

## Before You Read

Read these questions. Discuss your answers in a small group.

1. Have you ever known anyone who was very, very smart? What could they do or what did they know that made them different from other people their age?
2. What can a family do to help or encourage a baby's mental development? Physical development? Emotional development?
3. Schools often want to know how intelligent children are. How do schools usually measure intelligence? What kinds of tools or tests do they use? What skills or abilities do they measure?

# Child Prodigies

It seemed **normal** when Nguyen Ngoc Truong Son wanted to play chess with his parents. However, it was unusual when he revealed that he already knew how to play—  
 5 before anyone taught him. Apparently the two-year-old had learned all of the rules by watching his parents. After only one month of playing with them, he was winning all of the games. By age four, he was competing in  
 10 national tournaments. By age 12, he was Vietnam's youngest champion.

Another two-year-old child, Jay Greenberg, likewise surprised his parents by drawing pictures of musical instruments that he had never  
 15 seen. They soon discovered that Jay "heard music in his head." He began to compose music at age three. By age ten, he was attending the well-known Juilliard Conservatory in New York, composing full symphonies. Jay was noted not  
 20 only for the quality of his musical work, but also the speed at which he was able to produce it.



That is, while talented professional composers **normally** write five or six symphonies in a lifetime, Jay wrote five by the age of 12.

25 A third young child, Abigail Sin, was first introduced to piano lessons at age five and had what her tutor called an "unstoppable urge to master the keyboard." She became Singapore's most celebrated pianist by age ten.

30 Child prodigies such as these are a mystery to **experts** and non-experts alike. On the one hand, they attract praise and attention from everyone they meet; on the other hand, they attract criticism, and they find it difficult to fit in  
 35 with the rest of the world.

Child prodigies are highly **intelligent**, but this is not the only **factor** that sets them apart. They are considered prodigies because of their exceptional ability in one domain, or area.

40 **Experts** define *child prodigy* as “a young child who displays mastery of a field that is usually undertaken by adults.” Child prodigies usually have abilities in structured areas such as language, math, drawing, chess, and music. They  
45 are not as likely to appear in less structured domains such as medicine, law, or creative writing, areas that require experience.

Child prodigies can **focus** their attention for long periods of time, **concentrating** on tasks that  
50 would bore other children of the same age. Abigail Sin practiced piano at least 25 hours a week. Similarly, two-year-old Nguyen Ngoc Truong Son had the **concentration** to play chess for hours at a time. The distinction of “prodigy” thus goes beyond  
55 mere **intelligence**. For explanations, **experts** look in two directions: *nature*, the child’s unique biology, and *nurture*, the child’s **environment**.

When researchers look to *nature* to explain child prodigies, they study innate, or inborn,  
60 qualities. For example, they look at whether the brain structure of a prodigy is different from that of a child with average **intelligence**. **Technology** is a great help in answering this question. For instance, scientists **utilize** imaging  
65 **technology** to see the amount of activity in different parts of the brain. These brain scans **reveal** that the frontal lobe of a prodigy’s brain is very active, unlike children with average **intelligence** doing the same tasks. Their frontal  
70 lobes are virtually inactive. Science has proven that the frontal lobe of the brain controls many aspects of thought and **concentration**. This may explain how prodigies can **focus** on a task, solve complex problems, and learn quickly.

75 When researchers look to *nurture* to explain child prodigies, they **focus** on the child’s **environment** instead of the child’s biology. The most important **factor** on the *nurture* side is the parents. Raising a child prodigy is extremely  
80 **challenging**. It requires **considerable** patience, creativity, and resourcefulness.

Some parents are delighted by the extraordinary abilities of their children. They make use of all the **resources** they have or can find to

85 support them. For example, Jay Greenberg’s parents bought their two-year-old son a cello when he requested it and arranged for music lessons.

Other parents are not so supportive of their child prodigy. On the contrary, some parents  
90 even see their offspring’s gifts as a way to draw attention to themselves and their own interests. Boris Sidis, for example, was a well-known scientist with strong opinions about making the most of one’s **intelligence** and about raising  
95 children. When his son Billy was born, Boris saw the child as an opportunity to test his theories.

From Billy’s birth, it was clear that he was an exceptional child. His parents **utilized** every opportunity to teach him language, math,  
100 science, and logic. Boris was very poor, but he used his limited **resources** to buy or acquire toys and books for the young genius. Billy Sidis spoke five languages at age five. He passed entry exams for MIT and Harvard Medical  
105 School at age nine and was admitted to Harvard at age 11. He was considered a genius in mathematics, physics, and languages.

Boris claimed that his methods of child-rearing were responsible for his son’s abilities  
110 and took his story to the press. The press, in turn, **focused** more on the young Harvard student’s odd personal life than on his accomplishments. It was soon clear that Billy was unprepared to relate to other people, function successfully in the real  
115 world, or manage the **challenges** of being different. After college, he lived an isolated life. Despite his **intelligence**, he died unemployed and in poverty.

When people are unusual, they attract attention. In the case of child prodigies, the  
120 attention they receive is both positive and negative. It is positive because most people admire **intelligence**. It is negative because prodigies are very different from other people. They are a **challenge** for teachers, who expect seven-year-olds to prefer Batman to Beethoven. They are a  
125 **challenge** to parents, who want to help them but often lack the **resources** or find their needs and desires difficult to understand and meet. They present a **challenge** to scientists, who want  
130 to study them without further isolating them from **normal** society. And they **challenge** the world because they **reveal** the tendency that people have to reject those who are different from the norm. ■