

Salt Lake Puddles - Student Worksheet

The salt concentration in salt lakes will change depending on water levels.

Your task is to investigate the effect of floods on salt concentration in salt lakes.

Materials

- Table salt
- Measuring spoon or scales to measure salt
- Tap water
- Funnel
- 3 plastic bottles (at least 600mL) with lid
- Marking pen to label bottle and trays
- Measuring jug or cylinder
- 3 plastic containers or trays



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Method

1. Make a salt solution of approximately 20g/L concentration (HINT: 1,000mL = 1L) by mixing salt and water in one of the plastic bottles. Record how much salt you added in the table (1 tsp = approx. 5g). Label the bottle 'Solution 1'.
2. Measure out one half of Solution 1 and pour it into a second plastic bottle. Fill the rest of the bottle with fresh water, put the lid on and shake well. Label this bottle 'Solution 2'.
3. Measure out one half of Solution 2 and pour it into a third plastic bottle. Fill the rest of the bottle with fresh water, put the lid on and shake well. Label this bottle 'Solution 3'.



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4. Prepare the three containers by labelling them Solution 1, Solution 2 and Solution 3.
5. Shake each bottle then pour out approx. 50-100mL of each solution into the appropriate container/lid. Make sure you pour out the same amount of each solution to ensure a fair test.
6. Carefully put the containers in a warm place and leave until all of the water has evaporated, leaving the dry salt in the tray.
7. Observe and measure the amount of salt left in each container, either by scraping out and weighing the salt or measuring how many spoons of salt remain.



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Results

	Amount of salt added (g) (A)	Size of bottle (L) (B)	Concentration of solution (A ÷ B)	Amount of salt left after evaporation (g)
Solution 1				
Solution 2				
Solution 3				

Discussion

1. Which solution had the most salt left after evaporation?
Was it the least or most concentrated solution?

2. What natural event does this experiment model?

3. Is the dissolving of salt in water a reversible or irreversible change?
