Purpose & SOL
• The students will identify compounds and elements by completing a sort.
• Science 5.4c, 5.4d

Materials
• Header cards (see attached)
• Cards to sort (make one set for each group)

Introduction
Discuss the difference between an element and a compound. Elements make up all matter and over 100 can be found on the periodic table. When two or more elements combine to form a new substance, it's called a compound.

Have students name a few elements, and do 4 high knees after each.

Have students name a few compounds and do 4 cross crawls.

Explain that doing high knees only uses one part of your body, like an element is only one from the periodic table. But a cross crawl uses at least 2 parts of your body, like a compound is two or more elements.

Implementation
1) Divide the students into groups, no more than 4 students per group.
2) Give each group a set of cards to sort and the header cards. Demonstrate how the groups will be making a T-chart with the header cards at the top. Assign an exercise for each of the header cards.
3) One at a time, a student from each group will take a turn picking a card. They will read the card and it to their group. As a group, they will decide if it is an element or a compound.
4) The card will be sorted under the correct header, and the appropriate exercise will be completed as a group (4 high knees for elements, or 4 cross crawls for compounds).
5) Continue until all of the picture cards are sorted.

Cool Down
Review the sort while stretching. Do warrior I pose for elements and warrior 2 pose for compounds.

Modifications
If time remains, have the groups match the symbols with the element or compound (i.e., match O with Oxygen, match NaCl with Sodium Chloride).

This activity can also be played as a relay.

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Elements

(4 high knees)
Compounds

(4 cross crawls)
<table>
<thead>
<tr>
<th>C</th>
<th>H</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>He</td>
<td>Na</td>
<td>K</td>
</tr>
<tr>
<td>Carbon</td>
<td>Hydrogen</td>
<td>Oxygen</td>
</tr>
<tr>
<td>Helium</td>
<td>Sodium</td>
<td>Potassium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>( \text{H}_2\text{O} )</td>
<td>( \text{NaCl} )</td>
<td>( \text{CO}_2 )</td>
</tr>
<tr>
<td>( \text{CO} )</td>
<td>( \text{HCl} )</td>
<td>( \text{H}_2\text{O}_2 )</td>
</tr>
<tr>
<td>Water</td>
<td>Sodium Chloride (table salt)</td>
<td>Carbon Dioxide</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>Hydrochloric Acid</td>
<td>Hydrogen Peroxide</td>
</tr>
</tbody>
</table>