Teenagers thrive on the spur of the moment. Whether it's jumping into the latest fad, rushing into a decision, or acting before thinking something through, teens are known for taking "risks." Science now provides answers on how the teen brain is particularly "wired" to do so. 

First, a bit on how the brain works. The brain has a relay system in which different cells, called neurons, talk with each other by way of electrochemical impulses and chemical messengers, called neurotransmitters. Information flows through this system across small gaps called synapses. The signal originates in the cell body, travels down the axon, crosses the synapse to affect the dendrites on the neighboring cell. The ultimate outcome of this signaling system is a feeling or a thought or a behavior.

Research shows that one's brain reaches its full size between ages twelve and fourteen (depending on whether you are a girl or a boy). However, it also shows that a teen's brain development is not complete. Parts of the brain continue to mature through a person's early twenties. One part that matures late is the prefrontal cortex, located directly behind your forehead. It is important as a control center for thinking ahead and sizing up situations. Mature brains are more likely to take such a control in teen decision making.

Meanwhile, a part of the brain that matures earlier is the limbic system, which plays a role in emotional responses. Since this system matures earlier, it is more likely to take control in teen decision making. That may lead to impulsive decisions in emotionally charged situations. Those choices often have to do with feelings the mature brain associated with logic. The result? Teens are more likely than adults to make unconsidered emotional choices—rather than carefully considered logical choices.

Learning how your brain works can help explain why you sometimes behave the way you do. With this knowledge, you can be better equipped to make smart choices.

**Did You Know?** While the brain reaches its full size in early adolescence, parts of the brain continue to mature through a person's early twenties.

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**Student Worksheet 1**

**DID YOU KNOW?** While the brain reaches its full size in early adolescence, parts of the brain continue to mature through a person's early twenties.

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**Pick Your Brain:** After reading the information above answer the following questions:

1. Brain cells, called_, talk with each other through electrochemical impulses and chemical messengers, called_

2. The cortex, located directly behind your forehead, is an important center for thinking ahead and sizing up situations.

3. One's brain reaches its full size between ages_.

4. Parts of the brain continue to mature through a person's_.

5. The brain's system plays a role in_.

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**The Science of Teen Decision Making**

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