

**Inquiry Plan Components - Kindergarten**

\*Page 1, Overview

<p><b>Name:</b> Adapted from EDUC4721 teacher candidates' plans.</p>	
<p><b>INQUIRY QUESTION</b></p> <p>What is salt used for?</p>	
<p><b>DESCRIPTION</b></p> <p>Due to the winter weather, the Learners have started to notice the white salt lines accumulating on their boots, as well as asking questions about why there are big bags of salt by the front door.</p>	<p><b>LEARNING OPPORTUNITIES</b></p> <pre> mindmap     (What is Salt used for?)       Mathematics/Art         Using stencils and the salt to make geometric shapes SG         Measuring and weighing different types of salt SG/WG         Salt art (reaction between salt and paint) SG         Making playdough SG       Writing         Create letter and words with salt table Sg         Write letter to de-icing workers to ask them why they salt roads SG/WG         Independent or partnered reading of salt books SG       Science/Discovery         science experiments with salt WG         salt water vs fresh water SG/WG         why it cures wounds/cankers SG/WG         salt rings SG         salt cubes SG         Mixing the salt with different items: vinegar, paint, water, snow/ice SG       Building/Design         salt cubes/playdough/cross curricular SG         clumps, and pickles, and dough SG         hollow geometric shapes SG           </pre>
<p><b>ANCHOR TEXTS</b></p> <p><i>Salt</i> by John Paul Zronik  <i>Salts &amp; Solids</i> by Robert C. Mebane  <i>From Sea To Salt</i> by Robin Nelson  <i>Salt</i> by Brenda Walpole  <i>Salt</i> by Neil Morris  <i>Winter In Canada: Machines</i> by Nicole Mortillaro  <i>I Wonder Why: The Sea Is Salty</i> by Anita Ganeri  <i>Salt Hands</i> by Jane Aragon &amp; Ted Rand</p>	

**Date(s)/Day(s) # of Inquiry:** Day 1

**LEARNING OPPORTUNITY**

Set out a Salt Learning Invitation with the following learning opportunities:

- Mathematics/ Art: Using stencils and the salt to make geometric shapes SG, Salt art (reaction between salt and paint) SG
- Drama/ Music: Dramatic play - pretend they are de-icing workers, clearing salt (using construction trucks) SG
- Science/Discovery: Mixing the salt with different items: vinegar, paint, water, snow/ice SG

**MATERIALS AND SPACE NEEDED**

*Space needed:* 1 table with multiple chairs

*Materials:* Table salt, Himalayan pink salt, Road salt, toy construction trucks, bin, vinegar in squeeze tube, paint in primary colours, plastic spoons, ice cubes/snow, post it notes and pencils, construction paper, Himalayan salt lamp, metal shape stencils.

**OBSERVATIONS**

Table Set Up:



**Doing: (Process):** Learners used the paint brushes and paint to mix the salt, snow and ice. They tried to paint with different items including, snow, ice and paint brushes. They tried using the different types of salt to see what mixed with the paint.

**Actions:** Using ice to scoop the paint, then mixing the salt and the paint. Putting salt on top of painting and rubbing it in. Painting letters and painting faces. Seeing which types of salt does what with the paint (how the smaller salt dissolves faster than the bigger salt pieces). Painting the pile of snow with the tempera paint.

**Saying:** *While holding the salt:* M - "Where does salt come from?"

*Referring to ice salt:* R - "Can you put it in your mouth?" "Can I eat it!"

*Picking up Pink Himalayan salt:* D - "It looks like a gem!", "I like it, it looks different."

*Painting with the ice cubes:* S - "Ice doesn't make a very good paint brush"

*Smelling bottle of vinegar:* M - "This bottle smells like fish and chips!" "It's vinegar!"

*Pouring vinegar onto the paint and salt:* M - "The vinegar makes patterns with the salt"

T - "The snow absorbs the colour, the colour of the paint!"

L - "If you put finer salt on the salt it melts faster!"

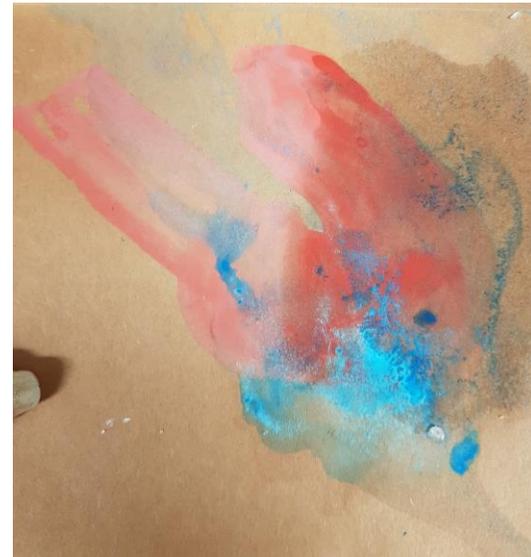
S - "Paint doesn't dissolve salt. Paint and vinegar don't mix!" "I am seeing if different salts do different things with the paint." "The smaller pieces will paint faster." "Snow can be used to paint but ice can't."

M - "Some of it is disappearing! The red stuff is staying!" "Ice doesn't make a good paintbrush." "Water is blue so I'm going to use the blue paint. It's hard to scoop the paint with ice." "What makes paint washable?"

T - "I poured vinegar on the snow and it made a hole so I'm going to fill it." "The salt is making the snow melt. It is going fast!" "I'm making a snow mountain and I put a big salt crystal on top, now two crystals on top since the other melted fast." "I have a discovery! If you put fine salt on snow it melts faster because of the surface area!"

M - "I'm painting snow to see how long it lasts. I am going to paint over the salted snow too!"

**Representing:** As learners explored and observed one another's representations, they noticed the different sizes of salt melted the snow at different speeds. Below are a few examples of their representations.



**Ideas for Displaying/Sharing Documentation:** A documentation panel with a short explanation of the inquiry will be displayed in the classroom.

### EXPECTATIONS/FRAMES

The most significant learning demonstrated was that the Learners were able to effectively communicate their thoughts in various ways while they used a hands-on investigation strategy to observe, ask questions and experiment with the salt.

1. communicate with others in a variety of ways, for a variety of purposes, and in a variety of contexts
2. demonstrate independence, self-regulation, and a willingness to take responsibility in learning and other endeavours
4. demonstrate an ability to use problem-solving skills in a variety of contexts, including social contexts
13. use the processes and skills of an inquiry stance (i.e., questioning, planning, predicting, observing, and communicating)
14. demonstrate an awareness of the natural and built environment through hands-on investigations, observations, questions, and representations of their findings
22. communicate their thoughts and feelings, and their theories and ideas, through various art forms
23. use problem-solving strategies, on their own and with others, when experimenting with the skills, materials, processes, and techniques used in drama, dance, music, and visual arts
25. demonstrate a sense of identity and a positive self-image

### NEXT STEPS

#### **Ongoing Exploration:**

-Continue to provide materials for exploration. Ask open ended questions to prompt further inquiry.

#### **Sharing Learning:**

-Have learners gather outside (depending on weather) to share their ideas and observations.

#### **Mathematics/Art - Salt Art (reaction between salt and paint) small group:**

-Learners can investigate how to create designs with different types of salt and paint.

-Learners can observe the reactions between the salt and paint and document it through writing or drawing.

-Observe if different types of paint have different reactions.

-Learners can create colour patterns or salt patterns.

	<p><b>REFLECTION</b></p> <p>We have learned from our observations that our learners are interested in how salt reacted with the snow and the paint. They were curious about the dissolving reaction, the shape and the smell of the salt. They noticed that different amounts of salt and snow cause different results. Learners were using their five senses to enhance their exploration.</p> <p>Learners were more interested in the artistic aspects of this invitations so we will continue to provide more options for them to explore their artistic abilities.</p> <p>We are wondering professionally how we could continue this inquiry when the weather changes if they are still interested in salt. We are also wondering how to incorporate their artistic interests into different inquiry topics.</p> <p>We are curious why the Learners did not find interest in the other items; however maybe with more opportunities they will be interested.</p>
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<p><b>Date(s)/Day(s) # of Inquiry:</b> Day 2</p>	
<p><b>LEARNING OPPORTUNITY</b></p> <p>Learners were mainly interested in playing with the salt/vinegar/paint and making art. Once the paint dries we can re-investigate what the salt has done with the painting. Since the Learners were not interested in any dramatic role playing or looking at the books at this point we will go in the direction of exploring art aspects in small groups.</p>	<p><b>MATERIALS AND SPACE NEEDED</b></p> <p><i>Space needed:</i> Tables and chairs. Easels for painting.</p> <p><i>Materials:</i> Table salt, Himalayan pink salt, Road salt, washable paint, paint brushes, straws, spoons, cups, water, construction paper, markers, crayons, scissors</p> <hr/> <p><b>OBSERVATIONS</b></p> <p>*Note: This second page sketches out the plan for Day 2 but does not include observations, next steps or reflections as these will be added as this day unfolds.</p> <hr/> <p><b>EXPECTATIONS/FRAMES</b></p> <ol style="list-style-type: none"> <li>1. communicate with others in a variety of ways, for a variety of purposes, and in a variety of contexts</li> <li>21. express their responses to a variety of forms of drama, dance, music, and visual arts from various cultures and communities</li> <li>22. communicate their thoughts and feelings, and their theories and ideas, through various art forms</li> </ol>

	23. use problem-solving strategies, on their own and with others, when experimenting with the skills, materials, processes, and techniques used in drama, dance, music, and visual arts
	<b>NEXT STEPS</b>
	<b>REFLECTION</b>