Why a Theater Sensor Signals When Wet

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

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Question 1

Electrons that are free to move through the metal carry charge. The copper atoms do not need to become dissolved ions.

Question 2

Choice (3)

The attached graphite trace conducts while dry and remains after rinsing. Potassium chloride provides mobile ions when wet, and the dissolved salt can wash away.

Question 3

Electrons can travel through the connected graphite trace. In the wet potassium chloride mark, mobile potassium and chloride ions carry charge through the solution. Accept equivalent wording that identifies both charge carriers.

Question 4

Dry potassium chloride gave no signal before it was rinsed. Any small amount left behind after drying could also give no signal because ions in the dry solid cannot move through the gap.