I have multiple list of a large number of items that must be stored. Up until now I have kept the lists in a Vectors. Since most items only require 4 bytes of data (about 80%), but the rest require more that 36 bytes, I thought that using an Array with a hierarchy of item classes would be more memory efficient. The small items would fit in 8 bytes (together with the pointer).

The problem is that in allocator implementation documentation it says that block sizes are rounded to 16 bytes. So if my 4 byte object takes 16, even when compared to 36, the effort to reactor does not seem to be worth it. Is the 16 byte size rounding still used?