

EXPLORATION: Your turn to design

Matter can exist in many different forms. Properties and changes in matter are often used to help classify it. Matter can be mixtures or pure substances. Here's the problem! You are a Geologist out in the field and have just found a deposit of salt but it is quite impure. In fact it is about 50% sand. Working with your team, devise a plan to extract the pure salt. At the conclusion of your lab you should have a mass of the salt, of the sand, and of the iron filings. You will then need to compare the results to the theoretical yield provided by your instructor. Check the plan with your supervisor (teacher), carry out the experiment, and then each of you will generate a lab report on your procedure and results.

Materials available to your team:

- sand/salt/iron sample
- Heat source
- Oven mitt or Tongs
- Funnel
- Filter Paper
- Stirring Rods
- Tweezers
- Beakers
- Water
- Paper Towels
- Magnet

At minimum include the following in your lab report or notebook:

- Title
- Introduction/background
- Detailed Procedure
- Data Collected
- Materials used
- Conclusion

EXPLORATION: Your turn to design

Matter can exist in many different forms. Properties and changes in matter are often used to help classify it. Matter can be mixtures or pure substances. Here's the problem! You are a Geologist out in the field and have just found a deposit of salt but it is quite impure. In fact it is about 50% sand. Working with your team, devise a plan to extract the pure salt. At the conclusion of your lab you should have a mass of the salt, of the sand, and of the iron filings. You will then need to compare the results to the theoretical yield provided by your instructor. Check the plan with your supervisor (teacher), carry out the experiment, and then each of you will generate a lab report on your procedure and results.

Materials available to your team:

- sand/salt/iron sample
- Heat source
- Oven mitt or Tongs
- Funnel
- Filter Paper
- Stirring Rods
- Tweezers
- Beakers
- Water
- Paper Towels
- Magnet

At minimum include the following in your lab report or notebook:

- Title
- Introduction/background
- Detailed Procedure
- Data Collected
- Materials used
- Conclusion