



Marijuana (Cannabis/THC) Information for Middle School Students

Marijuana (Cannabis/THC): Information for Middle School Students was created by the Chippewa Valley Coalition for Youth and Families, a school-community coalition in mid-Macomb County, Michigan. It provides research-based information from national sources, including the Centers for Disease Control and Prevention (CDC) and others. This lesson takes approximately 1 hour to present, depending on response to activities and discussion.

This lesson has been reviewed by Sara Orris, Health Consultant, Macomb ISD, and can be used to complement the Michigan Model for Health. National Health Education Standards were considered during the creation of this lesson and can be found at: <https://shapeamerica.org/standards/health/new-he-standards/>

A Message to Teachers and Others Using this lesson:

Many children and adolescents today have significant misperceptions and much misinformation about marijuana.

National drug survey data, Monitoring the Future 2025, shows a positive trend across the grade levels, including middle school, in the perception that marijuana use can be harmful.

The intention of this lesson, with embedded video, is to provide accurate, research-based

information to educate youth about the real dangers of marijuana use.

Please note that the term "marijuana" is used throughout the lesson because it is still used in the Michigan Model for Health. The terms "cannabis/THC" are also used for increased clarity.

This lesson is intended to be used as an instructional tool for students in middle school health or other classes and/or for educational presentations to youth groups in other settings, e.g., churches, recreational centers, etc.

When some young people are provided with information about the dangers of marijuana use, they may respond with adamant disbelief, given their lack of fact-based information. Expressions of disbelief can lead to stimulating and helpful discussions.

We have also found it constructive to take the following positions, in presenting this information:

- I am not trying to convince you of anything. I am providing you with research-based information to consider.
- You might do some research yourself to see what you discover, however, there is much misinformation about marijuana on the internet. I can give you some reliable and research-based resources to review.
- Be careful to separate opinion from research-based facts.

Information to assist in using this lesson:

Many of the slides have accompanying information.

Some slides may have TEACHER COMMENTS, statements found useful during the piloting of the curriculum to enhance student learning. Some Teacher Comments are purposefully informal to be “student friendly”.

Some slides include TEACHER NOTES that provide supplemental information for teachers.

In addition, some slides provide suggested Group Activities to promote discussion.

This presentation was updated during August 2026.

What is Marijuana?

Also called *cannabis*, *THC*, and *dabbing*

A mixture of the dried and shredded leaves, stems, seeds, and flowers of the cannabis plant

Has a chemical in it called
delta-9-tetrahydrocannabinol (THC),
the main addictive ingredient

Centers for Disease Control and Prevention (CDC)

A Reminder – some of the following slides have
TEACHER COMMENTS, statements that may be used in class to enhance the lesson, and/or
TEACHER NOTES, supplemental information for teachers

Teacher Notes:

What is marijuana?

Marijuana refers to the dried leaves, flowers, stems, and seeds from the Cannabis plant. The plant contains the mind-altering chemical THC and other similar compounds. Extracts can also be made from the cannabis plant.

Marijuana is often vaped and sometimes mixed into foods, “edible marijuana”, or drinks.

<https://www.cdc.gov/cannabis/about/index.html>

Not All Plants Are Safe!

Not all plants are safe to smoke or eat. (Tobacco is a plant.)

There are dozens of household plants that can poison people and pets (like Aloe Vera and Daffodils).

Heroin, cocaine, cyanide and strychnine are all dangerous substances made from plants.



CDC

Some students might argue that marijuana is safe because it is a plant and is “natural”.

Teacher Comments:

Consider that poison ivy is a plant and even touching it has negative effects.

Some of you who have pets at home know that there are dozens of house plants that can harm your pet.

Centers for Disease Control and Prevention

<http://www.cdc.gov/niosh/topics/plants/>

<https://www.cdc.gov/>

Marijuana (Cannabis/THC)

Some states, including Michigan, now allow marijuana (THC/Cannabis) to be used by people 21 and older.

It is NOT LEGAL

to use marijuana under the age of 21.

to use marijuana in public, including near or at a school.

to drive after using marijuana.

Michigan Legalization of Marijuana Law

Teacher Comments:

Even if laws have changed to allow adult marijuana use, scientific evidence shows that using the drug poses real, and potentially serious, health risks for teens.

Michigan Legalization of Marijuana Law

[https://www.legislature.mi.gov/\(S\(1bdtv43vras3vz5ifnhdd52n\)\)/mileg.aspx?page=getObject&objectName=mcl-Initiated-Law-1-of-2018](https://www.legislature.mi.gov/(S(1bdtv43vras3vz5ifnhdd52n))/mileg.aspx?page=getObject&objectName=mcl-Initiated-Law-1-of-2018)

Scholastic, NIDA, NIH, Department of HHS. Real News About Drugs and Your Body, 2023

https://nida.nih.gov/sites/default/files/NIDA_YR20_INS1_StudentMagazine.pdf

Teacher Note:

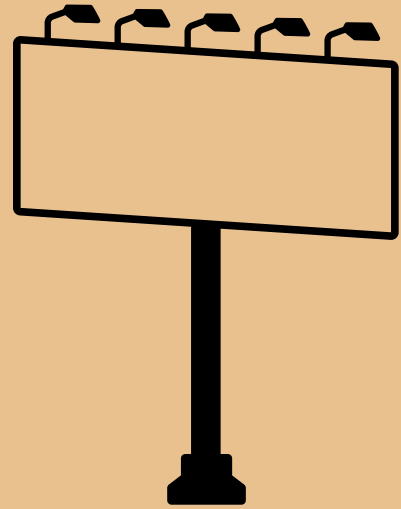
Michigan legalized adult use of marijuana in 2018.

Marijuana (Cannabis/THC)

You may have seen billboards advertising marijuana along main roadways in the state.

This has led some to believe that marijuana use is safe.

Use of marijuana is unsafe, especially for teens and young adults. It is important to learn the FACTS and educate your friends.



SCHOLASTIC, NIDA, NIH, U.S. DEPARTMENT OF HHS

Scholastic, NIDA, NIH, Department of HHS. Real News About Drugs and Your Body, 2023
https://nida.nih.gov/sites/default/files/NIDA_YR20_INS1_StudentMagazine.pdf

MARIJUANA (Cannabis/THC) HAS BECOME MUCH STRONGER OVER THE YEARS, CAUSING AN INCREASE IN...



Cannabis Use Disorder
(Addiction)

School Failure

Emergency Room Visits

Poison Control Calls

New Scientist & Scholastic, NIDA

Teacher Comments:

Cannabis Use Disorder (Addiction) is a strong urge to keep taking marijuana, even when it is causing harm (problems in relationships, with academics, legal issues, emotional problems, etc.).

Further explanation of Cannabis Use Disorder (Addiction) is provided later in this lesson.

In some cases, marijuana has been linked to severe symptoms that may require emergency care, such as vomiting, anxiety, shaking, and even seizures and psychosis. In some parts of the country, the number of marijuana-related hospital visits and calls to poison control have been dramatically increasing in recent years.

Scholastic, NIDA, NIH, Department of HHS. Real News About Drugs and Your Body, 2023
https://nida.nih.gov/sites/default/files/NIDA_YR20_INS1_StudentMagazine.pdf

Teacher Notes:

THC, the addictive element in marijuana, has increased significantly over time.

The data shows a clear trend: over the last 50 years, the average amount of tetrahydrocannabinol (THC)

in cannabis – the plant's main psychoactive component – has increased more than tenfold.

Cannabis Use Disorder has come to replace the term addiction when talking about the inability to stop using cannabis even after it causes problems for the user.

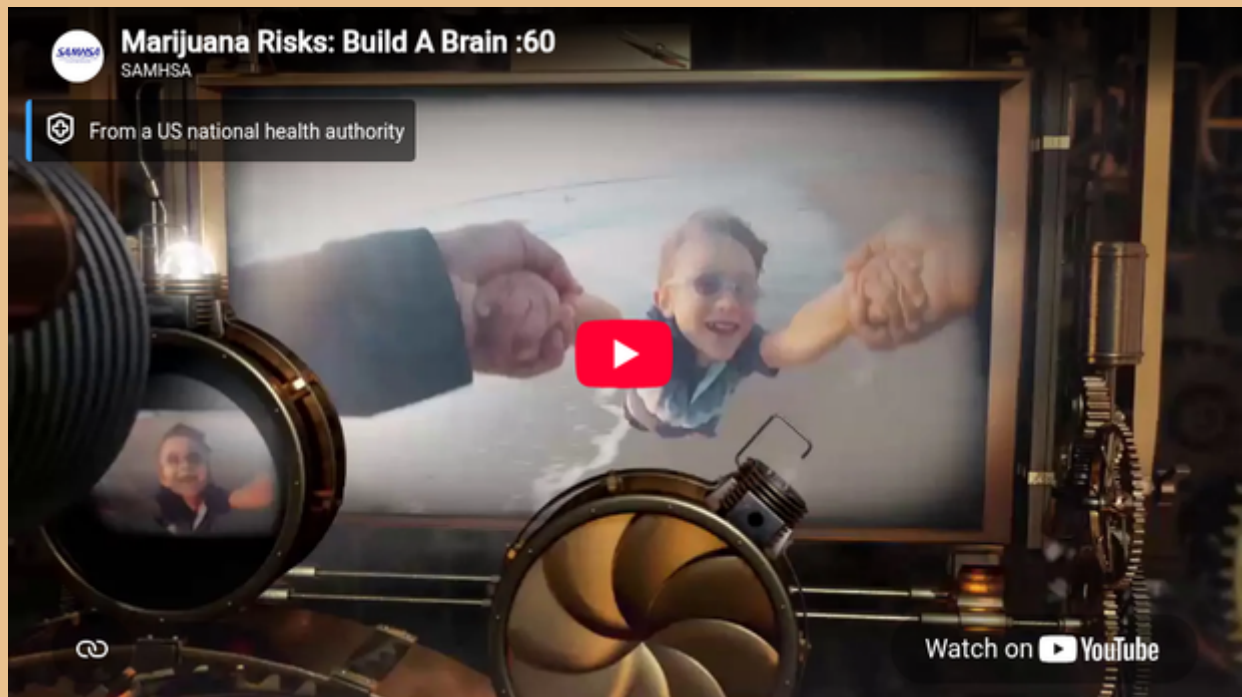
New Scientist. Is cannabis today really much more potent than 50 years ago? 11 October 2023

<https://www.newscientist.com/article/2396976-is-cannabis-today-really-much-more-potent-than-50-years-ago/#:~:text=The%20data%20shows%20a%20clear,has%20increased%20more%20than%20tenfold.>

<https://www.cdc.gov/>

<https://nida.nih.gov/publications/drugfacts/cannabis-marijuana-concentrates>

Video: *Build a Brain* (1 min.)



Teacher Comments:

Now we will watch a video that provides information about brain development and how marijuana use can interfere.

<https://www.youtube.com/watch?v=HLYlDpJxxq>

How is Marijuana (Cannabis/THC) Used?

It is:

**smoked,
vaped,
eaten, or
put in a drink.**



CDC

Centers for Disease Control and Prevention
<https://www.cdc.gov/cannabis/about/index.html>

Is Vaping Marijuana (Cannabis/THC) Safe?

NO!



When marijuana (THC) is vaped, harmful chemicals can be inhaled.

The liquid in vaping devices can also contain additional dangerous drugs.

Scientists continue to study the risks of vaping marijuana and nicotine.

Scholastic, NIDA, NIH, Department of HHS, CDC

Scholastic, NIDA, NIH, Department of HHS. Real News About Drugs and Your Body, 2023
https://nida.nih.gov/sites/default/files/NIDA_YR20_INS1_StudentMagazine.pdf

Centers for Disease Control and Prevention
<https://www.cdc.gov/cannabis/health-effects/brain-health.html>

Are Marijuana (Cannabis/THC) Edibles Safe?



Marijuana is sometimes mixed into food (brownies, cookies, and candy, etc.), called *edibles*, or into drinks (soda and tea, etc.).

The potency (strength) of edible marijuana is generally very high.

Many people who use edibles don't know their strength and long-lasting effects.

Some people that use marijuana, including edibles, need to be treated in hospital emergency rooms.

Scholastic, NIDA, NIH, Department of HHS, CDC

Scholastic, NIDA, NIH, Department of HHS. Real News About Drugs and Your Body, 2023
https://nida.nih.gov/sites/default/files/NIDA_YR20_INS1_StudentMagazine.pdf

Centers for Disease Control and Prevention
<https://www.cdc.gov/cannabis/health-effects/poisoning.html>

Teacher Notes:

The amount of THC in marijuana has been increasing steadily over the past few decades. When people begin to use marijuana, they have a greater chance of harmful reactions to high THC levels.

The availability of edibles increases the chance of harmful reactions. Edibles take longer to digest and produce a high.

Therefore, people may consume more to feel the effects faster, leading to dangerous results. Higher THC levels can result in a greater risk for Cannabis Use Disorder.

<https://www.cdc.gov/cannabis/health-effects/cannabis-use-disorder.html>

ACTIVITY

If you have 10 students, how many of them do you think have ever used marijuana?



Group Activity (preparing students for the next slide):

Ask students – “If you have 10 students, how many of them do you think have ever used marijuana?”

Write the estimates on the board.

Go to the next slide.

National Monitoring the Future Survey (2025) University of Michigan

8th Graders	10th Graders
Almost 9 out of 10 had NEVER USED Marijuana	Almost 8 out of 10 had NEVER USED Marijuana

Teacher Comments:

Many people your age believe that most teens use marijuana, even though research shows that isn't true.

Almost 9 out of 10 eighth grade students that took the national Monitoring the Future Survey in 2025 reported that they HAD NEVER used marijuana and almost 8 out of 10 tenth grade students that took the survey said they HAD NEVER used marijuana.

How does this compare to your guess?

MOST MIDDLE AND HIGH SCHOOL STUDENTS DO NOT USE MARIJUANA.

Teacher Notes:

The Monitoring the Future Survey is funded by the National Institute on Drug Abuse (NIDA), part of the National Institutes of Health (NIH). The survey is conducted by the University of Michigan.

To view full survey data, visit <https://monitoringthefuture.org/>

What Can Happen When Someone Uses Marijuana (Cannabis/THC)?

Potential Short-Term Problems

Marijuana use can interfere with:

Feelings/Mood (create anxiety, paranoia, panic)

Coordination

Memory

Thinking (create psychosis/distortion of reality)

Decision-making

Concentration & Learning

Heart Rate

Scholastic, NIDA, NIH, Department of HHS

Teacher Comments:

Every time a drug, including marijuana, is used there are risks. No one can control the effects marijuana will have.

Effects for the same person using marijuana may be different over time.

Some negative effects, including concentration/learning problems, and paranoia (unreasonable fear)/panic can last for days after use.

Scholastic, NIDA, NIH, Department of HHS. Real News About Drugs and Your Body, 2023
https://nida.nih.gov/sites/default/files/NIDA_YR20_INS1_StudentMagazine.pdf

What Can Happen When Someone Uses Marijuana (Cannabis/THC)?

Potential Long-Term Problems

Permanent brain changes
Risk of Cannabis Use Disorder (Addiction)
School failure & drop out
Depression & suicidal thoughts
Heart disease & stroke
Eating & sleeping problems
Breathing problems
Frequent & severe vomiting



Scholastic, NIDA, NIH,
Department of HHS
CDC, UPI, APA

Teacher Comments:

We will learn more about the potential long term problems of marijuana use in the information that follows.

Marijuana use in teenage years may hinder brain development...

https://www.upi.com/Health_News/2021/06/16/marijuana-teens-brain-development-study/4721623852022/

Scholastic, NIDA, NIH, Department of HHS. Real News About Drugs and Your Body, 2023

https://nida.nih.gov/sites/default/files/NIDA_YR20_INS1_StudentMagazine.pdf

Centers for Disease Control and Prevention

<https://www.cdc.gov/cannabis/health-effects/brain-health.html>

A Cannabis Use Disorder (Addiction) is...

**a strong urge to keep using
marijuana even when it is causing
harm (problems in relationships,
with academics, legal issues,
emotional problems, etc.).**

CDC

Teacher Comments:

Cannabis Use Disorder is the diagnosis given by doctors to people who are addicted to marijuana.

American Psychiatric Association. (2022). Diagnostic and statistical manual of mental disorders (5th ed., text rev.)

<https://www.cdc.gov/cannabis/health-effects/cannabis-use-disorder.html>

It Can Be Very Difficult to Stop Using Marijuana (Cannabis/THC).



When people try to stop using marijuana they often:

Are irritable & angry
Are stressed & nervous
Have problems eating & sleeping
Have urges to keep using the drug



American Psychiatric Association

Teacher Comments:

When someone tried to stop using marijuana, they often experience difficult physical and emotional problems.

American Psychiatric Association (2022). Diagnostic and statistical manual of mental disorders (5th ed., text rev.)

<https://doi.org/10.1176/appi.books.9780890425787>

Marijuana (Cannabis/THC) IS Addictive!

**The EARLIER marijuana use begins,
the GREATER the risk of addiction.**



**1 in 6 teens that use marijuana
become addicted.**

SAMHSA

Teacher Notes:

It is estimated that 10% (about 1 in 10) of adults who use marijuana will become dependent on it and develop a Cannabis Use Disorder.

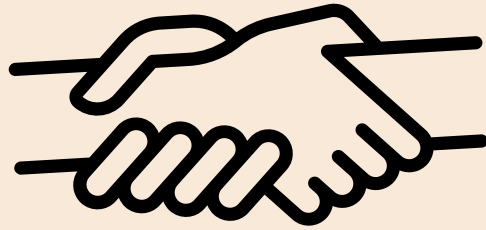
The number goes up to about 1 in 6 in those who start using in their teens.

Learn About Marijuana Risks, SAMHSA 2023

<https://www.samhsa.gov/marijuana>

**It Can Be Very Difficult to Stop Using
Marijuana (Cannabis/THC).**

**Don't start,
or get help
to quit!**



Teacher Comments:

Resources that can help someone quit using marijuana will be provided at the end of the lesson.

Video (2:03 min.)

Why Are Drugs So Hard to Quit?

Why Are Drugs So Hard to Quit?

Teacher Comments:

This brief video provides information about addiction.

After showing the video,

Ask:

What is the definition of addiction in the video?

Answer: Feeling a strong urge to keep taking a drug even when it is causing harm.

Ask:

When someone becomes addicted to marijuana or other drugs, what problems can they have?

Answers can include poor grades, problems with friends and family, legal problems, difficulty playing sports, etc.

<https://www.youtube.com/watch?v=h-PB9CcyE4w&list=PL7bRQfXX52x1hXxb6uV6F7jc-wdQS-dZS&index=6&t=3s>

ACTIVITY



Why Do Some Teens Try Marijuana (Cannabis/THC)?

Group Activity:

Ask:

Why Do Some Teens Try Marijuana?

Ask students the question more specifically: Why do you think some teens try marijuana after they have been given information about how risky marijuana use is?

Brainstorm and write their answers on the board.

Discuss their answers.

Why Do Some Teens Try Marijuana (Cannabis/THC)?

Pressure from friends

Boredom

Lack of confidence

Influence of media

Trying to “fit in”

Curiosity

To do something they are not supposed to do

To deal with feelings

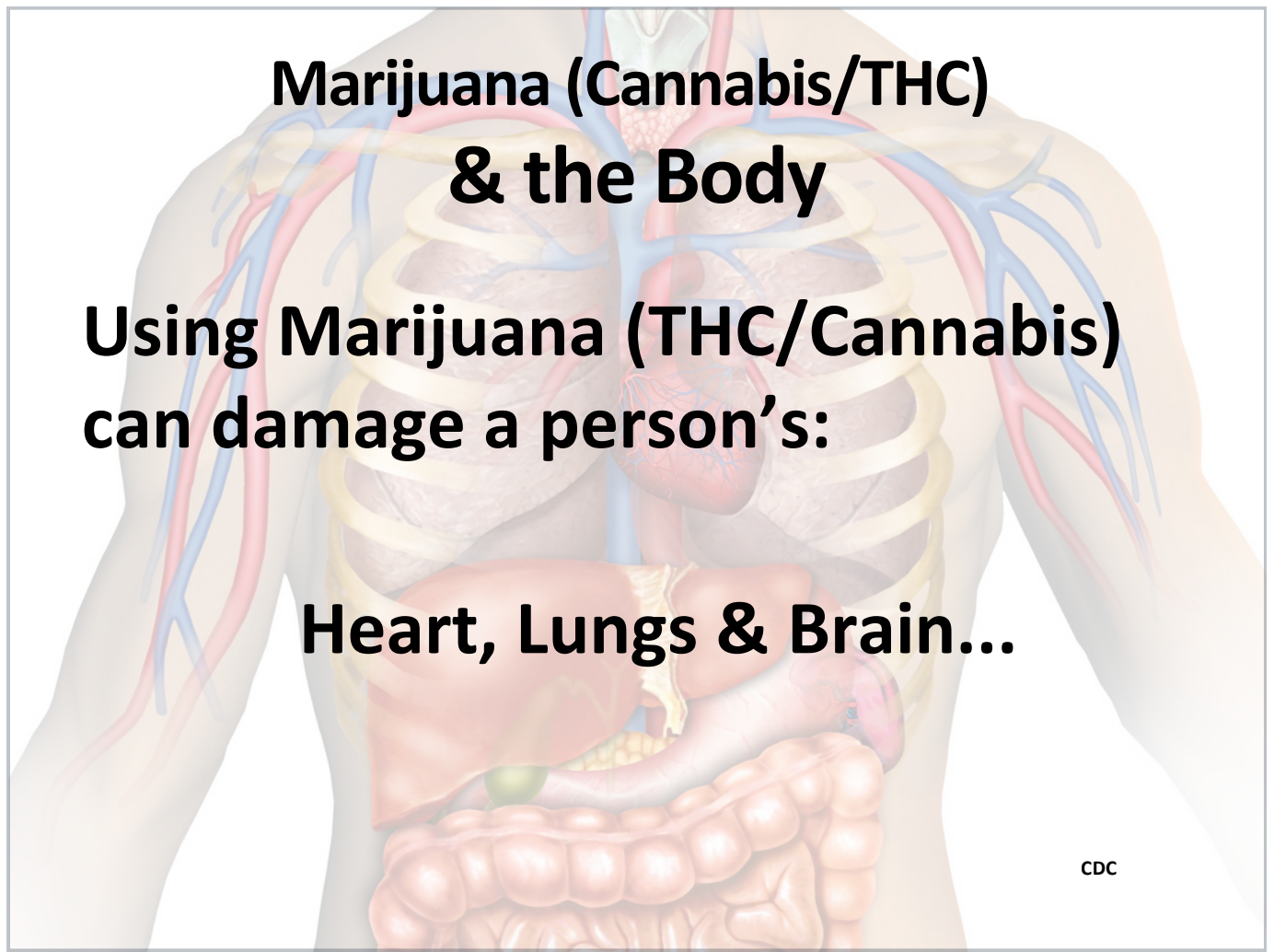
Believe it's safe

The Partnership to End Addiction

Compare this slide to the list the students created.

Discuss any reasons teens might try marijuana that haven't already been mentioned.

Why Teens Drink and Experiment with Drugs, April 2024 <https://drugfree.org>



Teacher Comments:

Marijuana use can, over time, damage parts of the body.

Centers for Disease Control and Prevention

<https://www.cdc.gov/cannabis/health-effects/index.html>

Marijuana (Cannabis/THC) & the Heart

Marijuana can make the heart beat faster and raise blood pressure immediately after using it.

Marijuana use can lead to increased risk of stroke and heart disease.



CDC

Teacher Notes:

Heart attack risk may be related to increased heart rate, as well as the effects of marijuana on heart rhythms, causing quick and irregular heart beats. This can be a frightening experience for the person using marijuana.

Centers for Disease Control and Prevention

<https://www.cdc.gov/cannabis/health-effects/heart-health.html>

Marijuana (Cannabis/THC) & the Lungs

**Research shows that
vaping marijuana can
cause lung damage.**

**Teens that vape
marijuana are more
likely to have
breathing problems.**

University of Michigan

<https://news.umich.edu/vaping-marijuana-associated-with-more-symptoms-of-lung-damage-than-vaping-or-smoking-nicotine/>

ACTIVITY

When does your brain stop developing?



Group Activity (preparing students for the next slide):

Ask:

When does your brain stop developing?

Write the estimates on the board.

Go to the next slide.

Marijuana (Cannabis/THC) & the Brain

Your brain is not fully developed until you are about 25 years or older.



Marijuana use can damage the developing brain, significantly affecting the ability to think, learn, remember, pay attention, and make healthy decisions.



CDC

<https://www.cdc.gov/cannabis/health-effects/brain-health.html>

Video (3:10 min.)

Teen Brain Development



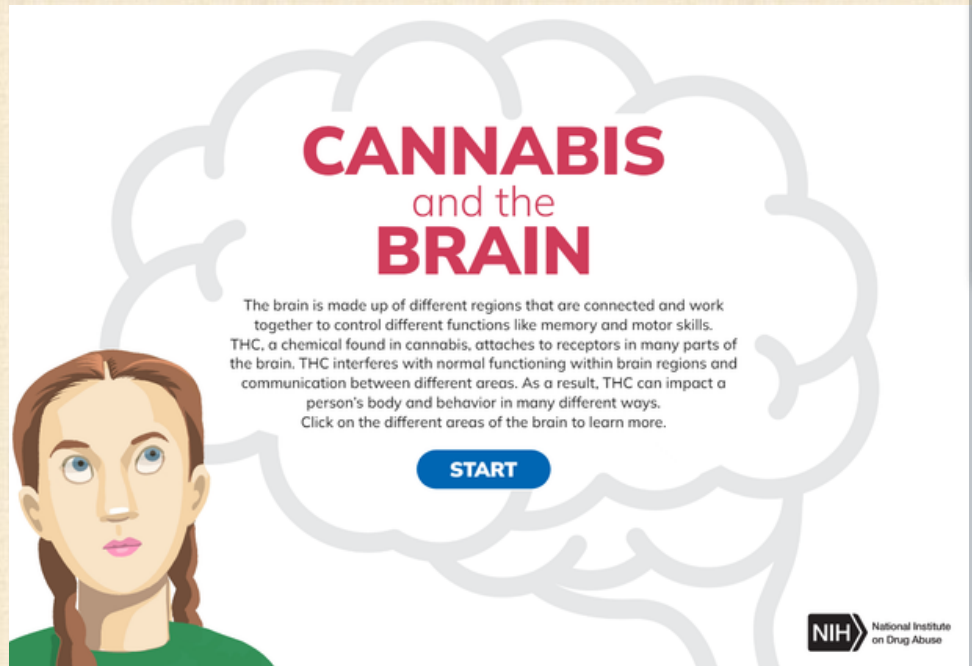
Teacher Notes:

This video explores the intriguing similarities between the processes of brain development and computer programming.

The analogy may help students understand why toxic environmental factors like drugs, bullying, or lack of sleep can have such a long-lasting impact on a teenager's life. It can be used to empower your students with information they need make better decisions.

<https://www.youtube.com/watch?v=EpfnDijz2d8>

Activity: CANNABIS (Marijuana/THC) and the BRAIN



Optional Classroom Activity:

Click on the photo or the link in the slide to access the activity about the effects of marijuana on the brain.

When each of the red dots turns blue, you know you have completed each section of the brain.

Activity link: <https://nida.nih.gov/themes/custom/solstice/interactive/cannabis/>

To simplify the presentation, the parts of the brain are summarized below.

Cerebrum- the area that controls the ability to think, plan, solve problems, and make decisions

Basal Ganglia – area involved in movement, thinking, and emotion.

Limbic System - area involved in memory and emotion processing.

Brain Stem – area involved in vital life functions.

Cerebellum – area involved in motor skills, such as balance and coordination, and plays an important role in the perception of time.

When the screen says GREAT JOB, return to this slide.

Marijuana (Cannabis/THC) & School

Marijuana's negative effects on thinking, learning, memory, and attention **can last for days and sometimes weeks**—especially if marijuana is used often.



Addiction 2022

Teacher Notes:

Someone who uses marijuana daily is likely to be functioning at a reduced intellectual level and experience problems learning.

Evidence on the acute and residual neurocognitive effects of cannabis use in adolescents and adults: a systematic meta-review of meta-analyses

Laura Dellazizzo, Stéphane Potvin, Sabrina Giguère, Alexandre Dumais

Addiction, Volume 117, Issue 7, July 2022 pp.1857-1870

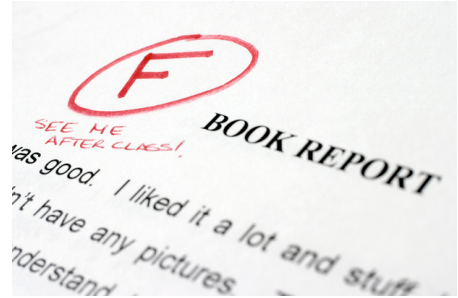
<https://onlinelibrary.wiley.com/doi/abs/10.1111/add.15764>

Marijuana (Cannabis/THC) & School

Because of the effects on the developing brain, marijuana (THC/cannabis) users:

Are more likely to get lower grades

Are more likely to drop out of school than non-users.



CDC

Centers for Disease Control and Prevention

<https://www.cdc.gov/cannabis/health-effects/cannabis-and-teens.html>

A top-down view of various sports equipment scattered on a plain white surface. The items include two tennis rackets (one blue and black, one red and black), several tennis balls (yellow-green, pink, light blue), a soccer ball, a basketball, a volleyball, a golf club, a baseball glove, a blue jacket, a blue rope, and some orange and yellow sticks. A small black bag with green accents is also visible.

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Create difficulty with thinking and problem solving,
Decrease motivation to perform and/or give maximum effort

Staying away from marijuana helps your team succeed.

<https://www.samhsa.gov/substance-use/learn/marijuana/risks>

SAMHSA: Know the Risks of Marijuana 2024

<https://www.samhsa.gov/marijuana>

Talking with your teen about marijuana: Keeping Your Kids Safe

<https://library.samhsa.gov/sites/default/files/PEP20-03-01-004-508C.pdf>

Marijuana (Cannabis/THC) & Emotions

Regular use of marijuana (THC/cannabis) significantly increases a teen's risk of **depression and anxiety**.

Marijuana (THC/cannabis) use can make depression, anxiety, and other emotional problems worse and has been linked to **suicidal thoughts and psychosis** (loss of touch with reality).



CDC

Teacher Comments:

Psychosis means that someone cannot tell the difference between what is real and what is not. It is a very serious mental health problem that can be brought on by marijuana use in some situations.

Those that use marijuana in their teens are more likely to develop psychosis.

Use of high potency marijuana/THC products can produce strong fears and loss of touch with reality (delusions/hallucinations/panic).

This can be frightening and dangerous.

Teacher Notes:

Cannabis use can cause disorientation and sometimes unpleasant thoughts or feelings of anxiety and paranoia. People who use cannabis are more likely to develop psychosis (not knowing what is real, hallucinations, and paranoia) and long-lasting mental disorders, including schizophrenia (a type of mental illness where people might hear or see things that are not really there).

Cannabis use is also associated with depression, social anxiety, and thoughts of suicide, suicide attempts, and suicide.

CDC <https://www.cdc.gov/cannabis/health-effects/mental-health.html>

Marijuana (Cannabis/THC) & Driving

Safe driving requires skills and full attention.

Marijuana use negatively affects skills needed to drive safely - alertness, concentration, coordination, and reaction time.

Marijuana use makes it is hard to judge distances and react to signals and sounds on the road.

It is NOT safe to ride with someone who's been using marijuana in any form.



CDC

<https://www.cdc.gov/cannabis/health-effects/driving.html> Feb 2024

Marijuana (Cannabis/THC) & Driving

Operating under the influence (OUI) laws are not just for alcohol. Driving under the influence of any drugs, including marijuana, is dangerous and illegal.

Marijuana use before driving has resulted in serious auto accidents across Michigan.

University of Michigan Injury Prevention Center, 2020

Teacher Comments:

After alcohol, marijuana is the substance most often associated with dangerous driving.

Centers for Disease Control

<https://www.cdc.gov/cannabis/health-effects/driving.html>

Impact of Recreational Cannabis Legalization in Michigan: A Baseline Report. University of Michigan. Ann Arbor, MI. May 2020.

https://thenmi.org/reports/2020_IPC_Cannabis_Report_Michigan.pdf

Marijuana (Cannabis/THC)

Let's Sum It Up!



Any time someone uses drugs, they risk serious and unpredictable **physical and emotional damage.**

Drug use, including use of marijuana, can have **significant negative effects** on **relationships, friendships, mental health, school, athletic performance, and someone's future.**

Teacher Notes:

This slide presents a summary of key issues related to teen marijuana use.

Marijuana (Cannabis/THC)

Let's Sum It Up!

It's important to find ways to manage feelings, deal with stress, and have fun **without using drugs.**

If you have concerns about yourself or a friend, talk to an adult you trust.



Teacher Notes:

This slide presents a summary of key issues related to teen marijuana use.

If you would like to provide your students with an informational sheet on managing difficult emotions, it can be accessed on the Kids Health website:

<https://kidshealth.org/en/teens/stressful-feelings.prt-en.html>

do not use marijuana.

For more research-based information:

www.cvcoalition.org

www.drugabuse.gov

www.teens.drugabuse.gov

www.cadca.org

www.nimh.nih.gov

www.niaaa.nih.gov

www.fda.gov



Teacher Comments:

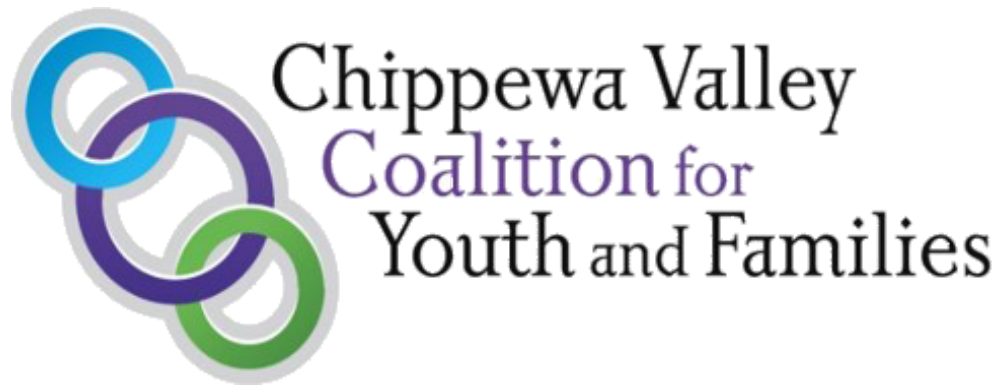
There is much misinformation about marijuana. To learn the facts, you can visit any of these websites.

Check out the games, blogs, and interactive quizzes for your age.

Optional Assignment:

Give your students 10 minutes to explore one of these resources and report back what they find.

Information Provided By:



www.cvcoalition.org

The Chippewa Valley Coalition for Youth and Families is a school-community coalition in mid-Macomb County, Michigan.

We provide research-based prevention lessons on marijuana use for middle school students and vaping. These are also available free of charge on our website cvcoalition.org.