

Fig. 6.1 shows the apparatus.

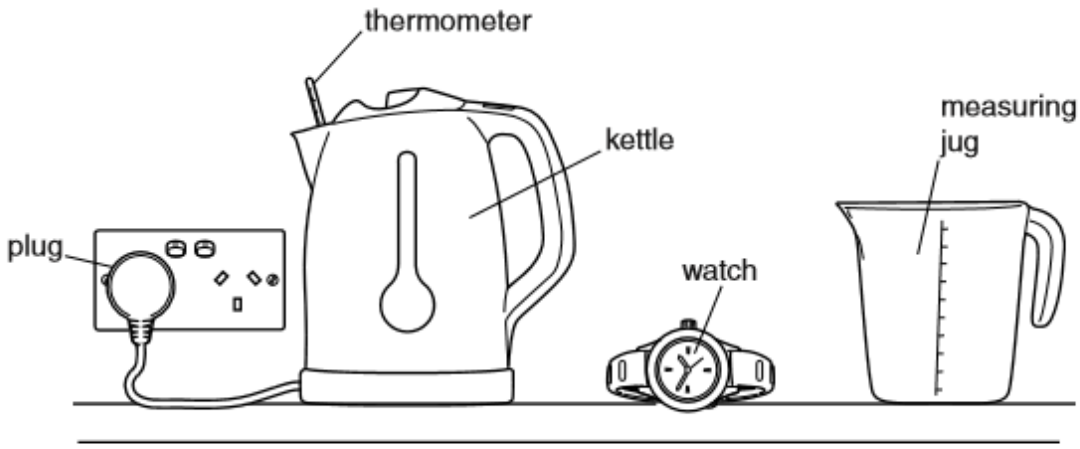


**Fig. 6.1**

The student uses a measuring jug and pours 1.5 kg of sunflower oil into the empty kettle. He uses a thermometer to measure the temperature of the oil.

The kettle is switched on and left on for 50 s. The temperature of the oil increases by 32 °C.

The student assumes that all the electrical energy is transferred as thermal energy to the oil.

**(a)** Calculate the value for the specific heat capacity of sunflower oil obtained by the student.

specific heat capacity = ..... [4]

**(b)** State and explain whether the value for the specific heat capacity obtained by the student is too large or too small.

.....

..... [1]

[Total: 5]