

## STATION 10

THE DENSITY OF AN OBJECT MUST BE LESS THAN THE DENSITY OF A LIQUID FOR THE OBJECT TO FLOAT IN THE LIQUID. THE BIN IN FRONT OF YOU CONTAINS 4 CANS OF COLA: PEPSI, DIET PEPSI, COCA COLA AND DIET COCA COLA. REPORT YOUR OBSERVATIONS ON THE FLOATING (OR SINKING) PROPERTIES OF THE CANS.

Explain your observations about the cans.



## **Concepts and Answers - Sink or Float.**

For the cola cans, the regular colas contain significant amounts of sugar. The sugar adds enough mass to the contents to make the whole object denser than water and the can sinks. The sweetener in the diet drinks is much sweeter than sugar and only small amounts are required to make the colas taste about as sweet as the regular colas. Because only small amounts are needed, the density of the whole can is less than the density of water and diet drinks generally float.