



**The Canadian
National
Institute
for the Blind**

CNIB School Activity Package for Canadian Educators and Students

All over Canada, people who are blind, visually impaired or deafblind are taking on new roles and accepting new challenges. As they become parents, computer engineers, defence attorneys, massage therapists, school teachers, politicians and academics, they will indeed change what it means to be blind and demonstrate that the old stereotypes no longer apply.

We appreciate your assistance in educating young people about blindness issues, especially eye safety, braille and the white cane. The white cane is the international symbol of blindness, the tool of travel, and, in the words of one blind person, “Nothing beats the white cane in terms of independence. The white cane is freedom in every sense of the word.” Similarly, braille literacy is as essential to independence for people who are blind or visually impaired as print literacy is to those who are sighted.

This year marks the 86th anniversary of The Canadian National Institute for the Blind. As a special awareness initiative for young people, we will once again include the School Activity Package on the CNIB Web site complete with interactive quizzes and a certificate of merit for students. You can visit the CNIB Web site at www.cnib.ca and let us know what you think by completing the evaluation form. As well, in 2000 we distributed the educational video “Young Heroes: Louis Braille” to every school across the country. We encourage you to show this educational and entertaining program to your students again this year.

We also encourage you to contact your local CNIB office and request guest speakers who are blind, visually impaired or deafblind, additional information, and videos that will assist you in planning your educational activities. Thank you for your participation — together we will change people’s perceptions and attitudes about blindness and visual impairment.

CNIB School Activity Package

Table of Contents

1) General Awareness	
• How much do you know about blindness?	3
• Sighted guide technique	11
• Classroom activities.....	15
• Perform a task using the sense of touch, rather than sight	16
2) Eye Safety	
• How to protect your eyes.....	17
• Activities & projects	21
• Eye safety quiz	22
3) Iris and Ivan	
• Introduction to Iris and Ivan	24
• Brainstorming about Iris and Ivan.....	26
• When you meet a person who is visually impaired.....	27
• Equipment	29
4) The Braille Code	
• History of Louis Braille	32
• Transcribing braille	34
• The braille system	35
• Braille your name/braille a message to a friend	36
• Crack the braille code.....	37
5) The White Cane	
• History of the white cane	38
• Different types of canes.....	39
• The white cane quiz.....	40
6) Appendix	
• Hot links for teachers.....	43
• Common causes of vision loss	46
• What is the CNIB?	51
• Who are the eye-care professionals?.....	52
• Teacher evaluation form.....	53
• Certificate of merit for students.....	56

(1) General Awareness

How much do you know about blindness?

1. What does “blind” mean?

“Blind” is a word used to describe people who cannot see at all. It’s okay to refer to someone who cannot see anything as being blind, although sometimes people refer to them as visually impaired – it’s a matter of degree. Very few people see nothing at all.

2. What does “visually impaired” mean?

“Visually impaired” is a phrase used to describe people who can only see very little. They see better with the assistance of technical aids such as magnifiers, telescopes, special glasses, and computers with special features such as large print.

3. What does “deafblind” mean?

“Deafblind” is a word used to describe people with both vision and hearing loss. The degree of loss is so substantial that it causes difficulty in accessing information, learning or participating in community activities. Each deafblind person is unique and has different needs depending on the nature of the vision and hearing loss and the stage in life at which they are affected.

4. How do people become blind, visually impaired or deafblind?

Up to 80% of blindness worldwide can be prevented, controlled, or successfully treated. Some people are born blind, visually impaired or deafblind. Others become visually impaired later in life from disease or from an accident, and others lose their vision as they get older.

Cataracts are the cause of blindness for approximately 50% of the world’s blind population. In North America, the primary causes of blindness are age-related. In developing countries, cataracts, diseases of the eye, and injuries are leading causes.

Usher syndrome is the most common cause of deafblindness that affects both vision and hearing. Hearing loss can occur at birth or shortly after. A progressive loss of vision, for example, as a result of an eye condition such as retinitis pigmentosa, can begin later in life. Other causes of deafblindness are aging, trauma, sexually transmitted disease, congenital rubella syndrome, CHARGE association, and cytomegalovirus.

5. What percentage of eye injuries are preventable?

90%.

6. How many people around the world are blind, visually impaired or deafblind?

In 2002, the CNIB helped more than 100,000 Canadians who are blind, visually impaired or deafblind. Since 1985, the number of people served by the CNIB has more than doubled. The dramatic increase continues to be fuelled primarily by aging. According to the World Health Organization, there are approximately 180 million people worldwide who are blind, visually impaired or deafblind, including between 40 and 45 million people who are blind.

These numbers will double within the next 25 years because of population growth and aging. Nine out of 10 people who are blind live in developing countries. China, India, and Africa account for approximately 60 per cent of blindness worldwide. In developing countries, people who are blind, visually impaired, or deafblind often live in poverty and isolation, with little access to education and support services.

7. How many different jobs are people who are blind, visually impaired or deafblind employed in?

Over 1,000 occupations. In general, people who are blind, visually impaired or deafblind can do anything that people with full vision can do, except drive a vehicle. However, in many countries, they experience unemployment rates several times higher than the national average.

8. Is being blind like being in the dark?

Not really. Most people still see some light. It's much like when you close your eyes.

9. How do I approach a person who is blind, visually impaired or deafblind?

It is a courtesy to introduce yourself to the person. When you approach a person who is deafblind, lightly touch his or her hand or shoulder, maintaining contact until he or she acknowledges your presence.

10. How can I speak to a person who is deafblind?

Intervenors are trained professionals who act as the “eyes and ears” of a person who is deafblind. They work in a variety of settings such as schools, the community, and the workplace. Intervenors are skilled in communication methods used by people who are deafblind. You may see the intervenor and deafblind person using visual and hand-over-hand sign language, finger spelling, or large-print notes. Intervenors are also trained as sighted guides and are knowledgeable about technical aids and devices.

The role of the intervenor is not to speak for the deafblind person but to communicate their thoughts and to act as a link in the conversation, if necessary. The intervenor provides access to information and forms a connection to the person's environment.

If you have questions about communication methods, sighted guide or general questions, ask a deafblind person directly. The intervenor will convey your message. When you speak with someone who is deafblind, remember to:

- Look and address them directly. For example, “Hi, my name is ...”
- Do not speak in the third person. For example, “Tell him/her that my name is ...”
- Tell them if you have no experience with working with an intervenor. The deafblind person or intervenor will be happy to explain what to do.
- Look at them when you are talking. Do not address your questions, comments, or conversation to the intervenor.
- Do not distract the intervenor.
- Avoid touching the intervenor.

11. Is it okay to use words like “look,” “see,” and “colour” when talking to people who are blind?

Yes, people who are blind, visually impaired or deafblind use the same everyday language as anyone else.

12. Do people who are blind or deafblind see colours?

No. But blind or deafblind people often use colours to describe an emotion or sensation. For example, some people associate the colour red with heat. The colour blue may mean cool or sad.

13. How do children who are blind, visually impaired or deafblind read?

Many children read braille, which is a special code of raised dots that are punched on thick paper. They also listen to tapes or CDs of books and magazines called talking books, or use a special computer. Many children with low vision hold their book very close to their face to read or use a magnifier, which makes the letters look bigger. Closed circuit televisions, which enlarge the letters on the screen, are also used. Children with both vision and hearing loss may use hearing aids, cochlear implants and other devices to help them hear and communicate.

14. Can someone who is blind, visually impaired or deafblind enjoy a play, movie, or TV?

Yes, people who are blind or visually impaired can enjoy a show through developed listening skills, audible cues, and by discussing it with friends. Descriptive video, which consists of a narrator's voice describing the scenery and action in a movie at times when there is no dialogue, is also available.

"Captioning" makes television programs and movies accessible for people who have hearing loss and some usable vision. Viewers can read the dialogue, which scrolls across the bottom of the screen. Sound effects such as a door slamming, sirens, or music are described in captioning.

15. Does a person who is blind automatically hear better than anyone else?

No, although practice and instruction can improve the listening skills of a person who is blind.

16. How do children who are blind, visually impaired or deafblind get from one place to another?

Children use white canes, guides dogs or the assistance of a person who is sighted to get around. They learn to memorize certain routes that they travel regularly or use tactile maps. Also, they learn how to use their senses of hearing, touch and smell to help them identify what's around them.

17. Can guide dogs see traffic lights?

Not really. Dogs are colour-blind. They take instructions from the person they are guiding, who gives voice and hand commands telling the dog when to cross the street.

18. Do guide dogs possess any unusual powers?

No. They are highly intelligent animals specially trained to react to commands from their owners.

19. How do children who are blind, visually impaired or deafblind play games like soccer, baseball and hockey?

Children who are blind or visually impaired often use brightly coloured equipment or equipment that is specially designed for people who can't see well. Children who are blind use beeping balls. They can catch or kick the ball by listening for the sound of the beep. Deafblind children use brightly coloured equipment as well as vibrating and tactile equipment. Sometimes an intervenor will assist the child by doing the activity hand-over-hand or with the child so that he or she can see and feel how it is done.

20. How do people who are blind, visually impaired or deafblind use the telephone?

Many people who have some vision have a large-print keypad. Some large-print keypads have numbers that are embossed and can be read by touching them with the fingers. Other people memorize the positions of the numbers on the pad or use directory assistance.

In many countries, special technology such as assistive listening devices, phone amplifiers and ringers, teletypewriter (TTY) accessed by both print and braille (telebraille) and relay services are available to help people who are deafblind.

21. How do people who are blind, visually impaired or deafblind tell the time?

People use watches with a system of raised dots in place of numbers and “talking” watches, which announce the time when you push a button. Children who are visually impaired wear watches with large print and sometimes use talking watches as well. Vibrating watches are also helpful.

22. How do people who are blind, visually impaired or deafblind go shopping?

To go shopping, people who are blind or visually impaired plan ahead and learn the layout of the store. Once they are familiar with the store, they can locate many items on their own, often using a magnifier or asking for assistance from the staff in the store for other products not easy to identify. Often a deafblind person and an intervenor will travel together in the community. The intervenor acts as a sighted guide ensuring that all movement is safe and barrier free and acts as a communicator providing information for the deafblind person.

23. How do people who are blind, visually impaired or deafblind identify money?

Many countries have paper currency in different sizes for different denominations. Some countries have tactile markings to denote different values of paper currency. In countries where there is no differentiation, some people who are blind, visually

impaired or deafblind use a billfold that has sections for different bills and a special purse with separate slots for coins. Others fold bills in different ways depending on their value, and identify coins by feeling the edges and memorizing the sizes. Most people use one method only.

24. How do people who are blind, visually impaired or deafblind cook?

People are taught to cook using safety techniques designed for them. They use equipment, such as stoves and microwaves, and ingredients that are labelled in large print and/or braille. Vibrating and flashing light systems are also helpful devices.

25. How do people who are blind, visually impaired or deafblind know that the food is cooked?

They can tell food is cooked by taste, texture, timing, and smell in the same way a sighted person knows.

26. How do people who are blind, visually impaired or deafblind find food on their plate?

Many people use the “clock method.” They picture the round plate as a clock. Either a sighted person tells them where the food is located “the peas are at one o’clock and the chicken is at seven o’clock” or they themselves always arrange the plate the same way – vegetables at one o’clock, meat at seven o’clock.

27. How do people who are blind, visually impaired or deafblind identify their clothes?

People put their clothes in the same place every time so that they can find what they want. They can either feel their clothes or they remember the order in which they are kept. Sometimes braille tags are sewn on each piece of clothing saying what it is, for example, “black T-shirt.”

28. How do people who are blind, visually impaired or deafblind tie their shoelaces?

People tie their shoelaces by touch and by memory in much the same way as a sighted person.

29. How do people who are blind, visually impaired or deafblind put on their make-up?

Putting on make-up is a skill that has to be learned by everyone. The make-up is labelled in large print or braille so that they can identify it.

30. Can people who are blind, visually impaired, or deafblind have children?

Certainly. And their children are not necessarily blind.

31. What do people who are colour-blind see?

People who are colour-blind have difficulty distinguishing certain colours such as red and green, or yellow and blue. For example, if there is an object that is orange and red, they would see the orange, but not the red. They would either see everything as orange or see grey where the red should be. However, people who are colour-blind can have otherwise perfect vision.

(1) General Awareness

Sighted Guide Technique

There are times when people who are blind or visually impaired need help from those who are sighted in getting around, even those who are very good at travelling alone. Occasionally, both the blind person and the sighted helper feel frustrated or embarrassed.

The sighted person, unsure of how to help, can fuss and overdo things; the blind person may feel foolish or annoyed, depending on his or her temperament. These notes are for sighted people helping blind people get around. Like most skills, the techniques suggested here improve with practice.

Linking Arms

For walking side by side indoors or out, stand by the person who is blind or visually impaired with your arms straight and fingers pointing to the ground. Ask your partner to take your arm. He or she should hold it firmly, just above your elbow, with the fingers on the inside of your arm and thumb on the outside. Your partner's elbow should be bent.

By holding your arm like this, your partner will be half a pace behind you, making it easier to tell when you are turning by the movement of your body. There is no need to move your arm. Check that your partner's feet are pointing in the same direction as yours; if not, you could soon be parting company!

Walking in single file

You will often need to do this in shops, restaurants, and other busy areas. Your partner will walk behind you instead of at your side.

So that your partner knows to move behind you, move your grip arm to the middle of your back, keeping it straight. Your partner should step in behind you, still holding onto your arm. He/she must keep his/her arm straight or risk stepping on your shoes. When there is room to walk side by side again, bring your arm back to its normal position at your side. Your partner will return to your side.

Changing sides

There will be times when you'll need to change sides, especially when negotiating a door. You stay where you are, while your partner, keeping his or her hand on your back, slips in behind you, transferring his/her hold to your other arm as he/she moves to your other side. It is important that your partner does not lose contact.

Doorways

Getting through a doorway is a little more complicated. If the door's hinge is on the left, your partner should be on your left with his/her left hand free. Describe it as 'door left.' The reverse applies if the hinge is on the right. As you turn the door handle and the door moves, your partner will know if it is moving inwards or outwards. As you walk through the doorway, your partner moves his or her free hand to the door, slides it along, and finds the handle. He/she follows you, slips his/her hand to the handle on the other side of the door, and closes it.

Alternatives

If your partner has a long cane or guide dog, it may be easier for him/her to let go of your arm, after you have said where the door is, and for your partner to go through it on his/her own. Warn your partner when you are coming to swinging doors so that he/she does not try to close them. Remember to open the door with your grip arm, or else your partner will not know it is being opened.

Steps and staircases

Whether you are going up or down, you should be one step ahead so that your partner does not take imaginary steps into space.

Going up stairs

Face the stairs, using the normal hold, and say 'stairs up.' Step up, placing your weight on the first step. Your partner will feel your arm move and this is his/her cue to start. As you climb the second step, he/she is on the first. When you reach the top, take a slightly longer stride forward and stop, allowing your partner to negotiate the last step. As your partner feels his/her arm resume its usual position, he/she will know that you are both on the level again.

Going down stairs

As you approach the stairs, say 'stairs down' and stop. Some people who are blind or visually impaired like to slide one foot to the edge of the stair to gauge the distance, before moving.

Put your foot on the first step; as your partner feels you move, he/she steps down, by which time you are on the second step. When you reach the bottom, stop and wait for your partner to draw level with you. He/she will know that he/she has reached the bottom because his/her arm returns to its normal position.

Seating

Never back a person who is blind into a seat. If possible, approach the chair centrally, but from whichever side, always place your grip hand on the back of the chair. This movement is enough to let your partner know the position of the back. Let your partner slide his/her hand down your arm to the chair back. It is now up to your partner to move into the chair, feeling the side of it with the calf of his/her leg and, if necessary, checking the seat depth with a hand.

Chairs with tables

Guide your partner to the table, using the above way to find the back of the chair. With one hand on the back of the chair, your partner moves the other forward to find the table; this will help to show how far to pull out the chair before sitting down.

A tip for a blind person who is not sure if he/she is 'square' to the table, is to bring the thumbs together on the edge or under the table, then slide them out to either side. If the edge seems to slant, adjust the chair accordingly.

Rows of seats

Most people who are blind or visually impaired prefer to be led into a row of seats—change sides if necessary. When you reach your row you and your partner side-step (step - pause - step) until your partner is central to his/her seat, and then leave the rest to him/her. When you are leaving, step to the other side of your partner so you can lead out in the same side-stepping manner you went in. When you are both in the aisle, you will need to about turn. Your partner releases his/her hold, and you turn to face each other, then turn again to face the exit. In other words you turn from 12 o'clock to 6 o'clock or 180 degrees.

This is not the end...

Hopefully, you will continue using these skills. Maybe you will improve upon certain ones to suit your individual circumstances. Perhaps this section has confirmed most of what you already know.

Whatever the circumstances, we wish you good speed, happy landing, and a grip relaxed enough to ensure normal blood circulation!

(1) General Awareness – Classroom activities

Classroom Activities

- Invite people who are blind or visually impaired to speak about how they cope with blindness in their daily life and describe the aids they use such as white canes, guide dogs and talking computers.
- Borrow a video from the CNIB or create a display of print materials on blindness.
- Ask students to take the part of Ivan who is blind and Iris who is visually impaired (*Please refer to section 3 – Introduction to Iris and Ivan*); how would everyday activities have to be altered to cope with blindness?
- List on the board all the new ways students could do things if they lost their sight.
- Ask students to write a print/braille message and have a classmate read it back to them (*Please refer to section 4 – The Braille Code*).
- Ask students to identify common things using other senses. Some examples:
 - smell** — various spices
 - hearing** — a sound effects soundtrack
 - taste** — spearmint vs. peppermint chewing gum
- Ask the class to create tactile pictures or maps using a variety of textured objects glued to a cardboard surface.

For more ideas, contact your local CNIB office.

(1) General Awareness - Classroom Activities

Perform a Task Using the Sense of Touch, Rather than Sight

Objective

To help students understand the importance of the sense of touch in acquiring information about their world.

Equipment

Paper bags containing four to six fairly similar objects, e.g. pencils, pens, chalk, buttons, various coins, bingo chips, checkers

Directions

1. Assign the students to work in small groups.
2. Ask students to reach into the bag and **silently** identify the objects.
3. Students should be encouraged to keep their discoveries to themselves until all group members have had a turn.

Discussion

- What was the easiest/hardest item to identify?
- How do people who are blind identify money?

(2) Eye Safety

How to Protect Your Eyes

Accidents resulting in eye injuries can happen to anyone. They are among the injuries most frequently treated in hospital and emergency rooms. The good news is that 90 per cent of all eye injuries are preventable. Get quick tips on how to keep your eyes safe by reading the following:

In the Home

Sometimes everyday products can cause serious burns when they touch your eye:

- If you are helping your parents clean up around the house, make sure that all spray nozzles point away from you before pressing the handle.
- Use sharp items such as pencils and scissors only in the presence of your parents.
- Paper clips, elastic cords, wire coat hangers, rubber bands, and fishhooks can cause serious eye injury.
- Stay out of the yard while anyone is operating a lawnmower. Stones and debris thrown from moving blades can cause severe eye injuries.

At School

- Always wear safety goggles when doing experiments with chemicals.
- Whether you're playing in the sandbox at school or on the beach, do not throw sand at your friends; it can hurt their eyes.
- Snowball fights can be dangerous if anyone gets hit in the face. Aim for the body and not the face.

Playing Sports

Sometimes playing sports can cause eye injuries. Play it safe and follow these suggestions:

- Have your parents find out what the best type of eyewear is for your sport and then wear it every time you play.
- Don't forget to use protective eyewear whenever you play baseball, racquetball, or hockey.
- Wear sunglasses when skiing to filter out ultraviolet (UV) rays and excessive sunlight.

Playing with Pets

Cats and dogs make great pets, but startling them could lead to serious eye injuries. Never try to pull any animal out by putting your face under a bed, sofa or other enclosed space and reaching in. It might be startled and lash at you in defence, scratching your face or eyes. It's best to call it or just wait for it to come out.

Fireworks

Fireworks can be fun on holidays, but it is important to remember that they can be dangerous. Fireworks are very unstable, and many people are hurt from fireworks every year.

- Always let an adult light the fireworks.
- Do not stand nearby when others are lighting fireworks.
- Never toss fireworks around carelessly or as a joke. This is highly dangerous.
- When playing with sparklers, do not hold them close to your eyes. If you are waving them around, try not to stand too close to your friends.

Playing with Water Balloons

- Playing with water balloons can cool you down on a hot summer day but be careful; launching water balloons with slingshots can inflict vision and life-threatening injuries.
- When playing with water guns, do not aim for the face and eyes — the water that shoots out could injure the eye.

Playing with Toys

- When you are finished playing with your toys, put them away so you don't trip and fall over a toy and injure yourself or others.

UV rays and Sunglasses

Many sources suggest that exposure to UV rays can hurt your eyes and lead to serious eye disease in mid to late life.

- It doesn't matter how old you are, you should always protect your eyes from the sun.
- Make sure that when you are in the sun, you either wear sunglasses or a hat.
- Protect yourself when you are in the sun especially between 10 a.m. and 3 p.m. This is when UV rays are at their strongest.
- Never look directly at the sun during an eclipse. They can be more dangerous than you realize. Because the moon blocks the bright light from the sun, your eyes don't squint when you look at the sun. But harmful rays still come through during an eclipse and can burn your eyes. Some people who have looked directly at the sun during an eclipse have gone blind.

Treatment of Eye Injuries

When an eye injury occurs, seek medical treatment immediately. It is advisable to have an ophthalmologist (eye physician and surgeon) examine the eye as soon as possible. The seriousness of an eye injury may not be immediately obvious. Even if you suspect that the eye injury is not serious, follow-up anyway with an eye-care professional to make sure your eyes are okay.

- If something is wrong with your eye or with your vision, let your teacher or parent know immediately.
- Never rub your eye. Blinking a few times is helpful if you have a speck or particle in your eye.
- If the eye has been hit, an ice-cold compress applied for 15 minutes will reduce any pain and swelling.
- For chemical splashes, flood your eye with clean water immediately for at least 15 minutes (for example, you can hold your head under a tap). After doing this, seek medical help immediately.

(2) Eye Safety

Activities and Projects

- Ask the members of your class to bring in various kinds of eye protection gear they might have in their homes. Then decide in what situation each protective device should be used.
- Conduct an eye-hazard scavenger hunt. Start by having each scavenger team think of 10 typical hazards and list them on a piece of paper. Some examples are: coat hooks, objects at eye level, (e.g. a shelf, low hanging branches on trees), and sharp objects such as scissors, etc. Then, exchange lists among the teams. Some hazards are difficult to actually collect. Have the teams describe in detail where they have found the hazards on their list. This activity can be conducted in your community, looking for blind corners, steps, and sidewalks that are in disrepair or unlit at night, etc.
- Find and collect newspaper articles about eye accidents that have happened in the school's area. How many different kinds can they find over a period of one month, one year?
- Invite an eye care specialist guest speaker such as an optometrist, ophthalmologist, or an industry safety representative to talk to your class about eye safety.
- Design an exhibit on eye safety, eye hazards, or eye first aid for display in your class or school, for example, an I Care/Eye Care poster illustrating eye safety and protection.
- Find out what eye safety regulations apply to your school. What is the law and who makes and enforces regulations. Prepare a talk or demonstration on eye first-aid procedures as a class activity
- Discuss different cues in the environment that assist people who are blind to navigate. (Some examples could include edging on stairs, handrails, braille in elevators, audible traffic lights, etc.) Then ask the students to bring in a list of such cues they have found over the following week.

(2) Eye Safety

Eye Safety Quiz

Answer true (T) or false (F) for the following statements and learn all about eye safety.

1. Looking at the sun is not harmful. T F
2. Most eye injuries to children occur in play or sport. T F
3. Reading and writing can be done in almost any level of light. T F
4. Spraying aerosols towards the eyes is dangerous. T F
5. The best way to remove a speck is to rub the eye until tears wash it away. T F
6. I can light fireworks when adults are around. T F
7. When playing hockey or football, always wear a helmet with an eye shield. T F
8. It is okay to throw sand in the playground. T F
9. When playing with animals that you know, you should not worry about them clawing you. T F
10. You could hit and damage someone's eye with a snowball. T F

2) Eye Safety

Eye Safety Quiz - Answers

1. **False:** Looking at the sun can cause injury, even if there is no discomfort.
2. **True:** Two-thirds of eye injuries occur in play or sports, especially when unsupervised.
3. **True:** Eyes adjust to various lighting, but tire if used in poor light for too long.
4. **True:** This may cause serious irritation to the eye.
5. **False:** Eyes shouldn't be rubbed. Remove the speck by lifting one eyelid over the other, blinking a lot, and letting tears wash it away.
6. **False:** Having an adult around does not prevent fireworks injuries. If you have fireworks at home, let your parents light them.
7. **True:** Always wear protective head/eye gear when you play sports.
8. **False:** Grains of sand can irritate the eye and cause scratches on the cornea. (The cornea protects the inside of the eye.)
9. **False:** If an animal you know or your pet is startled or feels threatened, it could still lash out at you and scratch your face and eyes.
10. **True:** A snowball could also include little stones and dirt that can hurt people if it hits them in their eyes.

3) Introducing Ivan and Iris

Introducing Iris

Hello, my name is Iris, and I am visually impaired. That means I don't see things as well as you do. I have to wear glasses to help me see. Ever since I was a baby, I have worn glasses that help me to focus on objects.

But even with my glasses, I can't see the blackboard and I can't read books with small writing.

I need good light to read, and the books I use are in large print. The work the teacher gives me has to be enlarged on the photocopier or computer screen so I can read it too. But not being able to see as well as you doesn't stop me from doing the same things you do.

I like music and am learning to play the piano. I like playing with my dog and going to the park with my friends. I like to go to the movies and to the beach. I am a good swimmer and have even been fishing with my dad.

I go to a school just like yours, with lots of other kids who can see. My favourite subjects are math and spelling. To help with my schoolwork, I use a computer with a voice inside that reads aloud as I type work into it and reads it back to me so I can check it. I use my computer because I can't see well enough to write easily.

The best part about school is the friends I have made. They help me, and I help them. Sometimes they tell me what's on the blackboard and help guide me around the school. Sometimes I help them with their math.

But the most important thing about my friends is that they don't treat me as if I can't do things just because I am visually impaired. We have a lot of fun together.

3) Introducing Ivan and Iris

Introducing Ivan

Hello, my name is Ivan, and I am blind. That means I don't see at all. I was born blind. Although I have never been able to see, I have learned how to understand the world around me.

I can read braille and I really love reading books in the same way sighted kids learn how to enjoy reading print. The only difference is that I read with my fingers instead of my eyes.

I also enjoy listening to talking books on my computer, digital talking book player, or audiotope player. You might think it strange, but I talk about reading books in braille or on audiotope, even though I read through my fingers or listen through my ears.

I love to do all the things you like to do, and my friend Iris does too, even though she has a tiny bit of sight and I have none. I like playing with my dog, going swimming, listening to music, or just hanging out with my friends.

I like going to the movies with my friends, but I also like watching descriptive videos at home. Those are movies that describe the action during the scenes when there is no dialogue.

Like Iris, I go to a school with kids who can see. My favourite subjects are history and English. I use a computer with a Braille keyboard and voice output, so I can check what I have done.

And I agree with Iris—the best part of school is the friends I have made. They help me “see” things I can't see, and I help them with things that aren't so visible.

Courtesy of Royal Victorian Institute for the Blind

3) Introducing Ivan and Iris

Brainstorming about Iris and Ivan

Brainstorm ways your class could help Iris and Ivan if they were in your school. Discuss some of the issues/questions below.

1. If Iris or Ivan were in your class what might they need?
2. Would you know what to do if you met them?
3. Would you know how to guide Iris or Ivan around the school?
4. Would you understand how Iris or Ivan “sees” and how their eyes work?
5. Would you know about the special equipment they use?
6. If you didn’t know about these things, how would you find out about them?

3) Introducing Ivan and Iris

When You Meet a Person Who is Visually Impaired

If you meet someone like Iris or Ivan, there are many ways you can help him or her.

- Always introduce yourself when you meet. Tell them your name. Even though they may know you, they may not recognize your voice.
- When you are talking to people who are blind or visually impaired and you need to walk away, tell them that you are leaving so they are not left talking to themselves.
- If you are in a group with a person who is blind or visually impaired, tell the person the names of the people with you. Use people's names when you are talking so that the person who is blind knows to whom you are speaking.
- If you want to ask a person who is blind a question, just ask that person directly, not the person he or she is with. Remember, just because people are blind, it doesn't mean they can't talk.
- Don't be afraid to use words like "see," "look," and "watch" with someone who is blind. People who are blind or visually impaired use these words all the time.
- Be careful when you use words like "here," "there," or "over there." These don't mean anything to someone who can't see
- When you are giving directions, give details such as "behind you on your left," or "in front of you on the right."
- When you are giving something to people who are visually impaired, tell them where it is, for example, "I am putting the cup by your left hand."

- If you are going to touch people who are visually impaired or help them get somewhere, let them know what you are doing before you do it.
- People's sight may change from day to day. What they see may depend on how much light is around, or whether they are tired or somewhere unfamiliar. If you are unsure, ask them "Are you okay?" or, "Would you like me to help you?"
- Some people who are partially sighted find it difficult to adjust to bright light or a dark room if they have been outside. Remember, it might take them a bit longer to adjust to a change.

**If you want to know if a
person who is blind or visually impaired needs
help — ask him or her.**

**Remember, people who are blind or
visually impaired are people just like
you and me — they just can't see as well.**

3) Introducing Ivan and Iris

Equipment

Here is some of the equipment used by people who are blind or visually impaired like Iris and Ivan.

White Cane

This is the most common mobility aid used by people who are blind or visually impaired. They use a cane to check that there are no obstacles in front of them. The white cane also helps other people recognize that a person is blind. Canes are white and come in a variety of sizes to suit the person using them. There are metal, wooden, and plastic canes. The most popular are metal canes that can be folded down to a compact size when not being used.

Braille

This is a system of reading and writing using raised dots. Braille is used on clocks and watches, and many appliances and signs are labelled in braille to help people. Braille cards and games are also popular.

Braille

Similar to a typewriter, this prints braille onto a page so it can be read.

Laptop Computer

Many students use laptop computers to help them with their schoolwork. Some computers have “voices” that speak the words being typed as they are being typed. Other computers have large print, which allows someone with low vision to use them.

Closed Circuit Television (CCTV)

Printed material placed under a CCTV can be magnified up to 60 times onto a screen similar to a television.

Talking Books

Books, magazines, and newspapers are recorded onto tape or compact disk and loaned free to people who are blind or visually impaired.

Talking Clocks

Talking clocks and watches read the time aloud when a button is pressed.

Talking Calculators

These read the numbers aloud as a person uses a calculator to add, subtract, divide, or multiply.

Magnifiers

A range of handheld magnifiers are available that enlarge material placed under them.

Monocular/Telescope

Many students use these to look at objects in the distance, for example, writing on the blackboard, overhead transparencies, or bus or streetcar numbers.

Liquid Level Indicator

This small piece of equipment can be attached to a cup or glass. When liquid is poured into the glass, the indicator gives a loud beep when the liquid reaches a certain level. People who are blind can use these to help them safely make tea and pour drinks.

Audio/Beeping Balls

These balls make a sound when thrown or hit, and are used by children with a visual impairment to play games like baseball and hockey.

(4) The braille Code

History of Louis Braille

In 1829, Louis Braille published the **Method of Writing Words, Music, and Plain Song by Means of Dots, for Use by the Blind and Arranged by Them**. Today, this method – braille – is used in virtually every language as the standard form of reading and writing by people who are blind, visually impaired or deafblind.

Louis Braille was born on January 4, 1809, in Coupvray, a small town near Paris, France. His father was a saddler, and the young Louis enjoyed playing in his father's workshop. When he was three, Louis accidentally punctured his eye with an awl, a sharp tool used to punch holes in leather. Infection eventually set in and spread to his other eye, leaving him completely blind. Louis developed the braille system by the time he was 15.

With the support of a local priest and schoolteacher, Louis' parents were determined to allow him to develop his demonstrated intelligence. He was enrolled in a regular school where he learned by listening and excelled in his studies. By the age of 10, he earned a scholarship to the Royal Institution for Blind Youth in Paris. There he learned to read letters that were raised on a page. Since these letters were made by pressing shaped copper wire onto a page, it was impossible for people who were blind to write anything for themselves.

At the Institution, Louis was first introduced to a coded system of raised dots. In 1821, a French army captain, Charles Barbier de la Serre, visited the school to introduce his invention, "Night Writing." Night writing was designed for soldiers to communicate at night without speaking. In his system, a series of 12 raised dots were used to represent sounds that, when combined, would form words. It proved to be too complicated, and the army eventually rejected it.

Barbier adapted his system for use by people who are blind, but the 12-dot phonetic system still proved cumbersome. Recognizing how useful this tactile system could be, Louis set out to experiment with a simplified version. Eventually, he settled on a system based on normal spelling using six dots to represent the standard alphabet.

Louis Braille went on to become an admired and respected teacher at the Institution.

But even though his system allowed people who are blind to write using a simple stylus, braille was not widely used. Plagued by ill health, Louis died of tuberculosis on January 6, 1852. In 1868, Dr. Thomas Armitage and a group of four blind men founded the British and Foreign Society for Improving the Embossed Literature of the Blind. This organization grew to become the Royal National Institute for the Blind, the largest publisher of braille in Europe and Britain's largest organization for people who are blind or visually impaired.

The braille code was eventually recognized for its practicality and simplicity and became a worldwide standard. Today, braille literacy is as essential as print literacy.

In 1952, the accomplishments of Louis Braille were fully recognized by the French government. His body was exhumed and reburied in the Pantheon, the resting place of France's national heroes.

With information from:

RNIB fact sheet on Louis Braille:

<http://www.rnib.org.uk/wesupply/fctsheets/braille.htm>

A story of the braille system and Louis Braille by Duxbury Systems:

<http://world.std.com/~duxbury/braille.html>

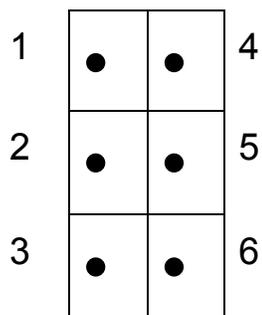
N.B. The video “Young Heroes: Louis Braille” was distributed in 2000 to schools across Canada. This is an excellent educational resource to use in your lessons.

(4) Louis Braille and the braille code

Transcribing Braille

Braille is a system of touch reading and writing in which raised dots punched into the paper represent the letters of the alphabet. To read braille, the fingers gently glide over paper that has been embossed with the braille code. Like any new “language,” braille takes a lot of time and practice to learn. For people who are blind, it can be a building block of language skills, a means to teach spelling to blind children, and the most direct contact with the written thoughts of others.

Braille books are available in all subject areas, ranging from modern fiction to mathematics, music and law. Watches, playing cards, and games such as Monopoly are just some of the things that have been adapted to braille.



Each braille character or “cell” is made up of six dots, numbered in a specific order. Each dot or combination of dots represents a letter of the alphabet.

Equipment

Printed braille alphabet sheet (included in activity package)

Directions

Explain the basics of braille (as above) and have students “braille” a message to a friend.

(4) The Braille Code

The Braille Alphabet

The basis of the braille system is known as a braille cell. Each cell is composed of one to six dots. Each dot or combination of dots represents a letter of the alphabet. In braille numbers, a number sign must appear before the number and so is composed of two braille cells.

●○ ●○ ●● ●●	●○ ●● ●● ●○ ○●	○● ●○ ●○ ●●	○● ●○ ●○ ●○
○○ ●○ ○○ ○●	○○ ●○ ●● ●● ●○	●● ○○ ●○ ●● ○○ ●○ ○○	○○ ●○ ●○ ●○
○○ ○○ ○○ ○○	○○ ○○ ○○ ○○	○○ ●○ ●○ ●○	○○ ●○ ●○ ●○
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		

Braille Numbers

○● ●○ ○● ●○ ○● ●● ○● ●● ○● ●○				
○● ○○ ○● ●○ ○● ○○ ○● ○● ○● ○●				
●● ○○ ●● ○○ ●● ○○ ●● ○○ ●● ○○				
1 2 3 4 5				
○● ●● ○● ●● ○● ●○ ○● ○● ○● ○●				
○● ●○ ○● ●● ○● ●● ○● ●○ ○● ●●				
●● ○○ ●● ○○ ●● ○○ ●● ○○ ●● ○○				
6 7 8 9 0				

(4) The Braille Code

Braille your name

00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

"Braille" a message to a friend

00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

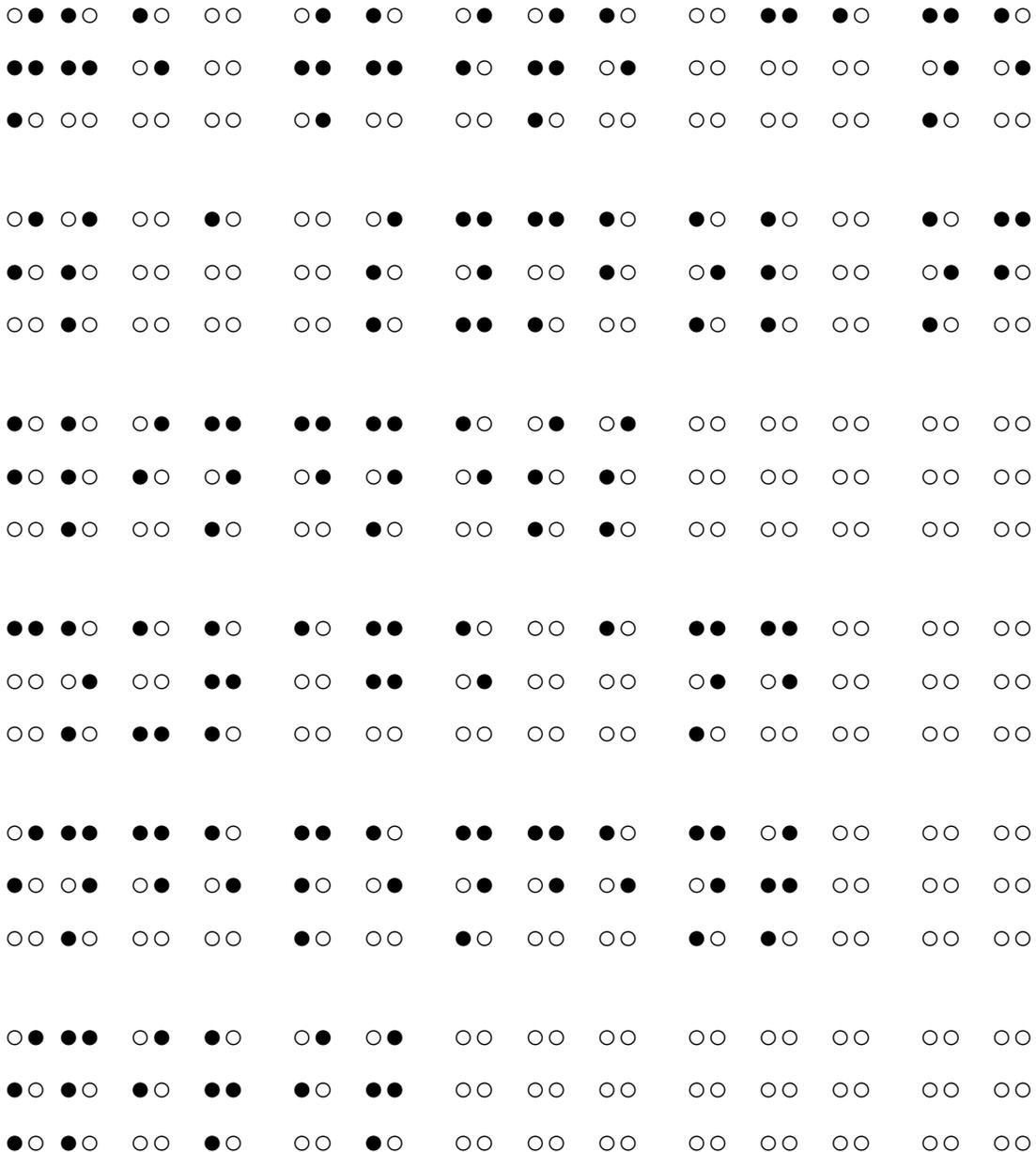
00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00

(4) The Braille Code

Crack the Braille Code

Braille can act as a secret code. Use the braille alphabet to help you crack this code.



Answer - the white cane is a symbol of blindness, courage and independent spirit.

(5) The White Cane

History of The White Cane

People who are blind have used a cane as a tool for travel for centuries. But it was not until 1921 that the white cane became the symbol of blindness. An English photographer who had lost his sight decided to use a white cane to let people in his community know he was blind.

In North America, the introduction of the white cane is attributed to Lions Clubs International. In 1930, a Lions Club member watched as a man who was blind attempted to cross the street with a black cane that was barely visible to motorists against the dark pavement. The Lions decided to paint the cane white to make it more visible. In 1931, the Lions Clubs International adopted the promotion of white canes for people who are blind as a national program.

(5) The White Cane

Different types of canes

There are three different types of white canes, depending on a person's visual impairment, age, height, and specific needs:

Identification Canes

- lightweight, can collapse to fit in a pocket or briefcase
- used by the person to indicate to others that they are blind or visually impaired
- can be used to assist with depth perception on stairs or curbs

White Support Cane

- collapsible or rigid
- designed to support a person's weight and to help him or her walk

Long Cane

- used as a bumper and a probe
- used mainly for independent travel in the home or unfamiliar places
- requires specialized training from a CNIB orientation and mobility instructor

The most commonly used are rigid long canes, folding or collapsible canes, and orthopaedic support canes used in conjunction with travel canes. They are used primarily to help navigate the area ahead of the user. Using the cane, a person who is blind or visually impaired can check for objects in the path of travel, changes in the surface underfoot, and the nature of the surface ahead. The secondary function of the cane is for identification.

(5) The White Cane

The White Cane Quiz

How much do you know about the white cane? Answer true (T) or false (F) for the following statements and learn all about the white cane.

1. Only people who are totally blind use a white cane. T F
2. There is only one style of white cane. T F
3. The white cane is the symbol of blindness, courage and independent spirit. T F
4. You don't need special training to use a long cane. T F
5. The type of cane a person who is blind or visually impaired uses depends only on their height. T F
6. Lions Clubs International took a leading role in promoting the white cane T F
7. The primary function of the white cane is for identification T F
8. The primary function is to assess the area ahead of the user. T F
9. The long cane helps the person who is blind or visually impaired check for objects in their path of travel. T F

(5) The White Cane

The White Cane Quiz - Answers

1. **False:** People who are visually impaired may also use a white cane to identify themselves to others as visually impaired, and/or to help navigate their way around. Others may use it when light levels are low.
2. **False:** White canes come in a variety of styles and lengths, depending on a person's visual impairment and need. For example, there is a flexible, folding cane that can be slipped into a pocket or briefcase, and a support cane for seniors.
3. **True:** The white cane is not only the international symbol of blindness, but also the symbol of courage and independence. It gives a person who is blind the freedom to move around confidently, and live independently.
4. **False:** Using the long cane requires specialized training from a CNIB orientation and mobility instructor.
5. **False:** There are three types of canes to accommodate the abilities of different people. Which cane a person who is blind or visually impaired uses all depends on his/her visual impairment, age, height and other specific needs.
6. **True:** Lions Club International adopted the promotion of white canes for people who are blind as a national program in 1931.
7. **False:** White canes are primarily used to assess the area ahead of the user; their secondary function is to help identify people who are blind or visually impaired.

8. **True:** White canes are primarily used to assess the area ahead of the user; their secondary function is to help identify people who are blind or visually impaired.

9. **True:** The white cane helps people who are blind or visually impaired check for objects in the path of travel, changes in the surface underfoot, and the nature of the surface ahead.

Appendix

Hot Links for Teachers

Resource Material

<http://www.nyise.org>

This site provides many resource pages on blindness, braille history and literacy as well as a listing of online resources accessible to users who are sighted, blind or visually impaired. (New York Institute for Special Education)

<http://www.scis.nova.edu/~marston/vipage.htm>

Peg Marston has provided a list of links to educational Web sites that are speech-friendly and appealing to students who are blind or visually impaired.

Adaptive Technology Product Demos

These pages contain links to adaptive technology product demos. After downloading files from the sites, simply copy them to a temporary folder on your hard drive and either run the self-extracting archive or use the appropriate utility to unzip the archive into the temporary folder.

Speech-related products

JAWS for Windows 4.0

<http://www.hj.com/JAWS/JAWS40.htm>

OutSPOKEN 3.0 for Windows

<http://www.at.rsb.org.au/download/outspokn.htm>

WindowEyes 4.11 for Windows

<http://www.gwmicro.com>

Talking applications Web browsers and Internet Utilities

IBM Home Page Reader

<http://www-3.ibm.com/able/hprtrial3.html>

Screen enlargement software

ZoomText Xtra 7.06

<http://www.aisquared.com>

Magic 8.0 for Windows

<http://www.hj.com/MAGic/MAGic8.html>

Art

KinderArt Sculpture Lessons

<http://www.kinderart.com/sculpture/fisho.shtml>

Tactile illustrations incorporate shape, height and texture to transform flat print images into 3-dimensional models and raised-line diagrams. The main purpose of tactile art is to provide people who are blind or visually impaired the means to better understand the world around them by providing them with a spatial image.

Geography

<http://www.eduplace.com/ss/act/heights.html>

Learn how to create a tactile relief map.

Eye Conditions

http://www.lighthouse.org/low_vision_defined_page2.htm

Find out what the world looks like to people with low vision (includes photo illustrations of the most common eye conditions).

Language Arts

KidsWorthy

<http://www.cnib.ca/library/publications/kidsworthy.htm>

KidsWorthy is the CNIB Library for the Blind's newsletter for children, available on a two-track audiocassette. This Web page contains audio excerpts.

Digital Library

<http://digital.library.upenn.edu/books/>

Visit the University of Pennsylvania's digital library where you will find an assortment of books online.

Online Short Stories

<http://www.nfb.org/books/books1/kjtoc.htm>

Eighteen online books featuring stories by men and women who are blind.

Braille

www.hotbraille.com

Visit this site to learn to braille your name and much more. The site offers a Braille transcription service to users.

The Computerized Braille Tutor

<http://www.tusc.net/~lizgray/tutor.html>

Learn Braille here with this downloadable tutor!

Music

Dancing Dots

<http://www.dancingdots.com>

Ever wonder how music is transcribed into braille? Visit this site to learn the basics of braille music.

Appendix

Common Causes of Vision Loss

Cataracts

Cataracts are a very common cause of impaired vision. There have been significant advances in the treatment of this condition in the past few years, and most people can now expect to regain most or all of their vision.

What is a Cataract?

A cataract is a clouding of the normally clear and transparent lens of the eye. It is not a tumor or a new growth of skin or tissue over the eye but rather a fogging of the lens itself. When a cataract develops, the lens becomes as cloudy as a frosted window and light cannot be properly focused on the retina. Often, only a small part of the lens is affected and, if sight is not greatly impaired, there is no need to remove the cataract. If a large portion of the lens becomes cloudy, sight may be partially or completely lost until the cataract is removed.

Causes and Symptoms

There are many types of cataracts. Most are caused by a change in the chemical composition of the lens. These changes may be caused by aging, heredity or birth defects, injury to the eye, or certain diseases or conditions of the eye or body. Senile cataracts are the most common type and may occur as early as age 40.

Cataracts may also develop in children. When they appear in children they may be hereditary caused by infection or inflammation affecting the pregnant woman and unborn baby. Eye injuries can cause cataracts in people of any age.

Treatment

Surgery is the only effective way to remove the cloudy lens, and is highly successful — over 90 per cent of patients who undergo surgery regain useful vision.

Diabetes

Diabetes is a condition in which the body does not properly regulate and use sugar (glucose) for its energy needs, usually because of a failure to produce enough of the hormone known as insulin. The disease may affect as many as one million Canadians, 50 per cent of whom do not know they have it.

How Does Diabetes Affect the Eyes?

Poorly regulated and high levels of sugar in the blood can cause changes in the eye, resulting in blurred vision. The condition may also interfere with focusing of the eye. Control of the blood sugar level usually corrects these problems. Diabetes can cause double vision when it affects the nerves that control the alignment and movement of the eyes. It can also cause the optic nerve to be more easily damaged by glaucoma.

The most important cause of visual impairment in people with diabetes is diabetic retinopathy, a condition in which changes occur in the tiny blood vessels that nourish the retina (the light-sensitive tissue that lines the back of the eye and changes the light into nerve messages to be transmitted to the brain). Although 25 per cent of people with diabetes have some degree of retinopathy, the condition does not progress to more severe problems in most. The chances of having some form of diabetic retinopathy increase the longer a person has had diabetes. Retinopathy is present in 90 per cent of those who have had the disease for more than 20 years.

Detection and Treatment

Research has shown that severe vision loss from diabetic retinopathy can be prevented or delayed by laser treatment, but only if it is diagnosed early enough. This is why it is important for most people with diabetes, particularly those who have had the disease for five years or more, to have an annual eye examination performed by a medical doctor trained to recognize the subtle early signs of diabetic retinopathy.

Glaucoma

Glaucoma is a disease affecting one in every 100 Canadians over 40 years of age. It is one of the most common causes of blindness. Although associated with increased age, glaucoma may develop at any age—even in infancy. The basic cause of glaucoma is unknown, but a number of risk factors have been identified. These include age, heredity, myopia (near-sightedness), general disease such as early heart attack and stroke, and raised intraocular pressure (IOP). Raised IOP occurs when fluid outflow is obstructed. The gradual loss of nerve function causes loss of peripheral, or side, vision painlessly and without notice.

How to Detect Glaucoma

It is important to be aware of the possibility of glaucoma, particularly if you have any of the risk factors (age, heredity, myopia, general disease such as early heart attack and stroke, and raised intraocular pressure). Some drugs, such as cortisone (steroid) drops, can cause glaucoma. As well, any visual disturbance that cannot be corrected by glasses may be a sign of glaucoma.

Treatment

Tests for glaucoma are painless and take little time. Treatment is begun with eye drops and sometimes pills, which decrease the IOP. It may be necessary to change from one type of drop to another. This lifelong disease must be constantly monitored to ensure the best treatment.

Macular Degeneration

Macular degeneration is the leading cause of blindness in Canada, accounting for one-third of all cases of vision loss. The most common form of macular degeneration occurs in people over age 55 and is known as age-related macular degeneration (AMD).

What is Macular Degeneration?

There is a thin layer of light-sensitive nerve cells and fibres at the back of the eye called the retina. We see things because light entering the eye strikes the retina and is turned into an electric impulse that the brain understands as an image. Near the centre of the retina is a small spot about the size of a pea called the macula. The macula processes the details in the central part of the image that the brain receives.

The rest of the retina is responsible for side, or peripheral, vision. It is especially sensitive to dim light, which makes night vision possible. If the macula deteriorates for some reason, the retina becomes like a camera with a spot on the film. The centre of the field of vision blurs, and all detail is lost.

There are two types of macular degeneration. In the dry type there is gradual degeneration of the tissue cells that make up the macula, and symptoms tend to develop over many months or years. In the more severe wet type, leakage and often hemorrhage occur under the macula, causing the symptoms to develop over a relatively short period.

Causes and Symptoms

Although the specific cause of the deterioration is not understood, AMD seems to be part of the normal aging process. It may also be linked to other conditions, such as infections, high blood pressure, and general diseases like diabetes. Children and adolescents may be affected by hereditary macular degeneration.

Myopia, or near-sightedness, is a contributing factor, and excessive light and eye injuries leading to retinal detachment may also damage the macula.

The deterioration generally occurs over a period of a few years. Peripheral vision will remain normal, but the person will have difficulty seeing at a distance or doing detailed work. Faces may begin to blur, and it becomes harder to distinguish colours. Distortion or wavy lines may accompany or precede the blurred vision.

Treatment

Treatment begins with an eye examination to try to determine the cause of the condition. Unfortunately, because so little is known about the direct cause of macular degeneration, effective treatment is not possible in all cases. Lasers are sometimes used to seal damaged blood vessels in the early stages of the wet type of macular degeneration.

Although macular degeneration cannot be reversed, people with the condition can usually continue their daily activities using their peripheral vision and making the best use of their remaining detail vision. Devices such as high-intensity reading lamps and magnifiers help compensate for the loss of detail and make some fine work possible again. People with macular degeneration almost never go completely blind.

Copyright (c) 2001 Canadian Ophthalmological Society.

Appendix

The Canadian National Institute for the Blind (CNIB)

The CNIB was founded in 1918 by returning Canadian soldiers blinded in battle. It is the only national voluntary organization providing rehabilitation and library services to Canadians for whom loss of vision is a central problem in personal and social adjustment.

The CNIB uses a team approach in which staff, volunteers, and clients work together to achieve clients' goals. Today, the CNIB's 1,200 employees and 20,000 volunteers, working out of 57 centres, provide services to more than 100,000 clients in hundreds of communities across Canada.

The CNIB also supports basic research into the prevention of blindness and serves as a consultant and resource agency to the helping professions, government and private industry.

Appendix

Who are the Eye Care Professionals?

Ophthalmologists

Ophthalmologists are doctors who, upon graduation from medical school undertake several years of further training in the diagnosis and treatment of diseases of the eye. Because of their medical background, they can recognize diseases such as diabetes that may produce early warning signs in the eye. They can operate on and prescribe medicine for the eye.

(Adapted from the Canadian Ophthalmologist Society)

Optometrists

A doctor of optometry (optometrist) is a health-care provider who specializes in the examination, management, and prevention of diseases of the eye.

(Adapted from the Canadian Association of Optometrists)

Teacher Evaluation

We need your help to keep our School Activity Package interesting, informative and interactive for your students. Please share your thoughts and ideas about how it can be improved next year.

1. How did you receive this package?

_____ From the local CNIB office

_____ From the CNIB's Web site

2. If you accessed this package from our Web site, did you have any problems? If your answer is yes, please state the reason why.

_____ no _____ yes

3. Would you prefer to receive the package from our Web site? Please explain.

_____ yes _____ no

4. Check the activities you chose for your class:

_____ School Activity - Introducing Iris and Ivan

_____ School Activities - General awareness

_____ School Activity - Using the sense of touch

_____ School Activity - Transcribing braille

5. Did you supplement these activities?
____ audiovisual materials ____ print materials ____ guest speaker
____ other (please explain) _____

6. How did your students respond to these activities?
____ positively ____ indifferently ____ negatively

7. Were the activities age-appropriate? ____ yes ____ no

8. Are you aware of other blindness awareness activities?

9. Did the Q&A sections cover all your students' questions about blindness? Did they ask any questions you could not answer or had no information for?

10. What did you like about the package?

11. What did you dislike about the package?

12. Please write any comments and suggestions below:

Teacher's name: _____

School mailing address and telephone number _____

Number of students participating in the program: _____

Please return your evaluation to: Lesley Wilmot
National Communications & Media Relations
The Canadian National Institute for the Blind
1929 Bayview Avenue
Toronto, ON M4G 3E8