

Name_____

Date_____

Pitfalls in Reasoning About Density

Think carefully about each of the questions below and then write three to four sentences in response to each. We are more interested in your reasoning than in particular right answers.

1. Some students say that things are more or less dense depending upon the amount of air in them. Is it ever right to say that? If so, when? Is it ever wrong to say that? If so, when?
2. Jason said, "You can always use a substance's mass number or atomic weight to find the mass of an atom, and use that to accurately predict density." Do you agree or disagree? Why?
3. If diamond and graphite are made out of the same element (carbon) why don't they have the same density?
4. There is more than one possible cause for density. What advice would you give to someone who wanted to analyze a certain object to consider its density?