Acknowledging the uniqueness of each child is only the beginning. Effective early childhood teachers understand typical and atypical child development; they also understand the importance of knowing each child as an individual. They use this knowledge to plan and adapt curriculum, and to help each child meet important learning goals.

Why Pay Attention to Individual Differences?

One of the most well-known facts about child development is that there is a wide range of individual variation (IOM & NRC, 2015). But what does "wide range" mean, and what are the implications for teachers? The concept of a range of variation is based on an average; for example, we might say that on average, men are 5 feet, 10 inches tall. This average was calculated based on the heights of a huge number of men. When we consider their heights individually, however, they may range from 4 feet, 8 inches to 7 feet, 1 inch. Now consider a range of variation in relation to children's development. On virtually every characteristic we could measure—saying first words, balancing on one foot, knowing the alphabet—the pace and timing of children's performance vary. The average age at which most children master a skill, for example, doesn't tell us much without knowing the range, which gives us a far clearer picture of reality.

In general, teachers need to be cautious about focusing too much on averages. Many aspects of schooling, including the graded structure and power of standardized tests, tend to reflect the assumption that all children will achieve certain skills and knowledge at the same time. As a result, the tendency is for schools to ignore the range of variation and try to teach all children the same way.

But if we want every child to achieve the same goals, we must treat and teach them as individuals. Acknowledging that individual differences exist does not mean lowering expectations for some children. In fact, high expectations for children's learning are necessary if they are to succeed. In the sections that follow, we describe some important aspects of variation among children. But first we discuss theories about the origin of individual differences—the question of nature versus nurture.

Where Do Individual Differences Come From?

One of the most enduring debates in psychology is the degree to which development is the product of biology (nature) or environment (nurture). The question is often framed as whether nature or nurture is more influential in determining who we become as individuals. Although we know that physical characteristics are inherited, the genetic markers are less clear when it comes to an individual's behavior, intelligence, and personality. Consider the twins in Lindsay Creighton's classroom at the beginning of this chapter. Is Alice more outgoing and Alex more cautious because these personality traits are not part of the genetic pattern they share? Or does this difference result because their parents encouraged the girls in different ways?

The Influence of Biology on Development

In the past, some psychologists (Jensen, 1980) proposed that people behave as they do because of inborn characteristics. This belief emphasizes the influence of **nature**, the hereditary or genetic contributions to human development. Whether we are male or female, have freckles, have black hair, or have a certain type of personality can be influenced by genetic factors.

nature The hereditary or genetic contributions to human development.

Nature also refers to the biological and neurological drivers of development. For example, physical growth and advances in motor skills for most humans develop in a predictable sequence. Newborn reflexes soon give rise to voluntary movements and the development of abilities such as rolling over, crawling, walking, and running. Similarly, language development has a biological component. The fact that most infants, regardless of culture, begin to coo and babble at approximately the same ages provides strong evidence that nature indeed affects development.

Whereas some aspects of nature influence a similar course of development for most children, genetics also affects individual differences. For example, most children take their first