

EXERCISE 3

biomass distinct distribute diverts germinate in bloom
onset overall remainder replenishes reproduction survived

Energy Distribution in Plants

Annuals are plants that go through their entire life cycle within a single year. Annuals begin their life cycles in the spring when seeds that (1) _____ the winter (2) _____ (begin to grow). In regions with (3) _____ dry and wet seasons, germination occurs with the (4) _____ of the rainy season. Because it has only one growing season, an annual has to (5) _____ its photosynthates (energy-rich molecules) first to leaves. Leaves, in turn, become involved in photosynthesis, which (6) _____ the supply of photosynthates and increases (7) _____ plant (8) _____. At the time of flowering, the plant decreases the amount of energy distributed to leaves and (9) _____ most of its photosynthate to (10) _____. For example, in the sunflower, the biomass of leaves declines from approximately 60 percent of the total plant weight during the period of growth to 10 to 20 percent by the time the seeds are ripe. When (11) _____, the sunflower distributes 90 percent of its photosynthate to the flower head and the (12) _____ to the leaves, stem, and roots.