**Anticipation guide**

**Facts about the Teen Brain: True or False?**

**Read through the statements below. Highlight the ones you believe are true.**

Teens don't "see" barriers and limitations the way older humans do. Bringing a fresh perspective to old problems and challenging supposed limits is the essence of the teenage mind.

Common media stereotypes are wrong; most kids are not depressed, insecure, anxious and having problems throughout their teenage years.

The human brain nearly doubled in size about 3 million years ago. Another 50% was added some 300,000 years ago, bringing it to today's 1200-1400 ml size. Teenagers were the evolutionary solution to making this new, big brain work to its full potential.

Current science indicates that our brains take 25 years to mature.

The most recent addition to our brains is the **prefrontal cortex**, and this is one of the areas that kicks into overdrive in the teen years.

The **prefrontal cortex** allows us to "time travel" as we consider the past, process the present and contemplate the "what ifs" of the future. It helps us plan, exercise judgment, control our impulses, organize and strategize.

Teens are emotional because the older, impulsive **limbic** portion of the brain also increases its activity at this time, especially in the early teen years.

Many geniuses had great success in their later years due to inspiration or ideas formulated during their teen years.

Morbidity and mortality go up 300% for teenagers. The #1 cause of death is motor vehicle accidents. The entire top 10 seem related to errors in judgment and making poor decisions.

Our brain's reward system is largely based on the chemical called dopamine. Factors shown to elevate dopamine levels include loud music, the presence of friends and surviving dangerous situations (especially *with* friends).

Teens in love show an increase in dopamine in one small part of the brain called the nucleus accumbens, the same area affected in the brains of those addicted to any number of things. Teen love is, in fact, a profound addiction that steals the reward system of the brain and rejection can be likened to going through withdrawal.

The best cure for a teen that has lost a love is to fall in love again. Anti-depressant, seratonin increasing medications make this less likely to happen as they decrease the production of dopamine.

Today marks the first time in history when children are an authority on something really important – the digital revolution. With social media, human social evolution is unfolding before our eyes and under the leadership of teenagers.

Despite indications that friends rule their lives, experience shows that teens still care very much about what their parents think and have a strong desire for their approval.

**Interactive Model of the Human Brain**

**VISIT THE FOLLOWING WEBSITE:** <http://www.cbc.ca/news2/interactives/brain/>

The “Prefrontal Cortex” and the “Limbic System.” These are important parts of the teenage brain that are discussed in the documentary “Surviving the Teenage Brain.”

Locate each part of the brain on the Interactive model, and read the description for each. Be prepared to answer questions about them during class discussion.You may want to leave this model open in your internet browser while we watch the documentary so that you can refer to it to enhance your learning.