C. Putting It All Together

In this chapter, we examined S_N2, S_N1, E2, and E1 mechanisms and learned how they compete with each other depending upon the alkyl group, the leaving group, the solvent, and the nucleophile. We also examined solvent effects upon nucleophilicity. Nature does not always have clear-cut rules, but here we summarize guidelines that chemists use to predict the outcome of reactions between haloalkanes and various nucleophiles and bases.

Figure 9.8 shows a flowchart that allows you to predict the major product of substitution or elimination reactions. Use the chart as a guide to the following discussion. Alternatively, you can follow the discussion by referring to Table 9.11.

Figure 9.8
Flowchart for determining the experimental conditions and choice of reagents that favor S_N2, S_N1, E2, and E1 reactions.