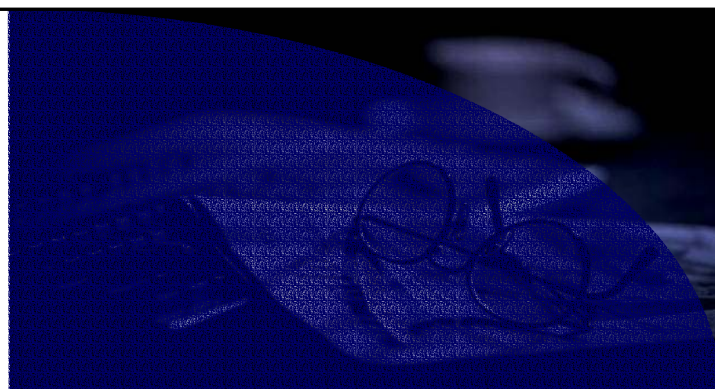


assessment for learning

year 8...mark scheme



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8I Heating and cooling...mark scheme

Assessment for learning...year 8 (level 3-6)

Question 1:

- (a) It melts **or** is melting 1
accept 'it starts to melt' or 'thaws' or 'turns to liquid'
or 'changes state'
do not accept 'it is between solid and liquid'
- (b) it is room temperature 1
accept no more energy being put in'
- (c) (i) They vibrate around fixed points **A** 1
if more than one box is labelled A, award no mark
- (ii) They move past each other and are close together **C** 1
if more than one box is labelled C, award no mark
disregard any ticks
- (d) (i) Ice is less dense than water. ✓ 1
if more than one box is ticked, award no mark
- (ii) The molecules are further apart in ice than in water. ✓ 1
if more than one box is ticked, award no mark

[6]

Question 2:

- (a) (i) 100 1
accept answers from 98 to 100
- (ii) to condense the water vapour 1
accept 'to change the gas into liquid'
or 'condensation' or 'condenser'
accept 'to cool the vapour into water'
do not accept 'to cool the vapour or water'
- (iii) distillation **or** distilling 1
- (b) (i) evaporating **or** boiling 1
melting 1
freezing 1
condensing 1
- (ii) A 1
accept 'boiling'
- D 1
accept 'condensing'
accept the letters written in the correct places on the diagram

[9]

Question 3:

- (a) the energy had to be shared by more particles **or** water 1
accept 'there was more water to heat up' or 'the heat is spread out more'
do not accept 'there was more water'
- (b) A 44 1
B 34
both answers are required for the mark
- (c) **for the mark to be awarded, the correct block must be identified and the correct reason given** 1
any **one** from
 - the block in B, because its temperature dropped by the larger amount
both answers are required for the mark do not accept 'B, because there was more water to heat up'
 - the block in B, because this block ended up at a lower temperature

[3]

Question 4:

- (a) brass steel ✓ 1
if more than one box is ticked award no mark
- (b) (i) metal X: aluminium 1
metal Y: steel
both metals are required for the mark
- (ii) turning the contact screw towards the bimetallic strip 1
accept 'turn the screw in or up'
do not accept 'turn or adjust the contact screw'

[3]

Question 5:

- (a) heat 1
high 1
friction order *answers must be in the correct order* 1
- (b) plastic *accept a suitable, named plastic* 1
accept 'wood' or 'rubber'
- any **one** from 1
- it is a poor conductor of heat **or** electricity
accept 'it does not conduct' or 'it is an insulator' or 'your hand does not get hot'
 - it is light
 - it is easy to shape
accept 'it is rigid or stiff'
do not accept 'it is strong'
- (c) they might melt *accept 'it makes a hole' or 'they burn'* 1
- (d) accept any time from 45 to 60 seconds 1

[7]