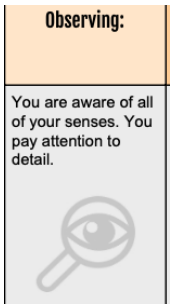
Curricular Area/s/Unit of Inquiry	TDT-How the world works An inquiry into the natural world and its laws; how humans use their understanding of scientific principles.
Central Idea	Investigation of transformations develops understanding of changes.
PLO's **(B.C. Curriculum)**	Identify the properties of solids. Use their senses to interpret observations.
Objective **(TSWBAT)**	The students will be able to identify and document their observations about the key characteristics of solids.
IB Links ***LP traits, Key concepts, connections to past units, ATL,action, agency**	**Key concepts:** Form-What is it like? ****this is the focus this lesson*** Change-How is it changing? 
Materials	-2 pictures of solid representations -3 3-D representation of solids -4 solids - mystery matter worksheets - "what are solids like?" worksheets -trays -ice -crayons -baking powder -cotton balls
Differentiation ***Enrichment options** ***EAL** ***Adaptations**	**Enrichment-** Students will be prompted to make real life connections during the discussions. **Adaptations-** Students who need additional help will begin at stations that are less abstract (i.e. solid items) and could also be paired with students who can help guide them. **EAL**- students can write down names in their home language and/or ask a teacher to scribe for them

Assessment (*formative*/summative)	Students will be documenting their thinking during the experiments and these will be collected to check for understanding and to check if objective has been met.

Timing **7 minutes**	**Tuning In** 1) Pop on your thinking caps! Pull out the mystery bag and prompt: "I've got some objects I want to observe carefully in here. What kinds of questions could I ask to learn about the objects in my bag?" Brainstorm questions and make connections with the key concepts. Next, from a mystery bag, pull out an object and ask students to describe it (this can be done with 1-2 objects for more student participation). Once the class has some practice, ask them to guess which concept we'll be focusing on today. (FORM)
20 min 10 min 25 min	**Learning engagements (whole class, small group, partner,)** 1) ***this will be modeled first**** In pairs, students will be given a station to start at with their UoI book. Each station will have either a picture, a 3-D model or a solid item. At each station, students will need to observe and document what properties each item has (each student is responsible for writing and each student will have a different colored pencil to track contributions). 2) Depending on time, students will visit 5 of the 9 stations. They will be given about 3-4 minutes at each station. ***Circulate, Pause to think** 3) Next, we will regroup at the carpet and try to answer the following question: what do all of these things have in common? (This question is also given to them before the activity) 4) Once the class has come up with "solids", we will discuss some of the properties of solids. During the discussion, I will do a demonstration on how solids retain their shape no matter what they are in (containers, locations etc.) 5) The discussion will be guided to the question: If a solid is broken, is it still a solid? This will lead into the instructions for the following learning engagement (which will likely be in a second period): 6) In table groups, each group will be given a different solid: crayons, ice cubes, cotton balls and baking powder. Before touching anything, they will need to think of and write down a way in which they think they can break the solid. Next, everyone in the group will take a turn trying to break the solid. After their turn, the students must document what the solid looks like after and try to answer the question: Is the item still a solid? How do you know? (This can be done as a group).
	Closure (student generated) 7) Once everyone has had a turn, we will meet at the carpet and do a debrief reflection with a spokesperson from their group in which they will try to answer the questions: What is a solid? How do we know?
	Teacher Reflection *Students were very engaged, especially during the experiments phase of the learning engagement. Modelling the thinking and documentation process allowed students to keep organized track of their thinking. Next time, a work bank with descriptive words of the senses (for example) could act as a support for students who had difficulty finding new adjectives to use in their notebooks.*