Physical Science and Nature of Science Assessment Probes

Thermometer

Mr. Martinez placed a thermometer in a jar of very hot water. His students watched what happened to the thermometer. Immediately the level of the red liquid in the thermometer went up. His students disagreed about why the red liquid in the thermometer rose when the thermometer was placed in hot water. This is what they said:



Jean-Paul:	"The hot water pushed it up."
Pita:	"The mass of the red liquid increased."
Jonathan:	"The heat inside the thermometer rises."
Jimena:	"The air inside the thermometer pulls it up."
Molly:	"The molecules of the red liquid are further apart."
Greta:	"The number of molecules in the red liquid increased.
Keanu:	"The molecules of the red liquid are getting bigger."

Which student do you most agree with?

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Explain why you think that student has the best explanation.

Uncovering Student Ideas in Science