In reviewing the research, Stephen Ceci distills 12 surprising facts about intelligence. They include the following:

1. IQ is associated with some simple abilities. No one with measurable IQ has difficulty deciding which of two lines is longer or whether two pairs of letters are identical. However, in order to perform these simple tasks, a person with an IQ below 70 may need up to five times longer than an individual with a higher IQ. The nervous systems of those with low IQs are simply less efficient.

2. School attendance correlates with IQ. Staying in school can elevate IQ or, more accurately, keep it from slipping. Evidence for this dates back to the turn of the twentieth century when the London Board of Education found that the IQs of children in the same family decreased from the youngest to the oldest. The older children progressively missed more school. Toward the end of the Vietnam War, a lottery determined draft priority. Those men born on July 9, 1951, were picked first so they tended to stay in school longer in order to avoid the draft. Those men born July 7 were last in the lottery and thus had no incentive to stay in school. Men born on July 9 had higher IQs and also earned 7 percent more money. Summer vacations also seem to affect IQ. With each passing month, children’s end-of- year scores decline.

3. IQ is not influenced by birth order. The idea that birth order influences personality and intelligence has not stood up under recent scrutiny. Moreover, the claim that large families make low-IQ children may be unfounded because researchers have found that low-IQ parents make large families. Smart people tend to have small families, but it is not small families per se that make people smart.

4. IQ is related to breast-feeding. Even when researchers control for factors such as the sense of closeness mother and child experience through nursing, breast-fed children appear to have an IQ of 3 to 8 points higher by age 3.

5. IQ varies by birth date. State policies mandate the age of students entering school as well the age they may leave, typically 16 or 17. Those born in the final three months of the year are more likely to enter school a year later; thus, when they leave school, they have been attending one year less. For each year of school completed, there is an IQ gain of approximately 3.5 points. Unsurprisingly, as a group, those born later in the year show a lower IQ score.

6. IQ evens out with age. Imagine, suggests Ceci, two biological siblings adopted by two different middle class families, at age 5 and again in early adult- hood. Are their IQs more alike when younger and living in the homes of their adoptive parents or when they are older and living on their own? Contrary to expectation, as the siblings go out on their own, their IQ scores become more similar. The probable reason is that once they are away from the dictates of their adoptive parents, they are free to let their genotypes express themselves. Because they share about 50 percent of their genes, they will become more alike because they are likely to seek similar sorts of environments.

7. Intelligence is plural, not singular. Regardless of their views of so-called general intelligence, researchers agree that there are statistically independent mental abilities such as spatial, verbal, analytical, and practical intelligence. Howard Gardner is, of course, a primary proponent of multiple intelligences theory.

8. IQ is correlated with head size. Modern neuroimaging techniques demonstrate that cranial volume is correlated with IQ. Evidence also comes from studies of the helmet sizes of members of the Armed Forces whose IQs were measured during basic training. Correlations are quite small.

9. Intelligence scores are predictive of real-world out- comes. Even among those with comparable levels of schooling, the greater a person’s intellectual ability, the higher the person’s weekly earnings. Those with the lowest levels of intellectual ability earn only two-thirds the amount workers at the highest level earn.

10. Intelligence depends on context. In visiting race- tracks, researchers found that some men were excellent handicappers while others were not. A complex mental algorithm that was used to convert racing data from the racing programs sold at the track distinguished experts from nonexperts. However, the use of the algorithm was unrelated to the men’s IQ scores. Some experts were dockworkers with IQs in the 80s, but they reasoned far more complexly at the track than all nonexperts, even those with IQs above 120. At the same time, the experts performed very poorly at reasoning outside the track.

11. IQ is going up. IQ has risen about 20 points with every generation, an increase called the "Flynn effect," after New Zealand political scientist James Flynn. The rise in IQ has been attributed to better nutrition, more schooling, and better-educated parents.

12. IQ may be influenced by the school cafeteria menu. In one large study, 1 million students enrolled in the New York City school system were examined before and after preservatives, dyes, colorings, and artificial flavors were removed from lunch offerings. The investigators found a 14 percent improvement in IQ after the removal. Improvement was greatest for the weakest students.