

Separating Mixtures Lab

Your task: To separate a mixture of sand, salt, and iron.

- Groups will be assigned. (2 per group)
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YOUR REPORT MUST INCLUDE THE FOLLOWING 4 SECTIONS:

Big Picture / Idea: Brainstorm how to separate the mixture into its 3 parts. Come up and tell me your idea to get my initials for this section prior to starting to write your procedure. (*You don't have to write anything for this part.*)

- **TEACHER INITIALS** need to be on the report page you hand in.

Procedure: Write a **detailed and clear** step-by-step procedure (numbered steps) telling someone how to separate the mixture into its 3 parts. This procedure is a large part of your grade. (*I highly recommend leaving a line or two between each step to allow for additions.*)

- Teacher MUST approve procedure before students perform the lab.
- **TEACHER INITIALS** need to be on the report page you hand in.

Data & Calculations: Measure the **mass of the mixture** before separating it, the **mass of each part** of the mixture after being separated. Calculate what **% of the mixture** was iron, sand, and salt. Show your work.

Conclusion: Students answer the following questions:

1. What is a mixture?
 2. How could you tell the sand, salt, and iron was a mixture and not a pure substance?
 3. Is the sand, salt iron mixture a “homogeneous mixture” or a “heterogeneous mixture”? Explain why.
 4. How could you improve your procedure? (*Did some of your sand go through your filter? Etc.*)
 5. Error Analysis: Where might some error have crept into your lab?
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Grade based on:

- **Procedure** – Specific, detailed, & clear? Could anyone follow it without any further directions?
- **Data & Calculations** – Accuracy? Organized presentation of data?
- **Conclusion** – Evidence of thought?
- **Neatness & Organization**