**Selecting and Sequencing Student Ideas in Science to**

**Promote Discussion for/in \_M&M Inquiry Lesson\_**

**Core Science Idea:** How chemical and physical properties affect matter

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| --- | --- | --- | --- | --- | --- | --- |
| **Anticipated Student Idea, Explanation, Model** | **Rationale for Selection** | **S****e****q****u****e****n****c** | **Science Concepts to highlight when students share** | **Teacher Questions to ask to make student ideas transparent to all or to connect learning (whole group)** | **Teaching routines to use during discussion** | **About students or group who used this** |
| M&Ms are melted by enzymes (saliva) | Partial mi-conception |  | The glucose coating has different characteristics than the chocolate core | When you did your dissection, what did you notice? What happened to the coating of the M&M when put into water? | Revoice-Compare |  |
| Your mouth melts the chocolate because it is hotter than our hand | Mis-conception |  | The glucose coating has different characteristics than the chocolate core | What happened when you used cold water vs. hot water? What affect did this have on the chocolate? | Revoice-Compare |  |
| The sugary coating is water soluble and when it is gone the chocolate melts | Correct concept |  | Chocolate (on average) is about 2/3 fats/lipids and is not water soluble | One the outside dissolved, did the chocolate melt in the cold water? | Revoice-Compare |  |
| others |  |  |  |  |  |  |
| **Connecting (**Questions that will make the core science idea visible and understandable to the entire class): Is the chocolate water soluble? How do you know, why is it not? What part does the enzymes in saliva play?  |

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