



## Self-teach Workbook Unit 5: Alcohol & Drug Abuse

**TIME ASSIGNED:** 1-2 Hours

### Activity 1

#### **SUBSTANCE ABUSE**

Fill in the spaces (by choosing from the box below) to get a definition of Substance Abuse.

**Substance abuse** refers to the \_\_\_\_\_ or hazardous use of \_\_\_\_\_ substances, including alcohol and \_\_\_\_\_ drugs. Psychoactive substance use can lead to \_\_\_\_\_ syndrome – a cluster of \_\_\_\_\_, cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong \_\_\_\_\_ to take the drug, difficulties in \_\_\_\_\_ its use, persisting in its use despite harmful \_\_\_\_\_, a higher priority given to drug use than to other activities and \_\_\_\_\_, increased tolerance, and sometimes a physical withdrawal state.

<i>consequences</i>	<i>illicit</i>	<i>behavioural</i>	<i>controlling</i>	
<i>psychoactive</i>	<i>obligations</i>	<i>desire</i>	<i>dependence</i>	<i>harmful</i>

### Activity 2

#### **DRUGS AND BRAIN**

Using drugs changes the way the brain works. The brain is very important. It controls body functions such as breathing, walking, and thinking. Discover the different parts of your brain and the jobs they do. Then, learn how drugs can get in the way. After reading, complete the diagram activity below.

The largest part of your brain is the **cerebral cortex**. When it's functioning normally, this section takes care of thinking, seeing, hearing, and the sense of touch.

Next is the cerebellum. The **cerebellum** coordinates movements you do everyday, such as brushing teeth and riding a bike.

Just above the spinal cord, a small section of your brain called the **brain stem** controls basic functions, such as breathing, digesting food, and maintaining your heartbeat.

Then, there's the **limbic system**, also known as the emotional brain. This is where feelings like fear and passion are born.

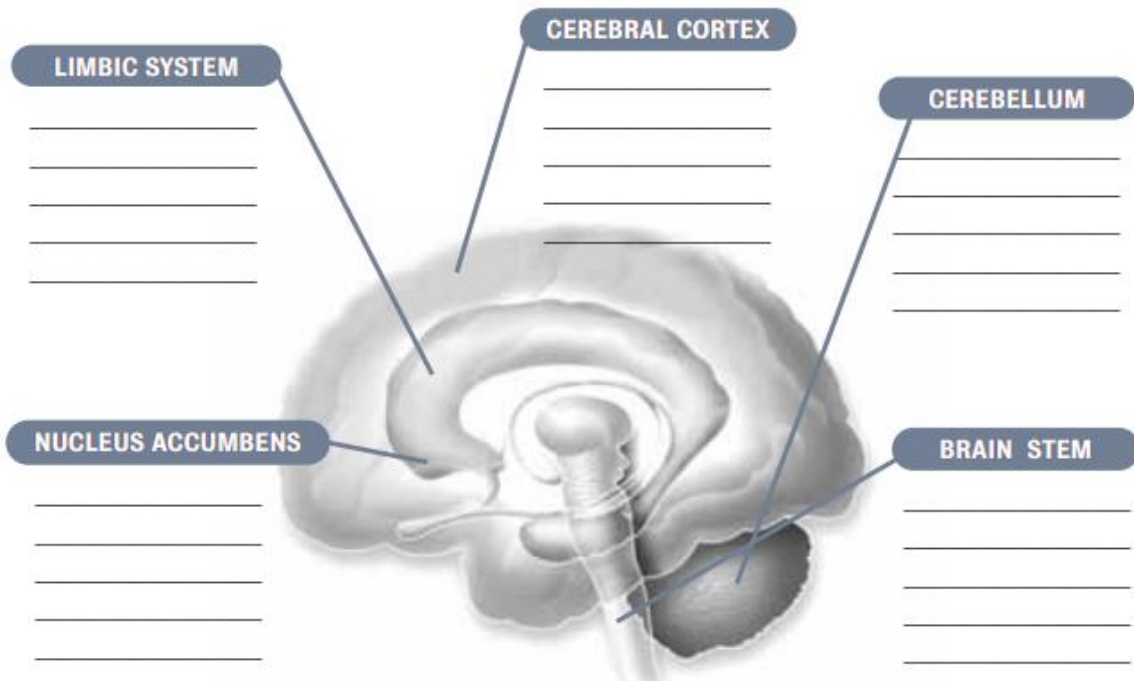
Scientists have identified a "reward pathway" in the brain that includes the **nucleus accumbens**.

When we do something that is key to survival, such as eating when we are hungry, the reward pathway is stimulated. Most addictive drugs also stimulate this reward pathway, often more than natural rewards, such as food.

**How do drugs affect your brain?** Once in the brain, drugs of abuse are similar in size and shape to brain chemicals called neurotransmitters. Brain cells release and absorb these natural chemicals in order to send and receive messages to and from each other. Drugs disrupt this delicate communication system, and can hurt your brain.

### **PARTS OF THE BRAIN: WHAT ARE THEY GOOD FOR?**

For each brain part, write one of the functions it performs. Plus, include one way you've used this part of your brain recently.



### **Activity 3**

#### **SUBSTANCE ABUSE CROSSWORD**

Complete the crosswords.

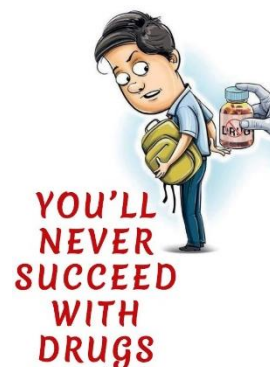
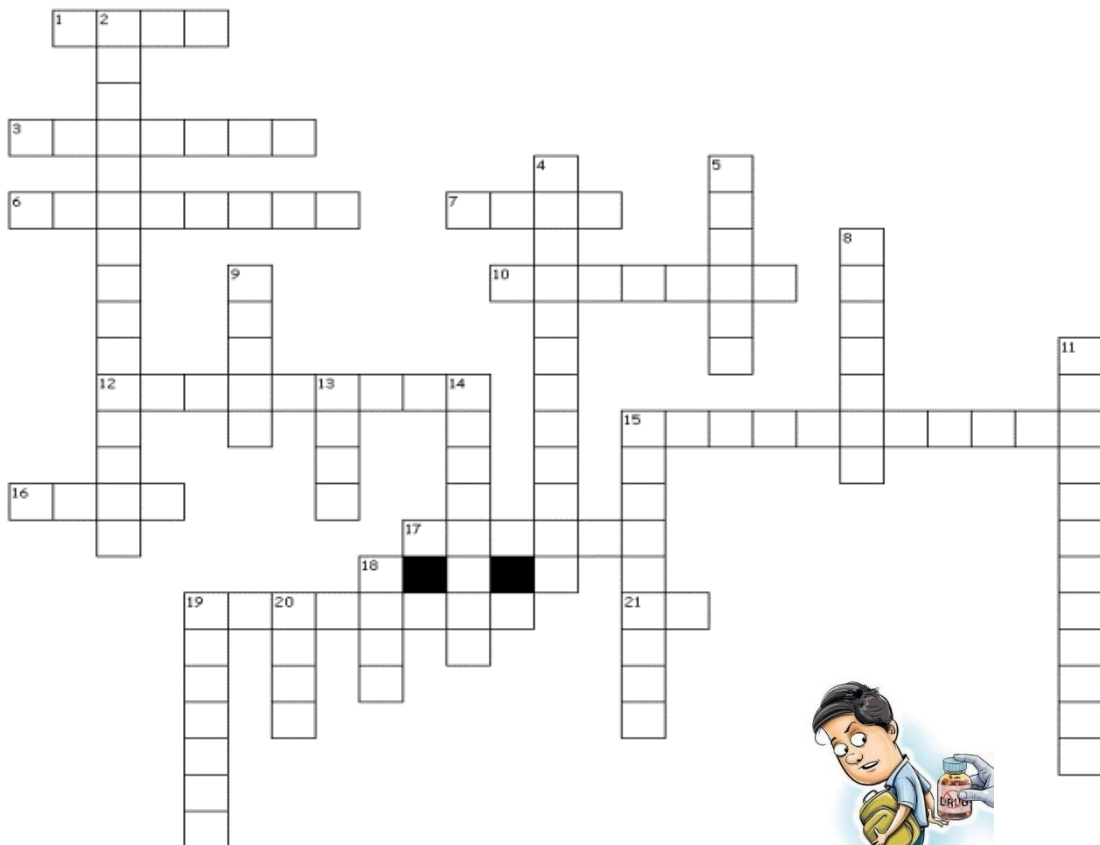
**Down**

- 2. This is the first stage of addiction
- 4. This type of drug can cause a person to see or hear things that are not real

**Across**

- 1. This is a slang word for marijuana
- 3. This drug is considered an athletic performance enhancer

5. Marijuana causes damage to your short term \_\_\_\_\_
8. Every day 1,200 people die from diseases caused by this
9. All drugs cause damage to this organ
11. These drugs should only be used with your doctor's consent
13. True or False: Most teens do not smoke
14. This is the addictive drug found in tobacco products
15. Consuming alcohol to the point that a person passes out is called alcohol \_\_\_\_\_
18. This drug can be very damaging to the teeth
19. This drug is a stimulant and comes in the form of a white powder
20. There are \_\_\_\_ stages of addiction
6. This slang name for Ecstasy has the same name as a candy
7. Chewing tobacco can cause this type of cancer
10. Underage use of this drug leads to about 5,000 deaths in the United States each year
12. This occurs when a person cannot stop using a substance
15. Smoking is the #1 \_\_\_\_\_ cause of death in the U
16. A small glass of alcohol is called this
17. This is the #1 reason why teens misuse drugs
19. This is a mild stimulant drug found in coffee
21. One way to refuse to use drugs is to "Just say \_\_\_"



## Activity 4

### THE WORD ON MARIJUANA

Here are some of the key words you need to understand to discuss the drug marijuana and its effects. Review the glossary. Then, fill in the blanks in the article below.

#### GLOSSARY

**Blunt:** slang term for a cigar filled with marijuana

**Cannabinoid Receptors:** sites on the surface of brain cells where the active ingredient in marijuana attaches to produce the drug's effects

**Cerebellum:** part of the brain involved in body movement

**Cerebral Cortex:** part of the brain involved in higher thinking

**Dopamine:** a brain chemical (or neurotransmitter) that helps nerve cells communicate

**Hemp:** the plant marijuana comes from

**Hippocampus:** part of the brain's limbic system that helps with learning and memory

**Joint:** slang term for marijuana rolled into a cigarette

**Neurons:** cells in the brain; also found in the spinal cord and other organs

**THC:** tetrahydrocannabinol, the main active ingredient in marijuana

#### WHAT IS MARIJUANA? WHAT DOES IT DO TO THE BRAIN?

The drug marijuana is the dried, shredded leaves of the \_\_\_\_\_ plant. While there are several methods of use, marijuana is often rolled into a cigarette, called a \_\_\_\_\_, or stuffed into a hollowed-out cigar, called a \_\_\_\_\_, and smoked.

The drug's effects on the brain are caused by the main active ingredient, tetrahydrocannabinol, or \_\_\_\_\_. This chemical attaches to specific receptors in the brain called \_\_\_\_\_ receptors. When it binds to these receptors, it interferes with the normal communication between brain cells, or \_\_\_\_\_.

Several parts of the brain have a lot of these receptors, including the \_\_\_\_\_, which deals with learning and memory; the \_\_\_\_\_, which helps with body movement; and the cerebral \_\_\_\_\_, which is in charge of higher thinking.

Finally, research shows that THC triggers the release of \_\_\_\_\_, a chemical that helps nerve cells communicate.

## Activity 5

### STEROIDS: ALL-OVER HORROR

Some people take drugs called steroids illegally as a way to build their muscles. But steroids affect more than muscles. Read below how steroids mess with your brain and body. Then, finish the diagram.

Write either how steroids affect the body part indicated by an arrow, or the name of the body part affected.

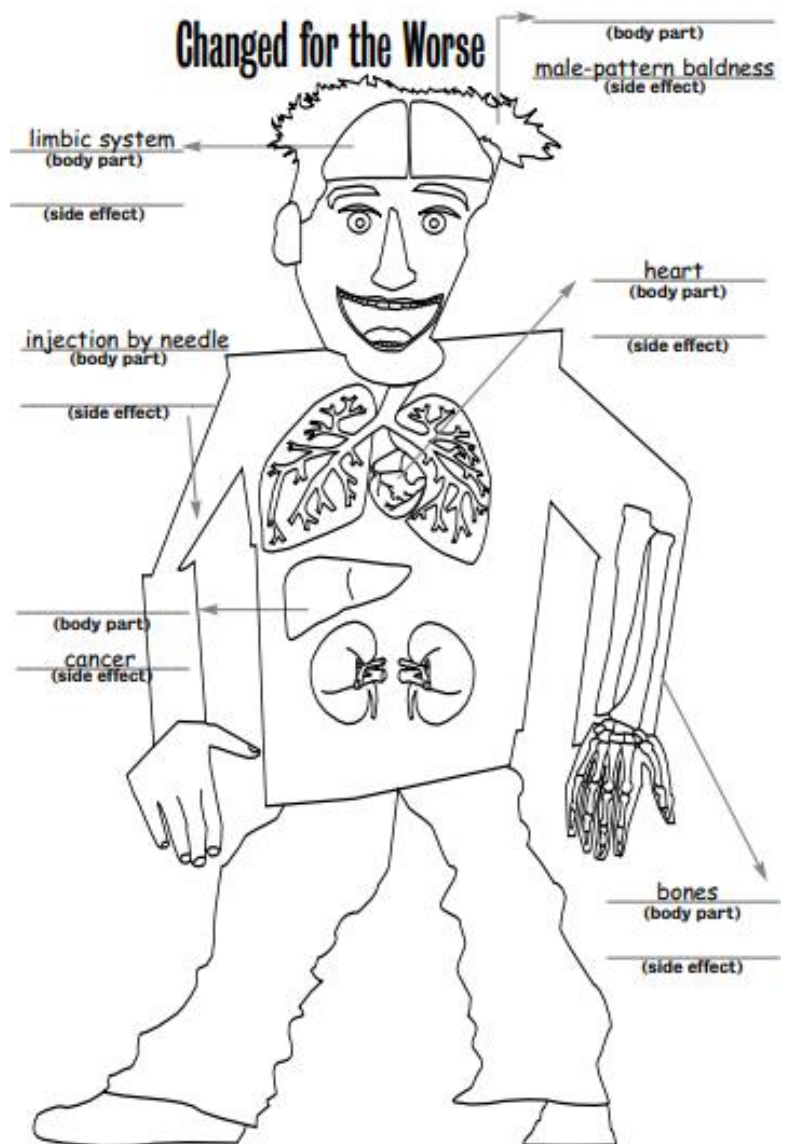
- Anabolic steroids are artificial versions of the male sex hormone testosterone. Artificial hormones affect the body in several ways. Men, for example, can grow breasts. And women can grow facial and excessive body hair, and get deep voices. Both sexes can experience **male-pattern baldness**.

- The drugs may also cause **stunted growth** in teens. When the brain senses too much of a hormone, it signals the bones to stop growing, even at a young age.

- Anabolic steroids cause problems in the brain, as well. They affect the **limbic system**, a part of the brain connected with mood. Some users experience very violent feelings. This condition is known as **roid rage**.

- Most steroid users pop pills but some inject the drugs. When they share needles, this can lead to the spread of **HIV** and **AIDS**.

- Finally, steroids make their way to the heart, causing potentially fatal **heart attacks**. They also pass through the liver, causing cysts and possibly **liver cancer**.



## Activity 6

### HEALTH CONCERNS/DRUG ABUSE

Read the scenario below and answer the following questions.

Jenny and her older cousin Tina have been very close since Jenny can remember. Recently, Tina started hanging out with a new crowd that makes Jenny nervous. Today, Tina was acting differently and admitted to Jenny that she had tried drugs. Jenny told Tina that she should stop immediately or she'll have to tell her parents. Tina thinks Jenny is creating drama and that if Jenny loves and respects her she won't tell her what to do or tell anyone about her business. Jenny feels it's because she cares that she is telling Tina to stop.

#### **Additional Tip: Drug Use and Communication**

It can be hard to have a conversation with someone who is using drugs or is in withdrawal from drug use. This is because drugs can impair a person's judgement, perception of a situation, and ability to read social cues. Drug use can also impact a person's mood and ability to control his or her emotions and behaviours.

1. How can Jenny use healthy communication strategies and respectful language to express her concerns to Tina?

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2. How might Tina's drug use impact how she perceives this situation?

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3. Is Tina right, that if Jenny loves and respects her she won't tell her what to do? Why or why not?

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4. What should Jenny do if Tina refuses to stop using drugs?

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## Activity 7

### BENEFITS OF NOT USING DRUGS

Find the following 15 words hidden in this puzzle.

Words can be forward, backward, up, down or diagonal in any direction.

ASSERTIVE    COMMUNICATION    CONCENTRATION    CONTROL    ESTEEM  
FRIENDSHIP    HEALTHIER    INDEPENDENCE    JUDGMENT    MEMORY  
PARENTS    PRIDE    RELATIONSHIPS    RESPECT    SUCCESS

N Z M L G M G V H A V M Q I N P A E Z W  
U A S N O Z E E O Y S Z B N O S S S D B  
F V M P P R A M F K J U O V I T S T J J  
T X B R I L T P O B Y I E Y T N E E O E  
N W I T T H Y N Q R T M M J A E R E V Y  
F D X H C O S G O A Y O D T C R T M G B  
E H I O F J H N R C G J K T I A I F R G  
G E A I C M A T O N D R T R N P V A J Y  
R P A I Q F N G R I Q G F N U A E N O N  
D Y B W T E K F Y N T T N E M G D U J J  
N J O V C O C A R K Y A T V M U T X X J  
P N S N F R Y X P I A T L H O I F A C F  
C Z O S U C C E S S E H L E C A R T M T  
X C I N D E P E N D E N C E R W C P K B  
N L O W H T C Z B G H O D G K E B U W Q  
K Y D W X F F C T E H O U S P G S Q Z S  
O O Y Q M A A F Q D F K Z S H O S S U D  
M I J J E J D N G N X X E J U I B T R P  
P Q Y J B D Y H X B Z R A M N O P P V F  
K M B A S R O U R B S N G K T N E A X E



## Activity 8

### ALCOHOL

Alcohol is a depressant drug, which means it slows down the messages traveling between the brain and the body. **Find the words related to this drug and its effects in the puzzle below.**

G K P C E O B J J V O T K P X N O M G X K Y Z E  
G M D Q M E D S N W R U U U I B L W G P S J B G  
E J H R I B F R G O L G U O C W X O X Y U Y P A  
Q T S T R O K E X T J B P F K J T Z D B O N N M  
F J E R U S S E R P R E E P I C H O E B I D K A  
O R E C N A C O V O M I T I N G A E T P L A Q D  
V A X N H Q O F G W W N Z M X U R L I R L N A E  
E M P N Z H W C H E B K D J G D D B B S E G P V  
G O U A W B H S G T Z Q L P C T N B E I B E E R  
D C K P E H W V T S A S I J A R T R K W E R U E  
R I S R E C L U W I N E T H Q R G N I G R O Q N  
O B G U Z C C A O B R O D C N X T N N I L U P A  
W U G E J I C V U U E I I Q E H E Y P M C S A M  
S F M E K I G J N S U J P S H F F A E L L E S V  
I H M R E T T R O H S J R S I W F Z I G B U S Q  
N Z I U W M C Z M F R A D J S C L E A R L H K N  
E U D M M Y L O H O C L A O W K E B R A I N X G  
S I S S E N S U O I C S N O C N U D B R F B F W  
S B H J K Z G O Y P T X C T Q A S C I X O T H Q  
H J R P X V D S T N A S S E R P E D E X L N C V  
L Q P M G R Y U F X K D U W F T M B M P J T E G  
I Y N V U D C G N I N O S I O P T F R R Y O U F  
J T G G F B V X I X S J W V S B M R E T G N O L  
H I S B S J O T J K N A Z G O P F B Y X V S Q R

Death	Effects	Party	Cancer
Ulcers	Brain	NerveDamage	Stroke
Blackout	Coma	Unconsciousness	Vomiting
Drowsiness	Rebellious	Dangerous	PeerPressure
Toxic	Alcohol	Decisions	Depressants
Drugs	LongTerm	ShortTerm	Poisoning
Spirits	Wine	Beer	



## Activity 8

### KEEP IN MIND

Complete the cryptogram and don't forget its message for life!

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

\_\_\_\_\_ .  
 19 13 15 11 9 14 7      9 19      1 4 4 9 3 20 9 22 5

\_\_\_\_\_ .  
 13 1 18 9 10 21 1 14 1      3 1 14      1 6 6 5 3 20      25 15 21

\_\_\_\_\_ .  
 18 9 7 8 20      1 23 1 25

\_\_\_\_\_ .  
 1 12 3 15 8 15 12      3 1 14      8 1 18 13      25 15 21      1 14 25

\_\_\_\_\_ .  
 20 9 13 5      25 15 21      4 18 9 14 11

\_\_\_\_\_ .  
 9      4 15      14 15 20      14 5 5 4      4 18 21 7 19      20 15

\_\_\_\_\_ !  
 2 5      3 15 15 12





## Self-teach Workbook Unit 6: Alcohol & Drug Abuse

### ANSWERS

#### Activity 1

##### SUBSTANCE ABUSE

Fill in the spaces (by choosing from the box below) to get a definition of Substance Abuse.

**Substance abuse** refers to the *harmful* or hazardous use of *psychoactive* substances, including alcohol and *illicit* drugs. Psychoactive substance use can lead to *dependence* syndrome – a cluster of *behavioural*, cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong *desire* to take the drug, difficulties in *controlling* its use, persisting in its use despite harmful *consequences*, a higher priority given to drug use than to other activities and *obligations*, increased tolerance, and sometimes a physical withdrawal state.

#### Activity 2

**Answers:** Cerebral cortex: thinking, seeing, hearing, and sense of touch; Limbic system: produces feelings and emotions; Cerebellum: coordinates movements involved in everyday tasks; Brain stem: controls breathing, food digestion, and heart beat; Nucleus accumbens: involved in reward and feelings of pleasure. Students' responses to how they've used each part of the brain will vary.

#### Activity 3

##### SUBSTANCE ABUSE CROSSWORD

Answer Key: Across 2.Experimentation 4.Hallucinogen 5.Memory 8.Smoking 9.Brain 11.Prescription 13.True 14.Nicotine 15.Poisoning 18.Meth 19.Cocaine 20.Four Down 1.Weed 3.Steroid 6.Skittles 7.Oral 10.Alcohol 12.Addiction 15.Preventable 16.Shot 17.Stress 19.Caffiene 21.No

#### Activity 4

## WHAT IS MARIJUANA? WHAT DOES IT DO TO THE BRAIN?

The drug marijuana is the dried, shredded leaves of the *hemp* plant. While there are several methods of use, marijuana is often rolled into a cigarette, called a *joint*, or stuffed into a hollowed-out cigar, called a *blunt*, and smoked.

The drug's effects on the brain are caused by the main active ingredient, tetrahydrocannabinol, or *THC*. This chemical attaches to specific receptors in the brain called *cannabinoid* receptors. When it binds to these receptors, it interferes with the normal communication between brain cells, or *neurons*.

Several parts of the brain have a lot of these receptors, including the *hippocampus*, which deals with learning and memory; the *cerebellum*, which helps with body movement; and the cerebral *cortex*, which is in charge of higher thinking.

Finally, research shows that THC triggers the release of *dopamine*, a chemical that helps nerve cells communicate.

### Activity 5

Answers: Hair—male-pattern baldness; Bones—stunted growth; Brain/limbic system—roid rage; Arm/needle injection site—HIV/AIDS; Heart—heart attack; Liver—cysts and liver cancer.

### Activity 6

#### Open text answers

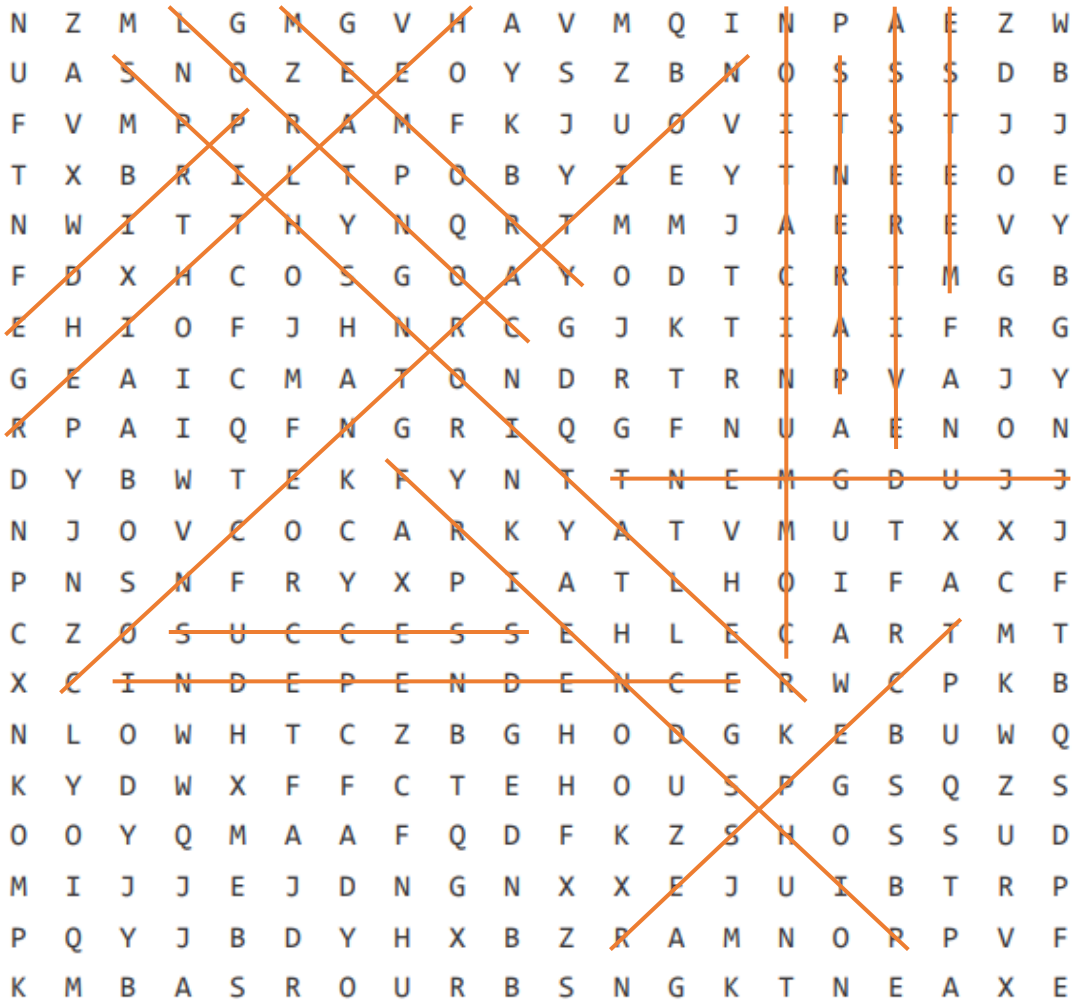
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**Activity 8**

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 E J H R I B F R G O L G U O C W X O X Y U Y P A  
 Q T S T R O K E X T J B P F K J T Z D B O N N M  
 F J E R U S S E R P R E E P I C H O E B D K A  
 O R E C N A C O V O M I T I N G A E T P L A Q D  
 V A X N H Q O F G W W N Z M X U R L I R L N A E  
 E M P N Z H W C H E B K D J G D D B B S E G P Y  
 G O U A W B H S G T Z Q L P C T N B E I B E E R  
 D C K P E H W V T S A S I J A R T R K W E R U E  
 R I S R E C L U W I N E T H Q R G N I G R O Q N  
 O B G U Z C C A O B R O D C N X T N N I L U P A  
 W U G E J I C V U U E I I Q E H E Y P M C S A M  
 S F M E K I G J N S U J P S H F F A E L L E S V  
 I H M R E T T R O H S J R S I W F Z I G B U S Q  
 N Z I U W M C Z M F R A D J S C L E A R L H K N  
 E U D M M Y L O H O C L A O W K E B R A I N X G  
 S I S S E N S U O I C S N O C N U D B R F B F W  
 S B H J K Z G O Y P T X C T Q A S C I X O T H Q  
 H J R P X V D S T N A S S E R P E D E X L N C V  
 L Q P M G R Y U F X K D U W F T M B M P J T E G  
 I Y N V U D C G N I N O S I O P T F R R Y O U F  
 J T G G F B V X I X S J W V S B M R E T G N O L  
 H I S B S J O T J K N A Z G O P F B Y X V S Q R

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Toxic	Alcohol	Decisions	Depressants
Drugs	LongTerm	ShortTerm	Poisoning
Spirits	Wine	Beer	

## **Activity 8**

### **KEEP IN MIND**

**Complete the cryptogram and don't forget its message for life!**

SMOKING IS ADDICTIVE.

MARIJUANA CAN AFFECT YOU RIGHT AWAY.

ALCOHOL CAN HARM YOU ANY TIME YOU DRINK.

I DO NOT NEED DRUGS TO BE COOL!