Name: _____

Activity 8
In Simple Terms

Addiction occurs when the brain's chemistry is altered by a substance—whether it's alcohol, tobacco or illegal drugs like marijuana. Nora Volkow, Director of the National Institute on Drug Abuse, has stated, "Particularly worrisome is the possibility that the more potent THC might be more effective at triggering the changes in the brain that can lead to addiction. More research is needed to establish this link between higher THC potency and higher addiction risk."

Each of the facts below describes the dangers of marijuana use and the brain. Imagine that you must explain these facts to your eight-year-old cousin. Rewrite each statement below using easy-to-understand language. You may want to use a dictionary to define unfamiliar words.

Source: National Institute on Drug Abuse, National Institutes of Health.

1. The brain's frontal lobes are responsible for planning, problem-solving and decision-making. These lobes are still not fully developed in teenagers, making teens more likely to indulge in risky behavior such as using marijuana without considering the consequences.

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2. Using drugs such as marijuana causes a release of the neurotransmitter dopamine in the reward pathway of the brain, leading to a very pleasurable feeling.

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3. In the brain, delta-9-tetrahydrocannabinol (THC) connects to specific sites on nerve cells called "cannabinoid receptors" and influences the way those cells function.

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4. Certain drugs reduce the number of dopamine receptors in the brain, making it more difficult to feel pleasure from normally pleasurable activities without the drug.

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5. Chronic drug use alters not only the reward pathway, but also the reward pathway's ability to respond to drugs.

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6. Certain "triggers," or things associated with a drug, make a person dependent upon drugs experience intense cravings by causing a release of dopamine in the brain.

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