|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Properties** | **Object 1** | **Object 2** | **Object 3** | **Object 4** | **Object 5** |
| **Color** | silver | silver | silver | silver | silver |
| **Mass** | 5g | 5g | 10g | 10g | 10g |
| **Volume** | 15mL | 2.5mL | 5mL | 15mL | 1mL |
| **Sink/Float** | floats | sinks | sinks | floats | sinks |
| **Conductor/Insulator** | insulator | conductor | conductor | insulator | conductor |
| **Magnetic interaction** | Not attracted to magnets | Not attracted to magnets | Not attracted to magnets | Not attracted to magnets | Attracted to magnets |

**Activity:**

Cut apart and provide each student with ONE of the six data tables on the next page. (These are color coded to facilitate grouping students who have different properties together easily.)

Tell students that, like the blind men and the elephant, each of them has ONE PROPERTY of several objects. Based on their property alone, can they tell whether any of the objects are made of the same material? Why or why not? Students should consider whether their particular property would be the same or different for objects of the same material that are different sizes.

Next, have students form pairs of properties such as:

* Volume (Teal) and Magnetic Interaction (Purple)
* Color (Yellow) and Sink/Float (Orange)
* Mass (Green) and Conductor/Insulator (Pink)

Ask students whether they are now able to tell whether any of the objects are made of the same materials-- which ones? (Note: students will notice that some materials share both properties, so teachers should push students to consider whether this is enough evidence.)

Finally, ask students to form groups so that they have members with EACH COLOR. Again, ask students to consider whether they think any of the objects is/are made of the same material. At this point, students should recognize that only Objects B and C share the same properties. While the students can connect this to the folktale of the blind men and the elephant, it is also important to connect this activity to the work of scientists. Ask students to consider how their ideas changed when as they got more evidence about the properties of the objects-- do scientists ideas change in this way? How did working together help them? How does it help scientists?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Property** | **Object 1** | **Object 2** | **Object 3** | **Object 4** | **Object 5** |
| **Color** | **silver** | **silver** | **silver** | **silver** | **silver** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Property** | **Object 1** | **Object 2** | **Object 3** | **Object 4** | **Object 5** |
| **Mass** | **5g** | **5g** | **10g** | **10g** | **10g** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Property** | **Object 1** | **Object 2** | **Object 3** | **Object 4** | **Object 5** |
| **Volume** | **15mL** | **2.5mL** | **5mL** | **15mL** | **1mL** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Property** | **Object 1** | **Object 2** | **Object 3** | **Object 4** | **Object 5** |
| **Sink/Float** | **floats** | **sinks** | **sinks** | **floats** | **sinks** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Property** | **Object 1** | **Object 2** | **Object 3** | **Object 4** | **Object 5** |
| **Magnetic interaction** | **Not attracted to magnets** | **Not attracted to magnets** | **Not attracted to magnets** | **Not attracted to magnets** | **Attracted to magnets** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Property** | **Object 1** | **Object 2** | **Object 3** | **Object 4** | **Object 5** |
| **Conductor/ Insulator** | **insulator** | **conductor** | **conductor** | **insulator** | **conductor** |