

SECTION

5



165

# APPENDICES



A QUESTION OF INFLUENCE: CURRICULUM SUPPLEMENT





**Appendix A. Alcohol and Other Drug Education in the School: A Note to Parents**

**Appendix B. Understanding Drug Influences, Risks, and Effects**

- Influences affecting students' substance-use decisions
- Principles of substance-use-related risk
- Drug terms
- Drug classifications
- Drug effects by classification

**Appendix C. Detailed Drug Information for Selected Drugs**

- Alcohol
- Cannabis
- Amphetamines and Methylphenidate (Ritalin)
- Mescaline and Psilocybin (Magic Mushrooms)
- Methylenedioxymethamphetamine (MDMA - Ecstasy)
- Pharmaceutical (Prescription) Drugs
- Anabolic Steroids
- Emerging Issue: Methamphetamine (Crystal Meth)

**Appendix D. Assessment Rubrics**

**Appendix E. Supplementary Resources**

- Addiction Services Locations with Prevention Staff
- Reading List On Substance Abuse for Adolescents
- Websites Relevant to Students and Teachers

**Appendix F. Teacher Evaluation Form for *A Question of Influence***



**Appendix A:**  
**Alcohol and Other Drug Education in the School: A Note to Parents**

Dear Parent(s) or Guardian(s),

This year, as part of the junior high level Healthy Living curriculum, our school will be using the curriculum supplement *A Question of Influence* to guide learning about alcohol and other drugs.

*A Question of Influence* has been developed by the provincial government through the Department of Health Promotion and Protection and the Department of Education. The resource is well researched and is based on best-practice evidence that demonstrates what types of educational activities are most effective for 12- to 14-year-old adolescents. As a result, it focusses on the two substances junior high students are most likely to encounter—alcohol and cannabis—and it supports students in developing skills to avoid the use of these substances and stay safe.

*A Question of Influence* was tested in Nova Scotia schools and was well received by teachers and students alike. We are confident that your child will learn a great deal from the resource activities and benefit from the information received. Feel free to view the resource on the Department of Health Promotion and Protection’s website: <http://www.gov.ns.ca/hpp/> [Click on Addiction Prevention].

If you have any questions or concerns about the information or activities contained in *A Question of Influence*, please feel free to contact me.

Sincerely,

---

Healthy Living Teacher

Contact Information

---

---

---

---

---



## Appendix B: Understanding Drug Influences, Risks, and Effects

### Influences affecting students' substance-use decisions

This supplement distinguishes between three levels of influence: internal, interpersonal, and environmental.

**1. Personal or internal influences** (e.g., curiosity, emotional stresses, mental health problems, beliefs concerning risk, and norms). This category of influences is referred to as “how I influence myself” in the grade-specific activities.

#### **CURIOSITY**

Curiosity is natural in young people, and is most often a positive trait. There are few days when drug issues are not in the news, and they are frequently a topic of conversation, so it is not surprising that some young people are curious enough to experiment with alcohol or another drug.

#### **EVERYDAY EMOTIONAL STRESS**

Because they hold promise in elevating mood and enhancing positive feelings, substances (both legal and illegal) may appeal to some persons— young or old—who are stressed, anxious, or just bored.

#### **LACK OF PERCEIVED RISK**

Decisions around substance use are also linked to a sense of how much risk is associated with a particular drug. In cases where new information leads to an understanding that there is greater risk linked to a drug, fewer young people will use the drug. The reverse is also true: an emerging drug may experience a “honeymoon period” when there is little information available about risks or harms.

Because alcohol is legally available, some may underestimate the harms or negative consequences resulting from hazardous alcohol use. However, in the *Nova Scotia Drug Use Survey (2007)*, students reported experiencing a range of harms as a result of their use of alcohol: damaged things when drinking; injury to oneself; caused tensions or disagreement with family or friends; cost of alcohol prevented buying other things; trouble with the police; school work or exams affected; and being in a motor vehicle accident as a driver after drinking in the



previous two hours (See Table 5 in Section One for details).

To a greater degree than adults, youth tend to minimize the risks posed by their own substance use, with young men tending to do so more than young women. It has long been understood that young people tend to give less attention to long-term risks linked with substance use than they do to the more immediate consequences.

### **MENTAL HEALTH PROBLEMS**

It is estimated that, at any point, 15 percent of Canadian children and adolescents are experiencing clinical mental health problems, such as anxiety disorder, conduct disorder, attention deficit hyperactivity disorder (ADHD), depression or schizophrenia, that make it difficult for them to function. Individuals with mental health problems are at risk for substance-use problems because they may look to various drugs to “medicate” the distress they feel.

2. **Social or interpersonal influences** (e.g., peer and family influences). This category of influences is referred to as “how others influence me” in the grade-specific activities.

### **SOCIAL ACCEPTANCE**

Some young people are strongly influenced by their belief that substance use is common. For example, if one’s friends smoke, drink, or use other substances or if there is a sense that others in his or her network do, a young person may feel some influence to use. Some young people may use substances in the same way they use clothes and music, to establish an identity or image for themselves.

### **CELEBRATIONS AND RELIGIOUS OBSERVANCES**

Alcohol and other drugs are often a part of family, community, or religious celebrations or services. On these occasions, substances are often valued more for their symbolic importance than their drug effect.

### **DIFFICULT LIFE EXPERIENCES**

Some youth experience very difficult living situations that may include physical and sexual abuse and other forms of violence. Some young people leave home and live on or close to the streets, experiencing a range of difficulties. Although situations vary greatly within gay, lesbian, bisexual, and transgender (GLBT) populations, some GLBT youth may experience great stigma and personal uncertainty. All of these young



people may be attracted to substance use to cope with their situations and, as a result, find themselves at risk for substance-use harms.

- 3. Cultural or Environmental influences** (e.g., media, culture). This category of influences is referred to as “How I am influenced by the world around me” in the grade-specific activities.

#### **CULTURE AND MEDIA**

Today’s young people are growing up in a world that tolerates more forms of substance use, both medical and non-medical, than at any other time in history. In addition to their contributions to health, a side-effect of the huge presence of the pharmaceutical and alternative medicine industries is a climate of “solution by ingestion.” An unprecedented ease of access to various media has meant that more young people than ever are “consuming” a pop culture that tends to tolerate, and at times promote, substance use. The powerful marketing capacities of the alcohol and tobacco industries, and their focus on the youth market, add to this environment. Even these capacities however are dwarfed by the scale of the illicit drug industry.

### **PRINCIPLES OF SUBSTANCE USE–RELATED RISK**

New mood-altering substances are continually emerging in our communities. While it is important to become aware of the specific effects and potential harms linked to emerging drugs, it is helpful to understand principles of substance-use risk that apply to all substances, legal and illegal.

#### **All substance use involves a measure of risk**

While those using mood-altering drugs always seek some sort of benefit, non-medical substance use almost always poses some risks. Risk, in this sense, is an estimate of how likely it is that harm will occur as a result of using a substance. Risk from non-medical substance use can range from very low to very high, but it is important to know that even at low levels of risk (for example, when a person is experimenting for the first time), harms may occur.



### **The greater the amount used on an occasion, the greater the level of risk**

Using any substance to the point of intoxication, often termed binge use, usually results in disorientation, lack of judgment, and loss of motor coordination. This kind of use greatly increases the likelihood of injury due to accidents or violence. Due to their relative lack of experience, young people are particularly at risk. Understanding the amount used is difficult with illegal substances that have unknown purity, hence the risk of overdose.

### **Combining substances is very risky**

There are increased risks involved in taking more than one drug at a time. The combined effects of two drugs can be greater than expected (i.e., it may be that  $1+1=3$ ); often the result is unpredictable. For example, authorities are increasingly concerned with the combined effects of cannabis and alcohol when driving.

### **The interaction of person, drug, and setting greatly influences the level of risk**

The interaction of the person, the drug, and the setting determines the effects and harms linked to use of a substance.

#### **PERSON**

The person's physical traits, such as weight, gender, metabolism, and state of health, can all play a role in determining risk levels. A person's state of mind—their mood and expectations—will help to determine the experience and the level of risk involved in a drug-using situation (for example, risk increases when a person drinks in an angry state or to cope with sadness, rather than to enhance an enjoyable situation).

#### **DRUG**

The way the drug is prepared (i.e., weak vs. strong dosage) will help to determine risk. For example, the strength of cannabis used in Canada is now generally much greater than was the case 20 years ago, and risks are increased accordingly. The manner of use (i.e., swallowing, sniffing, inhaling, or injecting) has a large bearing on the level of risk involved. Swallowing tends to reduce the peak "high" and lengthen the period of intoxication. On the other hand, sniffing, inhaling, and injecting all result in a rapid and quite possibly, disorienting drug effect that may be dangerous. Injection is particularly dangerous because of the risk of contracting an infection, such as HIV or hepatitis C, from shared needles.

**CONTEXT**

Substances usually affect motor coordination, judgment and intellectual functioning in various ways. For that reason, there are certain settings or contexts for drug use that always pose a high risk for harm and should always be avoided: before driving a car, boat, ATV, or snowmobile, or using other machinery; before studying or working; before sports or other physical activity; before sexual activity; when pregnant; when using medication or other substances; and when sick.

**Risk increases with frequency and duration of use**

Beyond the level of risk associated with a single, drug-using situation, frequency and duration of use is also a major factor. The more frequently larger amounts are used over a lengthy period of time, the greater the likelihood of a dependency. Dependence, characterized by an inability to control use even in the face of negative consequences, can occur with any mood-altering substance, regardless of whether it is capable of producing physical dependence or only psychological dependence. Some persons can stop dependent use of a substance on their own, but most benefit from help from specialized treatment services or a self-help group.

**DRUG TERMS****Drug**

A drug is any chemical substance that changes the way the body functions. Mood-altering or psychoactive drugs affect the way a person thinks, feels, and acts.

**Examples:** Antihistamines reduce the symptoms of allergies. Cough medicines decrease coughing and can make a person feel more relaxed. Consuming alcohol can lead to intoxication.

**Harmful involvement**

Harmful involvement is the use of a drug to the extent that it interferes with everyday life.

**Example of harmful involvement:** The adult who has a drink in the evening to wind down after work may not be harmfully involved with alcohol. But if the person is consuming more than two drinks each evening, and more than 14 a week (9 for women), then he or she may be harmfully involved.





## Tolerance

Tolerance occurs when the body adjusts to a drug to the point that increased amounts are required to achieve the initial effects. An adult who finds one drink relaxing may, after a while, discover that it takes two or three drinks to achieve the same effect. This is developing a tolerance toward alcohol.

**Examples of tolerance:** A person often doesn't realize that he or she is becoming tolerant to something. Freshly baked bread or cookies smell wonderful when you first enter the kitchen, but the smell quickly wears off when you get used to it. Swimming pools often feel very cold when you first jump in, but in a short time the water feels comfortable.

## Physical dependence

Physical dependence occurs when the body becomes so accustomed to a particular drug that it can function normally only if the drug is present. Without the drug, the user may experience a variety of symptoms ranging from mild discomfort to convulsions, depending on the drug. These symptoms, some of which can be fatal, are collectively referred to as "withdrawal." Not all drugs produce physical dependence, but they may still be abused because of their perceived effects, or psychological dependence. Physical dependence is one of the factors contributing to the continued use of drugs.

**Example of physical dependency:** If a smoker runs out of cigarettes, he or she may become anxious, agitated, restless, or depressed and have sleep disturbances and decreased blood pressure and heart rate. In heavy smokers these symptoms may develop within hours of the last cigarette.

## Withdrawal

Withdrawal describes the effects when a person stops taking a drug or reduces the amount of the drug. Usually the effects of withdrawal are the opposite of the effects experienced when the drug is taken.

**Example of withdrawal:** The person who has a cup of coffee every morning to wake up may feel drowsy or have a headache on a morning when he or she misses a cup of coffee.



## Psychological dependence

Psychological dependence exists when a drug is so central to a person's thoughts, emotions, and activities that it is extremely difficult to stop using it or even stop thinking about it. Like physical dependence, psychological dependence is the result of ongoing drug use and a cause of continued use.

**Example of psychological dependency:** People who have quit smoking can occasionally have strong cravings for a cigarette. This can occur years after the person has had his or her last cigarette.

## Addiction

While there is no universally accepted definition of addiction, it is commonly understood to refer to repeated use of a psychoactive substance or substances to the extent that the user is periodically or regularly intoxicated, shows a compulsion to take the preferred substance(s), has great difficulty in voluntarily stopping or modifying use, and attempts to obtain the substance(s) by almost any means.

**Example of addiction:** A person who is addicted to an opiate such as heroin, and unable to secure any other supply, breaks into a pharmacy to obtain opiate-based medicines such as Dilaudid or morphine.

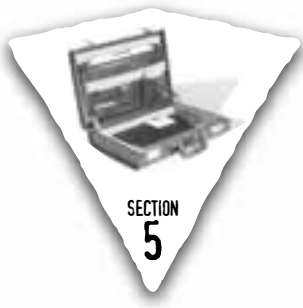
## DRUG CLASSIFICATIONS

### Psychoactive Drugs

Mood-altering drugs—also called psychoactive drugs—are drugs that can change or affect the way a person thinks, feels, or acts. These drugs usually have physical effects as well, but what sets them apart from other drugs is that they work on the mind and the senses. Most of these drugs work on the central nervous system (CNS).

#### Psychoactive drugs can be classified as

- CNS depressants
- opiates
- CNS stimulants
- hallucinogens
- cannabis
- solvents and inhalants



## A QUESTION OF INFLUENCE

**CNS DEPRESSANTS**

These are drugs that act on the central nervous system, producing feelings of relaxation, and can lead to intoxication. These drugs lower blood pressure, respiration, and heart rate. In large doses, depressant drugs may lower these body functions to the point of death.

**Examples of depressants include**

- alcohol (e.g., beer, wine, spirits, coolers)
- benzodiazepines (minor tranquilizers or sleep medications)
- barbiturates

**OPIATES**

These drugs were originally derived from the Asian poppy, but many drugs in this class are now produced by the pharmaceutical industry. These drugs are often prescribed by physicians and used under medical supervision to relieve and manage pain. Opiates can produce surges of pleasure followed by stupor. They also produce nausea, constipation, and slow breathing to a point where it may stop. Opiates have high addiction potential and can produce physical dependence at a prescribed dose.

**Examples of opiates include**

- morphine
- codeine
- heroin
- various prescription pain relief medications (e.g., OxyContin)

**CNS STIMULANTS**

These drugs act on the brain and the body to cause a variety of effects, including increased blood pressure, heart, and respiration rates; raised blood sugar levels; increased energy and alertness; and decreased appetite.

**Examples of stimulants include**

- cocaine (including crack)
- amphetamines (e.g., Benzedrine, speed, crystal methamphetamine)
- diet pills
- nicotine—tobacco products
- caffeine—coffee, tea, chocolate, colas
- methylphenidate (Ritalin)
- methylenedioxymethamphetamine\* (MDMA - ecstasy)

\* A stimulant with hallucinogenic properties.

**HALLUCINOGENS**

Sometimes referred to as “psychedelics,” these drugs act on the brain, intensifying all senses, dramatically affecting perception, and creating disorientation. Hallucinogens raise the heart rate and sensory activity and muddle perceptions of reality.

**Examples of hallucinogens include**

- lysergic acid diethylamide (LSD, acid)
- psilocybin (magic mushrooms)
- mescaline (peyote)

**CANNABIS**

Cannabis products are considered in a classification of their own because they act like a hallucinogen, but also produce depressant effects. Cannabis effects include relaxation and slowed response time, as well as memory and concentration problems.

**Examples of cannabis products include**

- marijuana
- hash
- hash oil
- synthesized THC medicinal product (e.g., Marinol)
- cannabis-based medicinal product (e.g., Sativex)

**SOLVENTS AND INHALANTS**

Solvents and inhalants are found in household and commercial products. They are used by pouring the product into a bag and inhaling. Effects range from effects similar to being intoxicated to serious and unpredictable results such as seizures, convulsions, brain damage, heart failure, and death.

**Examples of solvents and inhalants include**

- gas
- paint thinner
- aerosols
- plastic cement



## DRUG EFFECTS BY CLASSIFICATION

CLASSIFICATION AND EXAMPLES	EFFECTS (CAN HAVE AT LEAST ONE OF THESE EFFECTS)	HARMS/DANGERS (RISKS OF USING A DRUG CAN INCLUDE ONE OR MORE OF THESE)
-----------------------------	--	--

### CENTRAL NERVOUS SYSTEM DEPRESSANTS

- |  |  |   |
|--|--|---|
| <ul style="list-style-type: none"> <li>• Alcohol</li> <li>• Benzodiazepines: minor tranquilizers (Valium, Ativan), sleeping medications (Halcion, Imovane)</li> <li>• Barbiturates (Tuinal)</li> </ul> | <ul style="list-style-type: none"> <li>• decreased inhibitions</li> <li>• increased confidence</li> <li>• relaxation</li> <li>• intoxication</li> <li>• poor judgment</li> <li>• slurred speech</li> <li>• impaired memory/thinking</li> <li>• decreased motor skills</li> </ul> | <ul style="list-style-type: none"> <li>• respiratory depression</li> <li>• seizures</li> <li>• liver disease</li> <li>• heart disease</li> <li>• increased risk of cancer</li> <li>• fetal alcohol spectrum disorder</li> <li>• breathing problems</li> <li>• brain damage</li> </ul> |
|--|--|---|

### OPIATES

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li>• Prescription pain relievers</li> <li>• Morphine</li> <li>• Codeine</li> <li>• Heroin</li> </ul> | <ul style="list-style-type: none"> <li>• pain relief (analgesia)</li> <li>• drowsiness</li> <li>• intoxication followed by euphoria</li> <li>• constipation</li> <li>• decreased breathing rate</li> <li>• pinpoint pupils</li> </ul> | <ul style="list-style-type: none"> <li>• hepatitis (from sharing needles)</li> <li>• HIV/AIDS (from sharing needles)</li> <li>• increased risk of some cancers</li> <li>• brain damage</li> <li>• pulmonary problems</li> </ul> |
|--|---|---|

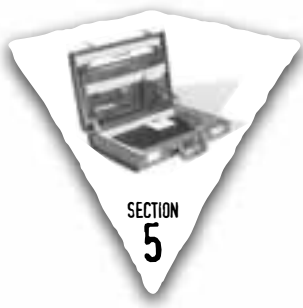
### CENTRAL NERVOUS SYSTEM STIMULANTS

- |   |   |  |
|---|---|--|
| <ul style="list-style-type: none"> <li>• Cocaine (incl. crack)</li> <li>• Methylphenidate (Ritalin)</li> <li>• Amphetamines</li> <li>• Nicotine</li> <li>• Caffeine</li> <li>• Methylenedioxymethamphetamine* (MDMA - ecstasy)</li> </ul> | <ul style="list-style-type: none"> <li>• euphoria</li> <li>• increased energy</li> <li>• increased heart rate, blood pressure</li> <li>• decreased appetite</li> <li>• feelings of enhanced sociability, sexuality, confidence</li> </ul> | <ul style="list-style-type: none"> <li>• paranoid psychosis</li> <li>• depression</li> <li>• HIV/AIDS (from sharing needles)</li> <li>• insomnia</li> <li>• sexual disinterest</li> <li>• dilated pupils</li> <li>• seizures</li> <li>• heart attacks/stroke</li> <li>• extreme anxiety, panic states</li> <li>• hallucinations</li> </ul> |
|---|---|--|

\* A stimulant with hallucinogenic properties.

### HALLUCINOGENS

- |  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li>• Lysergic acid diethylamide (LSD)</li> <li>• Mescaline</li> <li>• Psilocybin ("magic mushrooms")</li> <li>• Phencyclidine (PCP, "angel dust")</li> </ul> | <ul style="list-style-type: none"> <li>• visual and auditory distortions,</li> <li>• hallucinations</li> <li>• altered body image</li> <li>• feelings of enhanced mental capacity</li> <li>• muscle twitches</li> <li>• dizziness, nausea, vomiting</li> <li>• out of touch with reality</li> <li>• distorted body image</li> </ul> | <ul style="list-style-type: none"> <li>• panic reactions</li> <li>• psychosis</li> <li>• flashbacks</li> <li>• poor judgment leading to serious injuries or death</li> <li>• anxiety and depression</li> <li>• memory and thinking problems</li> </ul> |
|--|---|--|



CLASSIFICATION AND EXAMPLES	EFFECTS (CAN HAVE AT LEAST ONE OF THESE EFFECTS)	HARMS/DANGERS (RISKS OF USING A DRUG CAN INCLUDE ONE OR MORE OF THESE)
<b>CANNABIS</b>		
<ul style="list-style-type: none"> <li>• Marijuana</li> <li>• Hash</li> <li>• Hash oil</li> <li>• Synthesized THC</li> </ul>	<ul style="list-style-type: none"> <li>• drowsiness, relaxation</li> <li>• feelings of well-being, euphoria</li> <li>• increased appetite</li> <li>• short-term memory deficits</li> <li>• lapse of attention, poor concentration</li> <li>• distorted time/space perception</li> <li>• mood changes</li> <li>• slow reaction time</li> <li>• depression</li> </ul>	<ul style="list-style-type: none"> <li>• impaired driving</li> <li>• worsens schizophrenia symptoms</li> <li>• panic reactions</li> <li>• memory problems</li> <li>• decreased motivation</li> <li>• fearfulness, anxiety</li> <li>• pulmonary problems</li> </ul>
<b>SOLVENTS AND INHALANTS</b>		
<ul style="list-style-type: none"> <li>• Glues</li> <li>• Gasoline</li> <li>• Paint thinner</li> <li>• Lighter fluids</li> <li>• Aerosols</li> </ul>	<ul style="list-style-type: none"> <li>• intoxication</li> <li>• giddiness</li> <li>• sociability</li> <li>• loss of motor coordination</li> <li>• numbness</li> </ul>	<ul style="list-style-type: none"> <li>• heart failure resulting in "sudden sniffing death"</li> <li>• seizures</li> <li>• convulsions</li> <li>• brain damage</li> </ul>



## APPENDIX C

### Detailed Drug Information for Selected Drugs

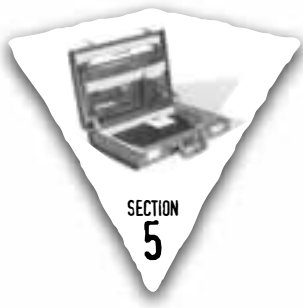
The following more-detailed fact sheets have been prepared for two groups of substances:

1. Those of greatest concern, alcohol and cannabis<sup>1</sup>, because in 2007 each were used by more than 30 percent of the Nova Scotia student population.
2. Those that are seen as emerging drugs of concern (mescaline/psilocybin, non-medical use of amphetamines and methylphenidate (Ritalin), ecstasy, pharmaceutical products, anabolic steroids, and methamphetamine).

These fact sheets are intended primarily as additional information for teachers to assist in responding to questions students may have. They can also be photocopied and distributed to students to support some of the work required by the learning theme activities. Every effort has been made to simplify the reading level of these sheets. The nature of some of the terms and concepts associated with specific drugs means that some students may struggle with some of the material in these sheets. Teachers may want to review the sheets for appropriateness before distributing them to students.

---

<sup>1</sup> Nicotine was used by 16 percent of high school students in the year previous to 2007, but as mentioned earlier, it is addressed in another supplement, *Smoke-Free for Life. Grades Seven to Nine. A Smoking Prevention Curriculum Supplement.* (1992; updated 2002).



## ALCOHOL

### Classification

Central nervous system depressant

### Examples

beer, wine, spirits (e.g., whiskey, rum, gin, vodka, liqueurs), coolers

### Short-term effects

- Relaxation
- Loss of inhibitions (lowered feelings of shyness, self-consciousness, or reservation)
- Reduced coordination
- Slower reflexes and mental processes (e.g., reaction time)
- Attitude changes, poor judgment
- Effects are increased by using alcohol with other drugs, including minor tranquilizers, opiates, and antihistamines (e.g., allergy medication).

### Short-term dangers

- Serious overdose may lead to death from respiratory depression (breathing slows or stops).
- Alcohol-related harm can happen right away, such as death or injury from fighting, car crashes, work-related incidents, drowning, falls, and fires.

### Effects and harms from long-term use

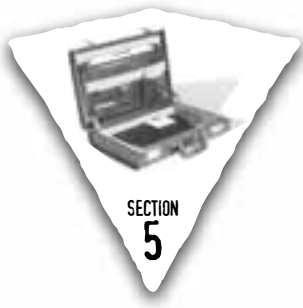
Long-term, regular heavy drinking (five drinks or more at a time) increases the possibility of

- diseases such as gastritis, pancreatitis, cirrhosis of the liver, certain gastrointestinal cancers, heart disease, brain damage
- alcohol dependency syndrome (also known as alcoholism), which usually brings on a range of health, safety, legal, and money problems, as well as problems with family, friends, and working life

### Alcohol use and pregnancy

- There is no safe time to drink alcohol during pregnancy. There is no safe amount of alcohol to drink during pregnancy. Binge drinking (for females,





this means drinking more than four or more drinks on an occasion) is most likely to harm the unborn baby. However, research shows that children born to mothers who drank as little as one drink during pregnancy, may have behaviour and learning problems. Therefore, all drinking should be avoided during pregnancy.

- Drinking during pregnancy can cause a range of lifelong effects known as fetal alcohol spectrum disorder. In the worst cases, a child with fetal alcohol syndrome might grow less, have mental disabilities and look different than other children. These effects do not go away over time.
- Stopping or drinking less alcohol at any point in a pregnancy increases the chances of positive results for the child. No alcohol during pregnancy is the best and safest choice for a healthy baby.

### **Alcohol dependence**

- An alcohol-dependent person gets used to the effects of alcohol, has a higher tolerance (needs more alcohol to feel its effects), and experiences alcohol withdrawal syndrome when stopping.
- Other signs of alcohol dependence include drinking alcohol in larger amounts or over a longer period of time than the person meant to; failed attempts to quit; spending increasing amounts of time on activities linked to drinking or getting alcohol; not looking after other daily activities; and not thinking about the consequences of negative behaviours.

### **Withdrawal**

- The first (and sometimes only) phase involves trembling, excessive sweating, feeling upset or on edge, headache, nausea (feeling sick to your stomach, like you might throw up), and higher blood pressure and heart rate.
- A withdrawal syndrome that features seizures, convulsions, hallucinations (seeing or hearing things that aren't there), and/or delirium tremens (which includes sweating, shaking, anxiety, and confusion) may occur when quitting after drinking alcohol heavily and regularly for a long time.

### **Alcohol and the law**

- Currently, you must be at least 19 years old to purchase alcohol in all provinces and territories, except for Quebec, Manitoba, and Alberta, where you must be 18 years old.
- Provincial laws make it illegal for restaurants and bars to sell alcohol

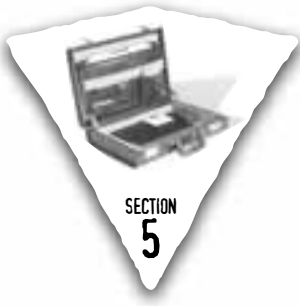


to underage, drunk, or disruptive people. Restaurants, bars, and those holding special events must pay attention to these regulations because courts have sent a message to these establishments that they must be careful not to serve a guest to the point of drunkenness. In recent years, there have been several court cases in which licensed establishments were sued after an intoxicated person hurt him- or herself or someone else.

- Both the federal and provincial governments have a responsibility to control alcohol advertising on television and radio and in newspapers, although over the past number of years, governments have stepped back and allowed the alcohol and advertising industries to make sure they follow the rules themselves.
- It is against the law to drive with a blood alcohol content (BAC) of .08 percent or more. It is also illegal to drive while drunk even if one's BAC is less than .08 percent. On top of the federal laws, all provinces and territories have laws that mean you can have your driver's licence suspended almost right away if your BAC is over a certain limit (in most cases, lower than .08 percent) or if you don't provide a breath sample.
- All provinces and territories in Canada except for PEI and Nunavut have graduated licensing programs for new drivers, and in all provinces and territories it is against the law for new drivers to drive with any alcohol at all in their blood.

### **Use of alcohol in Nova Scotia**

- Aside from caffeine, alcohol is the most commonly used drug in Nova Scotia.
- Seventy-six percent of Nova Scotians 15 years and older reported that they had drunk alcohol in the past year, according to the 2004 Canadian Addiction Survey (compared to 79 percent of all Canadians).
- Fifty-eight percent of Nova Scotians are light drinkers (they have less than five drinks when they drink), while 18 percent are heavy drinkers (they drink five or more drinks at a time).
- In 2007, 52 percent of students in grades 7-12 in Nova Scotia reported that they had drunk alcohol in the past year – consistent with the 2002 data. The higher the grade, the larger the percentage of students drinking: 12 percent of grade 7s, 49 percent of grade 9s, 63 percent of grade 10s, and 80 percent of grade 12s.
- The percentage of students who have not only drunk alcohol but who

**A QUESTION OF INFLUENCE**

have been drunk in the 30 days before the survey also increases through the grades: 5 percent of grade 7s, 22 percent of grade 9s, 33 percent of grade 10s, and 46 percent of grade 12s.

**Standard drink**

A standard drink has the same amount of alcohol (17 ml or 0.6 oz.), no matter what kind of drink it is. For example, each of the following is equal to one standard drink<sup>2</sup>:

Regular beer	340ml (12 oz.)	5% alcohol
Light beer	426ml (15 oz.)	4% alcohol
Spirits	43ml (1.5 oz.)	40% alcohol
Wine	142ml (5 oz.)	13% alcohol
Fortified wine	85ml (3 oz.)	18% alcohol
Coolers (wine and spirits)	340ml (12 oz.)	5% alcohol

<sup>2</sup>Most of these beverages also come in "extra strength" versions.



## CANNABIS

### Classification

Cannabis is considered in a class of its own.

### Examples

marijuana, hash, hash oil, Marinol (man-made drug for medical use)

### Short-term effects

**Psychological (effects may be different depending on how often it is used)**

- Feeling sleepy, relaxed
- Feelings of well-being, joy, or happiness
- Decreased driving skills and motor performance
- Bigger appetite
- Problems remembering things
- Trouble paying attention or concentrating
- Warped experience of time and space
- Mood changes (silly to depressed or withdrawn behaviour)
- Slow reaction time
- Feelings of loss of contact with yourself and your surroundings
- Hallucinations (seeing or hearing things that aren't really there)
- Extreme mood swings
- Panic
- Feeling paranoid, suspicious or fearful

### Physical

- Red eyes, enlarged pupils
- Irritation of the respiratory tract (the parts of the body involved in breathing)
- Cough, dry mouth
- Increase in heart rate
- Higher blood pressure
- Constipation
- Inability to urinate



### **Effects and harms from long-term use**

- Loss of motivation and interest in continuous activity
- Growing risk of problems with learning and memory
- Linked with schizophrenia (a mental illness)
- Damage to the respiratory system (breathing)

### **Use during pregnancy**

- Lower birthweight babies
- Lack of attention and mild learning problems in early and later childhood

### **Cannabis dependence**

- Tolerance (needing to use more to feel its effects) appears to develop in regular users who use large amounts of the drug.
- Withdrawal symptoms include anxiety, crankiness, sleeping problems, sweating, and loss of appetite.
- The mental craving for the drug combined with these withdrawal symptoms can make it hard for long-term cannabis smokers to stop using the drug.
- Mental and physical dependence on cannabis can occur in people who use regularly and heavily. Dependence means that they use the drug even though it interferes with family, school, work, and leisure activities.

### **Cannabis and the law**

- Prior to publication of this supplement, plans by the Canadian government to reduce the punishment for possession of small amounts of cannabis from a criminal offence to a ticketing offence (while increasing the punishments for growing and selling) had been placed on hold. Under the proposed changes, it would still have been against the law to possess or sell cannabis, but the penalty for possession of small amounts would have been a fine instead of criminal charges.
- The Controlled Drugs and Substances Act (CDSA) remains the law. According to the CDSA, possession of small amounts of cannabis is subject to a fine of \$1,000 or imprisonment for up to six months, or both, with larger penalties for larger amounts and for repeat offences.

### **Use of cannabis in Nova Scotia**

- In 2004, 14 percent of Nova Scotians 15 years and over reported using cannabis in the past year, the same as for Canadians overall (2004 Canadian Addiction Survey).



- In 2007, 32 percent of Nova Scotians in grades 7-12 reported having used cannabis in the past year. The higher the grade, the larger the percentage of students using the drug: 6 percent of grade 7 students, 31 percent of grade 9 students, 39 percent of grade 10 students, and 53 percent of grade 12 students.
- Around one in four clients in selected Canadian drug treatment programs report that cannabis is a “problem” substance for them.

### **Medical uses**

- Artificially made cannabis is now available as a medicine. It works as a painkiller, controls nausea (feeling sick to one’s stomach) and vomiting, and increases appetite; it looks like it is useful for patients having chemotherapy and those suffering from AIDS-related anorexia. However the exact way in which cannabis works is unknown.
- In Canada, there are two prescription forms of artificially made cannabis available: pill and spray. In pill form, it is used to increase appetite and reduce nausea and vomiting among cancer and AIDS patients; as a mouth spray, it is used as a pain medication for people who have multiple sclerosis.
- In 2001, Canada became the first country to start a system controlling the use of marijuana as medicine, as a result of pressure from the courts.
- Currently, people who suffer from incurable illness, multiple sclerosis, spinal cord injury, epilepsy, severe pain and weight loss from cancer or AIDS, and very bad arthritis can get marijuana for medical reasons through a doctor (in 2004, less than 1,000 people did this).



## AMPHETAMINES AND METHYLPHENIDATE (RITALIN)

### Classification

Central nervous system stimulants

### Immediate and short-term effects

- At low doses, effects include increased alertness, energy, and a feeling of well-being, but can also include nervousness, decreased appetite, rapid heart beat and breathing, increased blood pressure, sweating, enlarged pupils, and dry mouth.
- A person may become talkative, restless, excited, feel powerful, superior, aggressive, and hostile or behave in a strange, repetitive way.
- At higher doses, a person may feel happy and excited. Smoking or injecting amphetamines can produce a feeling described as extremely pleasurable that lasts a few minutes.
- Very large doses cause blushing, very fast or unsteady heartbeat, shaking, severe paranoia, and frightening hallucinations. Large doses can also cause death from burst blood vessels in the brain, heart failure, or very high fever.
- Violence, accidental or not, is the leading cause of amphetamine-related deaths.
- Overdose can cause delusions, hallucinations, high fever, delirium, seizures, coma, stroke, heart failure, and death.
- Use with alcohol and other drugs is especially dangerous because it leads to very unpredictable effects.

### Effects and harms from long-term use

- Long-term heavy users tend to be malnourished because these drugs make you lose your appetite.
- Long-term users are also likely to experience “amphetamine psychosis,” an experience similar to paranoid schizophrenia that usually disappears after the drug leaves the body.
- Amphetamine users can develop violent tendencies.

### Use during pregnancy

- Babies born to amphetamine users are more likely to be born prematurely, have low birth weight, have a higher risk of birth defects, and experience withdrawal symptoms like distress and drowsiness.



### **Amphetamines, methylphenidate and dependence**

- Regular users develop tolerance and will experience withdrawal when they stop use.
- After long-term use, even using small amounts, users can develop psychological dependence.
- Regular use at high doses can cause extremely obsessive use of the drugs.
- Quitting can result in extreme tiredness, disturbed sleep, anxiety, hunger, depression, and suicidal thoughts.
- Intense cravings along with a desire to avoid physical withdrawal symptoms mean that users may go to great lengths (including using violence) to get the drug.

### **Amphetamines, methylphenidate and the law**

- The laws for amphetamines and methylphenidate are part of Schedule III of the Controlled Drugs and Substances Act. The fine for possession can be up to \$1,000 or going to prison for up to six months, or both (summary conviction).
- The penalties increase for further (repeat) offences and with larger amounts in possession (e.g., trafficking) can result in going to prison for up to 10 years.

### **Use of amphetamines and methylphenidate in Nova Scotia**

- There is no information available about the use of amphetamines or methylphenidate (Ritalin) in the general population of Nova Scotians.
- In 2007, about 6.6 percent of students in grades 7-12 in Nova Scotia reported using either amphetamines or methylphenidate without a prescription in the past year.





## MESCALINE AND PSILOCYBIN (MAGIC MUSHROOMS)

### Classification

Hallucinogens

### Immediate and short-term effects

- Effects from psilocybin use are felt after about a half hour and last for several hours; effects from mescaline use also appear slowly and last 10–18 hours.

### Psychological effects

- As hallucinogens, they change the way a person sees, smells, hears, tastes, and experiences touch (e.g., visual effects, distortion of sound and changes in the sense of time and place).
- They may produce hallucinations; that is, a person may see or hear something that is not really there.
- Effects are unpredictable and emotional reactions can differ greatly.
- Difficulty concentrating makes it very dangerous to drive or operate machinery.
- Injuries and death can occur with these substances because of accidents caused by confusion and risky behaviour.

### Physical effects

- Dilated (enlarged) pupils, higher body temperature, increased heart rate and blood pressure, loss of appetite, sleeplessness, dry mouth, and shaking
- Nausea, vomiting, shivering, chills, and sweating often accompany use of these drugs.
- No evidence of fatal overdose

### Effects and harms from long-term use

- Daily use is uncommon because tolerance can build very quickly so that a few days' break is needed for the drug to keep having an effect.
- There are no significant physical problems resulting from long-term use.
- Depression, anxiety, and psychosis are a possibility, particularly among people who are more likely than other people to develop mental health problems.



### **Use during pregnancy**

- Little is known about the effects of these hallucinogens on pregnancy.

### **Mescaline, psilocybin and dependence**

- These substances do not appear to cause physical dependence, even after long-term use.
- Regular users can become psychologically dependent (i.e., they feel like they need the drug and without it, they get anxious or even panicky).

### **Mescaline, psilocybin and the law**

- Mescaline and psilocybin are governed by Schedule III of the Controlled Drugs and Substances Act. Conviction for possession of these drugs can result in a fine of up to \$1,000 or going to prison for up to six months, or both.
- Further (repeat) offences or possession of larger amounts can result in larger penalties (e.g., trafficking and related activities can result in imprisonment for up to 10 years).

### **Use of mescaline and psilocybin in Nova Scotia**

- In 2004, a very small percentage of Nova Scotians (1.5 percent) reported having used any hallucinogen (could include LSD, PCP, mescaline, or psilocybin) in the past year.
- In 2007, about 7.7 percent of students in grades 7-12 in Nova Scotia reported having used mescaline or psilocybin in the past year.



## METHYLENEDIOSYMMETHAMPHETAMINE (MDMA-ECSTASY)

### Classification

Stimulant (with hallucinogenic effects)

### Names

ecstasy, E, XTC, Adam, euphoria, X, MDM, and love doves

### Origins and ingredients

- This substance usually comes in gelatin capsules or tablets.
- Pills can be any colour and may have a design on one side such as a dove or a diamond.
- It can also come as a powder, which is snorted or, less commonly, dissolved and injected.
- As with all illegal drugs, it is impossible to know exactly what chemicals might be found in a pill that is supposed to be ecstasy; the actual amount of ecstasy in a tablet can vary greatly.
- Effects of taking a moderate dose start after 20–60 minutes (longer if on a full stomach) and can last for 3 to 6 hours.
- “Herbal ecstasy” (spelled wrong on purpose to set it apart from MDMA) has been marketed as a natural and legal alternative to ecstasy. It is a blend of herbs and compounds that usually include ephedra and caffeine. Users often think that “natural” products imply “safe” products. However, these products can be quite harmful. Health Canada has warned that products containing ephedra/ephedrine have led to serious health problems (such as stroke, heart attacks, heart rate irregularities, seizures, and psychoses) and death.

### Immediate and short-term effects

- At first the pupils become enlarged, the jaw tightens, and there is often a short period of nausea, sweating, and dry mouth and throat.
- Blood pressure and heart rate increase, and loss of appetite is common.
- Many users experience a rushing feeling at first followed by an odd combination of energy and calm.
- Loss of anger, the ability to understand and feel for other people, and an increased sense of being able to communicate are commonly reported.
- Some users also report an increased sense of their surroundings, greater appreciation of music, and more intense sexual and sensual experience.



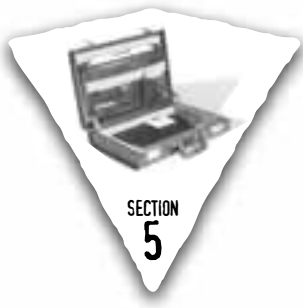
- Some users have bad experiences, including depression, sleep problems, intense fear and worrying, confusion, and unpleasant distortion of the senses. These experiences may, in some way or other, last for days or even weeks. This is more likely if users take high doses or are already feeling anxious or unstable.
- Disorienting effects may make accidents more likely. Deaths that have been linked to ecstasy have mainly been connected with non-stop dancing in hot, crowded clubs, which resulted in hyperthermia (overheating) and severe dehydration. This is because ecstasy can interfere with the body's ability to regulate its temperature.
- After taking ecstasy, users may feel very tired and need a long period of sleep to recover.
- Regular use may lead to sleep problems, lack of energy, dietary problems (including anorexia nervosa), and feeling depressed or anxious.
- Increased vulnerability to colds, flu, and sore throat may follow.

### **Effects and harms from long-term use**

- Although little is known about the long-term effects of regular use, there are definite concerns around learning, behavioural, and emotional changes.
- Depression, mood changes, and disrupted sleep patterns can occur in the week after use.
- Users may experience flashbacks or psychosis.
- Problems with short-term memory can occur (it is not clear if these changes are permanent or not).
- Severe liver damage can occur shortly after taking ecstasy, usually because of hyperthermia (overheating).
- Liver damage, apparently unrelated to hyperthermia, can also occur days or weeks after even a few times using ecstasy.

### **MDMA and dependence**

- People who use ecstasy regularly for several weeks or months need larger amounts to feel the same effects.
- There is little information on whether regular ecstasy users experience dependence or withdrawal symptoms if they quit.
- Psychological dependence on the feelings of euphoria and calmness and the lifestyle around ecstasy use is not uncommon.



### **MDMA and the law**

- As a hallucinogen, ecstasy is governed by Schedule III of the Controlled Drugs and Substances Act. Conviction for possession of these drugs can result in a fine of up to \$1,000 or going to prison for up to six months, or both.
- Further (repeat) offences or possession of larger amounts can result in larger penalties (e.g., trafficking and related activities can result in imprisonment for up to 10 years).

### **Use of MDMA in Nova Scotia**

- There is no information available on ecstasy use in the general population.
- Nova Scotia students were asked about ecstasy use for the first time in 2001. At that time, 4.4 percent report that they had used the drug in the past year.
- In 2007, about 7 percent of students in grades 7-12 in Nova Scotia reported having used MDMA (ecstasy) in the past year.
- As with other substances, the higher the grade, the larger the percentage of students using the drug: 0.8 percent in grade 7, 6.7 percent in grade 9, 8.6 percent in grade 10, and 11.3 percent in grade 12.
- The percentage of males and females reporting using MDMA is about the same.



## PHARMACEUTICAL (PRESCRIPTION) DRUGS

### Classification

The most commonly prescribed drugs that affect mood and behaviour fall into the categories of stimulants, opiates, and CNS depressants.

#### STIMULANTS

- At one time, prescription stimulants were more commonly available. However, the risk that they can produce serious problems linked to dependence has led to a change in prescribing practice.
- Stimulants are now prescribed for treating only a few health conditions, including narcolepsy (a sleeping disorder where a person cannot help suddenly falling asleep), and attention-deficit hyperactivity disorder (ADHD).
- Methylphenidate (Ritalin) is commonly prescribed in these cases. For people with these disorders, this drug has a calming rather than stimulating effect. However, others seeking a stimulant effect sometimes abuse them.

#### OPIATES

- Drugs from the opiate family (sometimes referred to as narcotics) are quite useful in treating pain (e.g., codeine, morphine).
- Because drugs in this family can also produce feelings of pleasure, they are used non-medically as well. Effects include drowsiness, constipation, and, with larger doses, slowed breathing.
- Taking a large single dose (such as through injection with a needle) can stop breathing and cause death.
- Because tolerance develops with long-term use and because withdrawal is difficult, dependence on these drugs happens easily.
- **OxyContin**, an opiate-like substance that is very effective in managing severe pain, deserves special mention:
  - Its form can be altered, making a substance that some are using non-medically because of effects similar to heroin. It is highly addictive when used this way.
  - Hundreds of deaths have occurred in the US as a result of overdose, and a growing number of deaths have been reported in Atlantic and Eastern Canada in the past five years.

**CNS DEPRESSANTS**

- These substances slow down normal brain function.
- Barbiturates, also called “downers,” were developed to treat sleep problems, anxiety, tension, high blood pressure, and seizures. Some are used as anesthetics.
- Benzodiazepines have replaced barbiturates in the treatment of many disorders. They are usually prescribed to treat anxiety and nervousness, to relax muscles, to control certain types of muscle spasm, and to treat sleep problems. Although they are safer and have fewer side effects than barbiturates, they can also produce dependence and are generally recommended for short-term use only.
- CNS depressants should not be combined with any medication or substance that causes drowsiness, including alcohol, opiate pain medicines, or certain over-the-counter cold and allergy medications. If combined, they can multiply each other’s effects and slow breathing and the heart to the point of death.

**Control of pharmaceutical products**

The pharmaceutical industry produces hundreds of drugs that can affect a person’s mood and behaviour. These all have medical uses that can provide real benefits when used responsibly. Several groups play a role in controlling these drugs and making sure they are used responsibly:

- Governments need to make sure that scientific proof of safety and effectiveness of new drugs is available, keep an eye on the production, sale, and distribution of these products, and make sure there is a balance between public health and the business interests of the pharmaceutical companies.
- Pharmaceutical companies must provide full, accurate information on the benefits and problems that may result from use.
- Physicians and pharmacists need to have a strong understanding of the product and the patient, communicate this information to the patient, and watch for signs of dependency.
- The patient needs to be honest about their condition and their use of the drug. Because it is possible for a person to become dependent on most of these substances, sometimes being responsible might mean looking for alternatives to pharmaceutical drugs, for example, by improving relaxation and stress-management skills.



### **Use of pharmaceutical products in Nova Scotia**

- There is no information available on how common pharmaceutical medicine use is in Nova Scotia.
- In 2007, about 6.6 percent of students in grades 7-12 in Nova Scotia reported having used amphetamines or Ritalin without a prescription in the past year. Like with most other substances, use increases through the grades (from 2.5 percent of grade 7s reporting using the drugs in the past year to 8.2 percent of grade 12s).
- In 2007, 3.0 percent of students reported non-medical use of tranquilizers.





## ANABOLIC STEROIDS

### Classification

Ergogenic or performance-enhancing drugs

### Origin and uses

- These drugs are available legally only by prescription to treat conditions that take place when the body produces abnormally low amounts of testosterone, such as delayed puberty and some types of impotence. They are also prescribed to treat body wasting in patients with AIDS and other diseases that result in loss of lean muscle mass.
- Athletes and others abuse anabolic steroids to improve performance and also to improve physical appearance. These drugs increase lean muscle mass, strength, and endurance, but they have not been found to improve acrobatic skills, cardiovascular capacity, or recovery from activity.
- Anabolic steroids are swallowed or injected. Athletes who cheat in this way take doses 5 to 10 times larger than those prescribed medically. Body builders and weight lifters may take doses up to 200 times larger.
- Selling anabolic steroids for non-medical use is illegal. Most of these steroids come from the “black market,” and like any illegal substance they may be mixed with other substances that may be toxic.

### Immediate and short-term effects

- Anabolic steroids cause unpleasant side effects like acne, high blood pressure, and increased cholesterol levels (which can lead to heart problems). Users can also have sexual problems.
- People who inject anabolic steroids run the added risk of getting or passing on HIV/AIDS or hepatitis, which causes serious damage to the liver.
- Many users report feeling good about themselves while on anabolic steroids. Even so, researchers report a range of other psychological effects including anxiety, crankiness and aggression (“roid” rage), insomnia, depression, mania, and psychosis. Depression often occurs when the drugs are stopped and may contribute to dependence on anabolic steroids.



### **Effects and harms from long-term use**

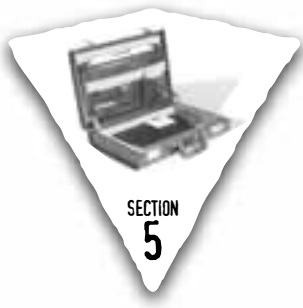
- In teenage and young adult males who use large amounts (in some cases equal to 100 to 200 mg testosterone weekly), anabolic steroids may cause baldness, shrinking of the testicles, reduced sperm count, increased risk of tumours of the testicles and prostate, and enlargement of breasts.
- Women who use anabolic steroids are at risk of “masculinization,” including development of body hair, breast reduction, deepened voice, and lighter periods or no periods at all. Many of these effects are permanent.
- Both sexes may experience liver damage and cancer, acne, increased chance of ruptured tendons, damaged joints, jaundice, swelling of feet and ankles, increased blood pressure, and cardiac problems such as increased risk of heart attack and enlarged heart.
- Anabolic steroids are dangerous for teenagers because they may affect growth.
- Research also shows that some users might turn to other drugs to deal with some of the negative effects of anabolic steroids.

### **Steroids and dependence**

- Users do not appear to develop tolerance. This means that larger doses are not needed over time to achieve the same effects. However, dependence on steroids does occur. Users can experience both physical and psychological withdrawal symptoms when they stop taking steroids. These include nausea, headache, sweating, dizziness, irritability, and depression.

### **Steroids and the law**

- In Canada, anabolic steroids are regulated by the Controlled Drugs and Substances Act (Schedule IV). Trafficking and related offences can result in imprisonment for up to three years. The International Olympic Committee banned steroid use in 1975. Since then, most sports organizations have put steroids on their list of banned substances.



### **Use of steroids in Nova Scotia**

- There is no information available on the use of anabolic steroids by Canadians.
- Among Nova Scotia students in 2007, 1.7 percent said they had used steroids in the past year.
- In 2007, the use among Nova Scotia students was more common among boys (2.5 percent) than girls (0.7 percent).



## EMERGING ISSUE: METHAMPHETAMINE (CRYSTAL METH)

### Note

*Information about methamphetamine is intended for the teacher's information only rather than for use with students, unless local data indicate otherwise.*

- Methamphetamine (called speed, crystal meth, ice, or crank) is often grouped with substances referred to as amphetamine-type stimulants (ATS), which also include ecstasy and amphetamine.<sup>3</sup> Among ATS, methamphetamine has a particularly high potential for abuse and addiction.
- Methamphetamine can be found in powder form or in a waxy form known as “base,” “paste,” “wax” or “point.” “Crystal” or “ice” (d-methamphetamine hydrochloride) is usually a clear crystal of high purity that consists of a recrystallized powder. Methamphetamine can also be sold in capsules or tablets, generally referred to as speed in this form.
- The “high” experienced when using methamphetamine has been compared to that of cocaine, though methamphetamine is relatively cheap when compared to cocaine, and the effects last much longer.<sup>4</sup>

### Immediate and short-term effects and harms

- At low doses, effects generally include increased alertness and energy, a feeling of well-being, decreased appetite, rapid heart beat and breathing, increased blood pressure, sweating, dilated pupils, elevated body temperatures, and dry mouth.
- At higher doses, a person may experience euphoria and a sense of feeling powerful and superior. Other effects include more intense sexual pleasure and endurance, becoming talkative, restless, excited, aggressive, or paranoid, or behaving in a bizarre, repetitive fashion. The positive attributes of crystal methamphetamine most cited by one sample of users are energy, aphrodisiac, sociability, euphoria, and loss of inhibitions. Weight loss may be experienced, which is often seen as a benefit, by women especially.
- Later in the high there is a state of agitation that can lead to violence in some. Problems and negative features often mentioned by users in two studies include the comedown, paranoia, inability to sleep, hallucinations, weight loss, and aggression.<sup>5,6</sup>

<sup>3</sup> Deguire A.E. (2005). *Methamphetamine*. Ottawa: Canadian Centre on Substance Abuse.

<sup>4</sup> Zickler P. (2004). Long-term abstinence brings partial recovery from methamphetamine damage. *NIDA Notes* 19(4). [http://www.drugabuse.gov/NIDA\\_notes/NNvol19N4/LongTerm.html](http://www.drugabuse.gov/NIDA_notes/NNvol19N4/LongTerm.html)

<sup>5</sup> Brecht M.L., O'Brien A., von Mayrhauser C., & Anglin M.D. (2004). Methamphetamine use behaviors and gender differences. *Addictive Behaviors* 29(1):89-106.

<sup>6</sup> Degenhardt L., Barker B., & Topp L. (2004). Patterns of ecstasy use in Australia: Findings from a national household survey. *Addiction*, 99(2): 187-195.



## Effects and harms from long-term use

- Malnourishment may occur, because these drugs suppress the appetite.
- Amphetamine psychosis, which can include paranoia and sensation of insects crawling on the skin, usually ends upon stopping use; however, a small percentage fail to recover completely (they may have had mental health problems before starting to use amphetamines).<sup>7,8</sup>
- Violent tendencies that are linked to psychosis are quite common among long-term users.<sup>9</sup> Violence, accidental or otherwise, is the leading cause of amphetamine-related deaths.
- Depression, cognitive difficulties, such as problems with abstract thought, capacity to learn and retain new information, and verbal competency, and memory problems may occur.
- Sexual dysfunction, an inability to achieve or maintain an erection, may result, leading to simultaneous use of erectile dysfunction drugs like Viagra by some. Rough sex presents a risk of bleeding and infection from blood-borne diseases.
- High rates of HIV are found among gay and bisexual meth/amphetamine injection drug users, a result of needle sharing, an increased number of partners, and increased rates and incidence of unprotected sex.
- Physical damage may include dental erosion, skin lesions, lung problems from smoking, inflammation of heart lining, and damage to dopamine- and serotonin-related brain cells.<sup>10</sup>
- Social problems associated with the used of methamphetamine include family strain/breakup, severe legal penalties, sex trade/drug dealing/petty criminal activity for drug money, unplanned pregnancy among women, and isolation due to criminality.
- Overdose can cause delusions, hallucinations, high fever, delirium, seizures, coma, stroke, heart failure, and in rare cases, death. Death can result from use as a consequence of burst blood vessels in the brain, heart failure, or very high fever.
- To find the desired effects, users may take higher doses of the drug, take it more frequently, or change their method of drug intake, with dependence often the result.
- Withdrawal effects include sleeping disturbances (nightmares, either sleeping a lot or hardly at all) shakiness, increased appetite, irritability, depression (which may last for months after the last binge), anxiety, and craving for the drug.

<sup>7</sup> Srisurapanont M., Kittirattanapaiboon P., & Jarusuraisin N. (2005). Treatment for amphetamine psychosis. The Cochrane database of systematic reviews. *The Cochrane Library*, 3.

<sup>8</sup> McKetin R. & McLaren, J. (2004). *The methamphetamine situation in Australia: A review of routine data sources*. Perth, AU: NDARC Technical Report No. 172.

<sup>9</sup> Ibid.

<sup>10</sup> It is not yet clear whether this damage reverses itself upon quitting.



### **Effects on the community and the environment**

- Threat to safety of home occupants, first responders, and neighbours may be caused by clandestine labs in residential areas, especially since labs are usually discovered following a mysterious explosion or fire. Residents may lack a sense of public safety.
- Environmental harms may be caused by the production of methamphetamine and the disposal of the resulting waste. The chemicals involved are corrosive, explosive, flammable, and toxic.
- There are the economic impacts associated with community resources being diverted to deal with these issues and with reduced real estate values.

### **Methamphetamine and the law**

In 2005, methamphetamine was moved from Schedule III of the Controlled Drugs and Substances Act to Schedule I of the act, which provides access to the highest maximum penalties. The maximum penalty for production and distribution of methamphetamine has increased from 10 years to life in prison.

A number of jurisdictions in Canada and the US have introduced legislation to limit the availability of “precursor” chemicals used to manufacture methamphetamine.

### **Use of methamphetamine in Nova Scotia:**

Nova Scotia students were asked about methamphetamine (also known as crystal meth or speed) for the first time in 2007. Among Nova Scotia students, 1.6 percent said they had used methamphetamine in the past year.

The use of this drug does not follow the typical trend of overall increase in use as the grade increases. In grade 7, 1.1 percent reported use, 2.4 percent in grade 9, 2.2 percent in grade 10 and dropping to 0.8 percent in grade 12.



## APPENDIX D: ASSESSMENT RUBRICS

### Assessment of student progress

Rubrics are very useful for teacher assessment or student self-assessment. They evaluate a student's performance based on the sum of a full range of criteria rather than a single numerical score. The criteria are logically linked to the outcomes intended for a learning activity. For example, with a small-group discussion format, a teacher may intend for students to demonstrate "new knowledge" and "use of effective communication styles," and a rubric can help assess progress in these areas. Creating or adapting a rubric requires a teacher to be clear on his or her objectives. When developed with students or shared with them beforehand, rubrics can clarify for the students what is expected of them. All rubrics contain three common features<sup>11</sup>:

1. They focus on measuring a stated objective (e.g., performance, behaviour, or quality). Example: Role play a situation that portrays peer influence.
2. They use a range of logically linked criteria to rate performance. Examples of criteria for role playing: Clarity of speech; expression of feeling; use of body language; believability of the role; accuracy of the role.
3. They contain specific performance characteristics, often arranged in four levels indicating the degree to which a standard has been met. Example: Demonstrated *complete/strong/adequate/weak* accuracy of the role.

### Advantages to using rubrics<sup>12</sup>

- Teachers can increase the quality of their direct instruction by providing focus, emphasis, and attention to particular details to direct student learning.
- Students have explicit guidelines regarding teacher expectations.
- Students can use rubrics as a tool to develop their abilities.
- Teachers can reuse or slightly modify an established rubric for many activities.

### Steps in creating and using a rubric<sup>13</sup>

- Determine the concepts to be taught. What are the essential learning objectives?
- Choose the criteria to be evaluated. Name the evidence to be produced.
- Develop a grid. Plug in the criteria and performance levels.
- Share the rubric with students before they begin writing.
- Evaluate the end product. Compare individual students' work with the rubric to determine whether they have mastered the content.

<sup>11</sup> Adapted from the Kennesaw (Georgia) State University's Education Technology Center's Intech technology professional development program's description of rubrics (<http://edtech.kennesaw.edu/intech/rubrics.htm>).

<sup>12</sup> From The Advantages of Rubrics, Teachervision.com. [http://www.teachervision.com/teaching-methods/rubrics/4522.html?detoured=1#what\\_is\\_a\\_rubric](http://www.teachervision.com/teaching-methods/rubrics/4522.html?detoured=1#what_is_a_rubric).

<sup>13</sup> From Create an Original Rubric, Teachervision.com. <http://www.teachervision.com/teaching-methods/rubrics/4523.html?detoured=1>



**Sample rubric: Small-group discussion<sup>14</sup>**

<b>Criteria</b>	<b>Level 4</b>	<b>Level 3</b>	<b>Level 2</b>	<b>Level 1</b>
Preparation	Almost always prepared with required materials and prep work for discussion	Usually prepared with required materials and prep work for discussion	Often prepared with required materials and prep work for discussion	Rarely prepared with required materials and prep work for discussion
Accuracy of information presented	All information presented in the discussion was clear, accurate, and thorough	Most information presented in the discussion was clear, accurate, and thorough	Most information presented in the discussion was clear and accurate, but was not usually thorough	Information had several inaccuracies or was usually not clear
Listening skills	Always listened respectfully to the perspective of others	Usually listened respectfully to the perspective of others	Often listened to the perspective of others	Rarely listened and often interrupted others
Speaking style	Consistently used eye contact, tone of voice, and a level of enthusiasm in a way that kept the attention of the group	Usually used eye contact, tone of voice, and a level of enthusiasm in a way that kept the attention of the group	Often used gestures, eye contact, tone of voice, and a level of enthusiasm in a way that kept the attention of the group	Rarely used eye contact, tone of voice, and a level of enthusiasm in a way that kept the attention of the group

**Sample rubric: Role play**

<b>Criteria</b>	<b>Level 4</b>	<b>Level 3</b>	<b>Level 2</b>	<b>Level 1</b>
Accuracy and believability of role	Point-of-view, arguments, and solutions proposed were always realistic and consistently in character	Point-of-view, arguments, and solutions proposed were usually realistic and in character	Point-of-view, arguments, and solutions proposed were often realistic and in character	Point-of-view, arguments, and solutions proposed were rarely realistic and in character
Clarity of speech	Speech is always clear and easy to understand	Speech is usually clear and easy to understand	Speech is often always clear and easy to understand	Speech is rarely clear and easy to understand
Expression and body language	Always expresses emotion through voice, facial expression, and gestures	Usually expresses emotion through voice, facial expression, and gestures	Often expresses emotion through voice, facial expression, and gestures	Rarely expresses emotion through voice, facial expression, and gestures
Knowledge gained	Can clearly explain several ways in which his or her character "saw" things differently than other characters and can explain why	Can clearly explain several ways in which his or her character "saw" things differently than other characters	Can clearly explain one way in which his or her character "saw" things differently than other characters	Cannot explain any ways in which his or her character "saw" things differently than other characters

<sup>14</sup>The rubrics presented were adapted from samples provided in the Rubistar section of the 4teachers.org site provided by Advanced Learning Technologies in Education Consortia (ALTEC), hosted by the University of Kansas, <http://rubistar.4teachers.org/index.php>.





## APPENDIX E: RESOURCES

### Addiction Services locations with prevention staff

#### (A) ADDICTION SERVICES (SHARED SERVICE AREA)

##### South Shore Health

Addiction Services, Prevention and Health Promotion  
Fishermen's Memorial Hospital  
14 High Street  
PO Box 1180  
Lunenburg, NS B0J 2C0  
Tel: (902) 634-7325  
Fax: (902) 634-7169

##### South West Health

Addiction Services, Prevention and Health Promotion  
50 Vancouver Street  
Yarmouth, NS B5A 2P5  
Tel: (902) 742-2406  
Fax: (902) 742-0684

##### Annapolis Valley Health

Addiction Services, Prevention and Health Promotion  
Eastern Kings Memorial Community Health Centre  
23 Earnscliffe Drive  
PO Box 1180  
Wolfville, NS B4P 1X4  
Tel: (902) 542-6370  
Fax: (902) 542-6607

#### (B) ADDICTION SERVICES (SHARED SERVICE AREA)

##### Colchester East Hants Health Authority

Addiction Services, Prevention and Community Education  
East Hants Resource Centre  
Suite 15015, Commerce Court  
Elmsdale, NS B2S 2K5  
Tel: (902) 883-0295  
Fax: (902) 883-7037



**Cumberland Health Authority**

Addiction Services, Prevention and Community Education  
All Saints Hospital  
PO Box 700, Springhill, NS B0M 1X0  
Tel: (902) 597-8647  
Fax: (902) 597-3955

**Pictou County Health Authority**

Addiction Services, Prevention and Community Education  
Aberdeen Professional Centre  
1st Floor, 825 East River Road, New Glasgow, NS B2H 3S6  
Tel: (902) 755-7017  
Fax: (902) 928-0208

**C) ADDICTION SERVICES (SHARED SERVICE AREA)**

**Guysborough Antigonish Strait Health Authority**

**Addiction Services Prevention and Community Education**

23 Bay Street, 2nd Floor, Antigonish, NS B2G 2G5  
Toll Free: 1-888-291-3535  
Tel: (902) 863-5393  
Fax: (902) 863-0160

**Cape Breton District Health Authority**

**Addiction Services, Prevention and Community Education**

235 Townsend Street, 1st Floor  
Sydney, NS B1P 5E7  
Toll Free: 1-888-291-3535  
Tel: (902) 563-2590  
Fax: (902) 563-2062

**D) ADDICTION PREVENTION AND TREATMENT SERVICES**

**Capital District Health Authority**

**Prevention and Community Education**

PO Box 896  
300 Pleasant Street, Dartmouth, NS B2Y 3Z6  
Toll Free: 1-866-340-6700  
Tel: (902) 424-8866  
Fax: (902) 424-0627



## READING LIST ON SUBSTANCE ABUSE FOR ADOLESCENTS

(Available at bookstores and public libraries)

Aker, Don. *The First Stone*. Toronto: HarperCollins, 2003.

Winner of the 2004 Ann Connor Brimer Award for Children's Literature, this book focuses on Chad, a 17-year-old who has been raised in several foster homes since the death of his alcoholic grandfather and his grandmother. Chad makes some bad decisions and becomes responsible for the hospitalization of Leeza, who is in a coma. Chad is sentenced by the court to assist with her rehabilitation. Neither Chad nor Leeza knows the role that Chad has played in Leeza's hospitalization. (Ages: 13+)

Fearnley, Fran (editor). *I Wrote on All Four Walls: Teens Speak out on Violence*. Toronto: Annick Press, 2004.

Nine teens tell different and dreadful stories of life in violent families and the choices they make to survive. (Ages: 15+)

Ferry, Charles. *Binge*. Rochester, MI: Daisy Hill Press, 1992.

Weldon Yeager is an 18-year-old alcoholic who is trying to recover and get back his former girl friend, Livvy. When the story begins, Weldon is in a hospital bed following a car accident in which he has run over four teenagers. Two of the victims have already died, and one of Weldon's feet has been amputated. Ending with the death of Livvy as a result of the accident, this short, tough story may result in some adolescents rethinking their attitudes towards drinking and driving.

Fischer, Jackie. *An Egg on Three Sticks*. New York: Thomas Dunne Books, 2004.

Set in the San Francisco of the 1970s, this humorous and hopeful novel describes Abby's attempts to keep her family together, be a 13-year-old, and obtain the love of her mother, following her mother's mental breakdown.



Flaming, Allen, and Kate Scowen (compilers). *My Crazy Life: How I Survived My Family*. Toronto: Annick Press, 2002.

This collection of real-life stories, compiled by two Toronto social workers, provides a truthful account of the desperate family situations and lives of several adolescents who overcame great personal difficulties and emerged as survivors. The stories describe life in families with mental illness, alcoholism and other forms of addiction, stealing, abuse, homosexuality, and loss of a parent through death or divorce. (Ages: 14+)

Foon, Dennis. *Double or Nothing*. Toronto: Annick Press, 2001.

This convincing story describes Kip's compulsive entanglement with high-stakes gambling. (Ages: 13+)

Musgrave, Susan (editor). *Nerves out Loud: Critical Moments in the Lives of Seven Teen Girls*. Toronto: Annick Press, 2001.

Seven women describe in a series of autobiographical chapters key moments or events that changed their lives as teenagers.

Stratton, Allan. *Leslie's Journal*. Toronto: Annick Press, 2000.

Leslie is dating Jason McCready, the new, extremely cool boy at her school. Soon Jason is trying to control Leslie's life. The realistic book deals with Leslie's struggle to find herself as she searches for approval.

Toten, Teresa. *The Game*. Calgary: Red Deer Press, 2001.

Nominated for a Governor General's Literary Award in the English juvenile literature category, this absorbing book focuses on the dysfunctional life of Dani Webster. As the story opens, we learn that Dani and her younger sister, Kelly, use a game to cope with their father's perfectionism and their mother's lack of involvement in their lives and that Dani has become a patient in the Riverbend Clinic, a psychiatric facility for teenagers with problems, because of her involvement with alcohol and drugs. It's at Riverbend that Dani encounters Scratch, the self-mutilator, and Kevin, a homosexual whose family are having difficulty acknowledging his sexual orientation. A friendship develops, which helps Dani regain her health and discover the truth about her family. (Ages: 14–17)



## WEBSITES RELEVANT TO STUDENTS AND TEACHERS<sup>15</sup>

These web links were active at the time of publication of this resource. It is not possible to make sure that these links remain active over time. Teachers are encouraged to consult the Department of Education website for an ongoing, updated list of active websites on alcohol and other drugs.

### For Students

**AADAC My Room:** A site for elementary and junior high students aged 11–13 years, produced by the Alberta Alcohol and Drug Abuse Commission (AADAC) <http://www.aadac4kids.com/index.asp>

**Be Drug Wise:** Health Canada’s site designed to provide teens with the information needed to make conscious, informed choices about alcohol and other drugs <http://www.drugwise-droguoisfute.hc-sc.gc.ca>

**Body Effects—How Alcohol Affects Your Body:** Interactive game on a site sponsored by the New Zealand government’s Alcohol Advisory Council <http://www.alac.org.nz/BodyEffect.aspx?PostingID=1550>

**Drinkingfacts.ca** A youth website to raise awareness about the harms associated with high-risk drinking. Developed by the Canadian Public Health Association for youth ages 14 – 18  
<http://www.drinkingfacts.ca>

**FreeVibe:** A site directed to teens sponsored by the US White House Office of National Drug Control Policy (ONDCP) <http://www.freevibe.com>

**Get It Straight!:** A site sponsored by the US Drug Enforcement Administration (DEA)  
<http://www.usdoj.gov/dea/pubs/straight/cover.htm>  
<http://www.alac.org.nz/BodyEffect.aspx?PostingID=1550>

**LifeBytes:** A site on health issues for young people aged 11–14 sponsored by the UK government that includes information on drugs and alcohol, among other topics <http://www.lifebytes.gov.uk>

**Mind, Body and Soul:** A site on health issues for young people aged 14–16 sponsored by the UK government that includes information on drugs and alcohol among other topics <http://www.mindbodysoul.gov.uk>

<sup>15</sup> Please note that although these websites were reviewed and considered generally appropriate when accessed in 2005–2006, it is important that teachers assess the sites to ensure that they are relevant and appropriate.



**Neuroscience for Kids—Alcohol:** A site directed to junior high youth by the University of Washington

*<http://faculty.washington.edu/chudler/alco.html>*

**NIDA for Teens: The Science behind Drug Abuse:** A site produced by the US National Institute on Drug Abuse (NIDA)

*<http://teens.drugabuse.gov/>*

**Talk to FRANK:** A site sponsored by the UK government that gives information and answers about drugs and alcohol

*<http://www.talktofrank.com>*

**Zoot2:** A site for adolescents produced by the Alberta Alcohol and Drug Abuse Commission (AADAC)

*<http://www.zoot2.com/index.asp>*

### **For Teachers**

**AADAC's Information for Teachers:** A site produced by the Alberta Alcohol and Drug Abuse Commission (AADAC) with curriculum guides and other classroom resources for educators

*<http://teacher.aadac.com/>*

**Be Drug Wise:** Health Canada's interactive website for youth and parents on drug information, particularly cannabis and alcohol

*<http://www.drugwise.gc.ca>*

**Best Advice Paper:** Alcohol and Drug Prevention Programs for Youth: What Works? Published by the Centre for Addiction and Mental Health (CAMH) in Ontario.

*[http://www2.camh.net/best\\_advice/best\\_prevention\\_youth.html](http://www2.camh.net/best_advice/best_prevention_youth.html)*

**Canadian Centre on Substance Abuse:** Canada's national addictions agency, with the mission of providing objective, evidence-based information and advice that will help reduce the health, social, and economic harm associated with substance abuse and addictions.

*<http://www.ccsa.ca>*



**Capital Health, Addiction Prevention and Treatment Services:** A links directory that includes a link to the Nova Scotia Department of Health publication *When Drugs Come to School: A Resource Manual for Student Substance Use and School-Based Policy*

<http://www.cdha.nshealth.ca> (Click on “Services”, then on “Addiction Prevention and Treatment Services”, and then on “Links”.)

**Global Youth Network: Youth & Drugs:** Website sponsored by the United Nations Office on Drugs and Crime. A global understanding of trends and prevention measures could be an asset to educators. There are free pamphlets that can be printed as well.

<http://www.unodc.org/youthnet/index.html>

**Nova Scotia Department of Health Promotion and Protection, Addiction Prevention Addiction Services:** Access to the latest reports and resources

<http://www.gov.ns.ca/hpp/addictionPrevention.html>

**Mind over Matter Index:** A free resource and curriculum guide for teachers of students in grades 5–9, produced by the US National Institute on Drug Abuse (NIDA)

<http://www.drugabuse.gov/MOM/MOMIndex.html>

**Media Awareness Network:** A site featuring lesson plans for teachers, including *The Target is You*, lessons on alcohol advertising, grades 4–8

<http://www.media-awareness.ca/>

**Ontario Curriculum Guide:** A resource outlining expectations and guidelines for each grade level from grade 1 through to grade 8 with full outlines of teaching plans and questions that can be used by educators

<http://sano.camh.net/guide.htm>

**Preventing Substance-use Problems among Young People: A Compendium of Best Practices:** A best practices report produced by Health Canada (2001)

[http://www.hc-sc.gc.ca/ahc-asclalt\\_formats/hecs-sesc/pdf/pubs/drugs-droguess/prevent/young-jeune\\_e.pdf](http://www.hc-sc.gc.ca/ahc-asclalt_formats/hecs-sesc/pdf/pubs/drugs-droguess/prevent/young-jeune_e.pdf)

**Your Life, Your Choice:** A web-based alcohol education resource for teachers of 13- to 14-year-olds sponsored by the Brewers Association of Canada in 2000

<http://www.2learn.ca/currlinks/Health/E/MainMenu/index.html>



## APPENDIX F: TEACHER EVALUATION FORM FOR A QUESTION OF INFLUENCE

This supplement was prepared with the aim of supporting teachers in fulfilling the Department of Education’s curriculum requirements (2007). In doing so, it also aimed to reflect the most current drug use trends, the best practices in drug education, and the input of a small selection of teachers and students.

Your reaction to the supplement, on having used it, would be very helpful to the Nova Scotia Department of Health Promotion and Protection and the Department of Education. Please rate the following:

	Very useful	Moderately useful	Not useful/ don't know
<b>Introductory sections (I–IV)</b>			
Underpinnings of this supplement.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting the most out of this supplement .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preparing to use this supplement .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Grade 7</b>			
Learning theme: How I influence myself .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning theme: How others influence me.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning theme: How I am influenced by the world around me.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wrap-up.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Grade 8</b>			
Learning theme: How I influence myself .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning theme: How others influence me.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning theme: How I am influenced by the world around me .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wrap-up.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Grade 9</b>			
Learning theme: How I influence myself .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning theme: How others influence me.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



