



Figure 1. Stages of Mitosis and Meiosis

(a) Images from *Drosophila* cells indicate the behaviors of chromosomes (blue, text descriptions below), microtubules (green), and centromeres (red) in interphase and mitosis. (b) Chromosome behaviors are shown for maize meiosis I prophase, which is the stage in which homolog pairing, synapsis, and recombination occur (images supplied by Hank Bass and Shaun Murphy, Florida State University). Key chromosome functions that occur during each stage are indicated below (blue text). Subsequently, homologs segregate to opposite poles during meiosis I anaphase, completing a reductional division. Sister chromatids only separate during meiosis II (see Fig. 9).