# Reading a Crystallization Temperature Spike

Scoring guide · one credit per question · review written work against each rubric

### Reading a Crystallization Temperature Spike

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### Question 1

Choice (1)

A rises from 25 to 31 °C between minutes 4 and 6. B falls from 25 to 23 °C.

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### Question 2

As particles form a crystal, their arrangement can have lower potential energy. Energy released by crystallization can increase the sample’s thermal energy even as some energy leaves for the cooler cabinet.

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### Question 3

A rises 31 − 25 = 6 °C, giving a thermal energy gain of 60 J. Adding the 20 J that leaves gives 80 J released by crystallization.

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### Question 4

The temperature rise accounts for energy retained as thermal energy. It leaves out the energy that has already moved from the sample to the cabinet.