

VISUAL SUMMARY

THE CHARACTERISTICS OF LIVING THINGS

FIGURE 1-13 Apple trees share certain characteristics with other living things.

Compare and Contrast How are the apple tree and the grass growing below similar? How are they different?



Living things are based on a universal genetic code. All organisms store the complex information they need to live, grow, and reproduce in a genetic code written in a molecule called **DNA**. That information is copied and passed from parent to offspring. With a few minor variations, life's genetic code is almost identical in every organism on Earth.

◀ *The growth, form, and structure of an apple tree are determined by information in its DNA.*

Living things grow and develop. Every organism has a particular pattern of growth and development. During development, a single fertilized egg divides again and again. As these cells divide, they differentiate, which means they begin to look different from one another and to perform different functions.

◀ *An apple tree develops from a tiny seed.*



Living things respond to their environment.

Organisms detect and respond to stimuli from their environment. A **stimulus** is a signal to which an organism responds.

▼ *Some plants can produce unsavory chemicals to ward off caterpillars that feed on their leaves.*



