Discussion Questions for "Sorting"

1. Why do we need comparisons in order to sort? Can you think of any way to sort a list without comparing one element of the list to another?

2. The cover illustration for the "Sorting" lecture shows kids sorting buttons by color. In computer science terms, this is not exactly "sorting" but "binning". What is the difference between the two terms?

3. At IBM, I attended a class on sorting in which the professor had magnetized cards with the numbers between 0 and 15, and he demonstrated each algorithm by moving the numbers around on the white board. Can you learn any sort algorithm just by manipulating the numbers between 0 and 15?

4. What is the difference between the "Comparable" interface and the "Comparator" interface? When would you use Comparable, and when would you use Comparator?