

Name _____ Date _____

Investigation 4-1: Rock Salt, Baking Soda, and Water

Investigation plan		✓
1	Gather supplies for the group: € 1 Quart plastic baggie € 1 Gallon plastic baggie € 1 Plastic spoon € Class supply of rock salt € Class supply of baking soda € Class supply of water € 1 Syringe (any size, approx. 10 mL) € 1, 4 oz cup with lid (for water) € 2 Clear plastic cups (any size; approx. 10 oz) € 1 Electronic scale € Safety goggles (1 pair per student) € Plastic gloves (1 pair per student)	
2	Put on plastic gloves and safety glasses.	
3	Prepare the rock salt cup: € Pour a spoonful of rock salt into the 10 oz cup. € Record the properties of rock salt in the investigation table.	
4	Prepare the baking soda cup: € Pour a spoonful of baking soda into the second 10 oz. cup. € Record the properties of baking soda in the investigation table.	
5	Prepare the 4 oz water cup: € Use the syringe to measure 10 mL of water out of the class supply and carefully squirt it into the water cup (with the lid). € Seal the lid tightly. € Record the properties of water in the investigation table. 	
6	Prepare the quart baggie: 	

	€ Pour the rock salt and the baking soda from the plastic cups into the quart baggie. € Carefully place the sealed water cup into the quart baggie. € Seal the quart baggie.	
7	Prepare the gallon baggie: € Place the quart baggie into the gallon baggie. € Seal the gallon baggie. € Record the weight of the gallon baggie in the investigation table. - o When weighing the gallon baggie, make sure it is all on the scale, and not falling off.	
8	Combine the substances: € Remove the gallon baggie from the scale. € Pop the lid off the water cup while it is still in the gallon baggie. € Allow the water to mix with the rock salt and baking soda. € Weigh the gallon baggie immediately after the water mixes with the rock salt and baking soda. Record the weight in the investigation table. € Record the properties of the mixed substance in the investigation table.	
9	Complete the investigation questions.	

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Investigation 4-1 Table:

Substance	Property			
	Color	Clarity (Transparent or Opaque)	Solid, Liquid or Gas	_____
Rock Salt				
Baking Soda				
Water				
Mixed Substances:				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

	Weight (grams)
Total amount of all substances before mixing	
Total amount of all substances after mixing	

Investigation 4-1: Rock Salt, Baking Soda, and Water (Questions)

1. Describe the **properties** of the substances before and after mixing. What did you figure out?

2. Compare the **weight** of the substances before and after mixing. What did you figure out?

3. Compare similarities and difference between the results of this investigation and the results of the investigation mixing sugar and water.

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Arguing from Evidence 4-1: Argument 1

Question:

Claim: _____

Evidence

Evidence 1 _____

Evidence 2 _____

Evidence 3 _____

Reasoning _____

Teacher Feedback:

	Comments
Claim	
Evidence	
Reasoning	

Name _____ Date _____

Arguing from Evidence 4-1: Argument 2

Question:

Claim: _____

Evidence

Evidence 1 _____

Evidence 2 _____

Evidence 3 _____

Reasoning _____

Teacher Feedback:

	Comments
Claim	
Evidence	
Reasoning	