|  |  |  |
| --- | --- | --- |
| Name: | Class: | Date: |

**6.5 Solve a Problem: Separating a Mystery Mixture**

**\*PROBLEM**: For this activity, your teacher will give you a mystery mixture to separate.

**\*TASK/PURPOSE**: Your task is to separate the substances in the mixture using the methods you learned in Section 6.4. Your group should be able to identify six different substances.

1. Look at your mixture. Are there any easily observable properties that give you clues about how to proceed? What separation methods can you use? In what order will you use them?
2. With your group: **Design a PROCEDURE** to separate your mystery mixture. Remember the different ways to separate a mixture: picking apart, filtering, using density, using magnetism, dissolving, and evaporating.
3. Decide what **MATERIALS** you will need. **Draw a DIAGRAM** to show how you will set up the equipment. Your diagram should be at least half a page in size.
4. Submit your list of materials, diagram, and procedure to your teacher for approval. Your procedure must include any safety precautions and an observation table.
5. Mixture Lab: Carry out your procedure.

**DATA and OBSERVATIONS: (may be modified to fit your needs)**

|  |  |  |  |
| --- | --- | --- | --- |
| Separation Method | Discovered (Name) | Type of Matter | Undiscovered / Left Over (description) |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**\*COMMUNICATE**: When you have completed your investigation, draw a **graphic organizer** to show how you separated the substances in your mystery mixture; include this in the DATA and OBSERVATIONS section of your write-up.

|  |
| --- |
| **Procedure:** |

|  |
| --- |
| **Materials needed:** |

**Diagram:**