

**GRADE 2**

**TEACHER BACKGROUND INFORMATION**

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**GROWTH AND DEVELOPMENT**

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## THE SENSES

The body is like a machine with many identifiable parts that work together in wonderful ways.

Sensory organs receive information from the environment, help us enjoy our surroundings and keep us safe.

Basic ways that the senses help us experience the world:

- Sight
  - provides near, far and side vision
  - interprets objects
  - distinguishes colour
  
- touch
  - distinguishes textures, temperatures and pressure
  - provides sensations of soft/rough; cold/hot, etc.
  - warns of danger (pain)
  - provides sensations of pressure - squeezing/light
  
- taste
  - provides sensations of sour, sweet, salty, bitter, etc.
  
- smell
  - warns of danger (smoke)
  - provides sensations of pleasant, unpleasant
  - provides awareness of surroundings

- hearing
  - perceives sounds, whether pleasant/unpleasant and determines location of sound sources

The two senses most commonly affected by sensory disorders in elementary school children are vision and hearing. Elementary teachers may encounter these disorders in the classroom, so it is important that they understand how the senses work and that they observe children at work and play, noting patterns of behaviour that may be clues to sensory losses. They must also promote a safe healthy learning environment and refer those children who exhibit health problems.

## **VISION, VISION PROBLEMS: CARE AND PREVENTION**

Vision is a sense that allows individuals to explore and relate to the physical and social environment. About eighty percent of school work involves visual acuity. Normally, elementary children are far-sighted. They readily see large print, large objects and diagrams. Their eyes must be trained for close-up work such as reading and writing. Because defective vision affects school progress and the health and personal development of children and youth, it is important to refer any suspected vision problems early.

### COMMON RISKS THAT MAY CONTRIBUTE TO SIGHT LOSSES INCLUDE:

- throwing sand, dirt in the face and eyes
- using dangerous equipment (guns, sling shots, bows and arrow, aerosol cans) and playing roughly
- staring up at bright light or sun
- using spray cans with nozzle pointing to face
- carrying sharp objects with points upward
- rubbing eyes with foreign bodies (sand, dirt, other)

- being close to operating tools that saw or grind without protective lenses
- not buckling up in motor vehicles - not a classroom problem
- holding pets too closely

### IDENTIFYING CHILDREN WITH VISION PROBLEMS

**A PPEARANCE** - eyes:                   crossed, protruding, swollen, reddened,  
blood-shot, watery

**B EHAVIOUR** -                   continual blinking when reading: brushes away  
blur, holding books far-away or close to face,  
frequent rubbing of eyes, squinting, covering an  
eye to read, guiding reading with a finger, fatigue  
after reading, poor eye-hand coordination

**C OMPLAINTS** -                   pain, burning, itching, sensitivity to light,  
headaches, blurred vision

## **VISION HEALTH PROMOTION**

### WAYS TO PROMOTE A HEALTHY SCHOOL/CLASS ENVIRONMENT:

- reduce glare and shadows
- provide adequate lighting
- use clean, non-glare blackboards
- use large clear writing on blackboards
- select appropriate reading materials
- follow eye safety measures in emergencies
- provide preferential seating when necessary

### PREVENTION OF EYE DISORDERS INCLUDES:

- systematic observation of children's sight
- periodic screening of visual acuity
- referral of suspected sight problems for treatment
- self care practices that promote health of the eyes

CARE OF THE EYES involves positive health practices. Some are:

- washing eyes with clear water daily
- eating nutritious foods from all four food groups, especially excellent sources of vitamins A, B, thiamin, riboflavin, niacin
- playing outside in clean air
- getting enough sleep and rest
- sitting where they can see the blackboard comfortably
- telling an adult if they have an object in the eye
- drinking plenty of milk, juice and water
- practising safety rules

### SAFETY PRACTICES FOR HEALTHY EYES

Encourage children to:

- have eye/medical examinations regularly
- use proper eye/head equipment for contact sports
- report eye problems to an adult in authority (parent, teacher)
- be careful around hazardous material and chemicals
- play with safe toys that are not pointed
- handle equipment carefully
- buckle up in motor vehicles
- use a cap, sun hat or good quality sunglasses in bright sunshine
- know and use eye safety rules in emergencies

## HEARING, HEARING PROBIENSS

Primarily the ear is a sensory organ that is responsible for balance and hearing. Hearing is an extremely important sense, because deaf people are also often hampered with very poor language development.

Even though the hearing loss may be of small degree, the consequences can be quite important both socially and educationally. These consequences, apart from the hearing loss and thus the difficulties in communication, include speech problems and a slowing down of the social, emotional and intellectual development of the child.

Hearing losses may occur gradually and may go unrecognized for some time. If deafness is one sided, or relatively mild, it may not be apparent. Sometimes only screening will reveal a hearing loss.

Teachers are in an excellent position to observe children's health. They have the opportunity to observe recurrent or unusual health behavior. They may see changes in physical appearance, and may have children report to them how they feel. Teachers may be the first adults to become suspicious about a hearing loss, and a referral, using recommended school procedures, may alleviate or avoid the consequences described above.

## OTITIS MEDIA

One of the most common causes of hearing loss in the N.W.T. is OTITIS MEDIA. Otitis media is the result of a bacterial or viral infection of the middle ear. It is common among young children, particularly age 3 months to 3 years. This means that children entering Kindergarten may already have hearing problems. The micro-organisms may migrate from the nose and throat area to the middle ear over the surface of the eustachian tube mucous membrane. Chronic otitis media is one of the main health problems in the native populations of Canada, Alaska and Greenland.

The first symptom is usually a persistent earache. Hearing loss may occur. Fever and nausea may occur in young children. The tympanic membrane may, without treatment, infect and later perforate.

Socio-economic factors, i.e., crowding, poor housing, hygienic conditions and nutrition, as well as bottle feeding, may all contribute to the onset of otitis media.

Treatment is usually in the form of antibiotics, to reduce the symptoms and hasten the end of the infection.

The greatest impact on reducing the incidence of otitis media is breast-feeding of infants for the first 8-12 months. Reducing upper respiratory infections and improving basic hygienic practices may also help reduce the incidence of otitis media.

## IDENTIFYING CHILDREN WITH EAR PROBLEMS

- A PPEARANCE** - drainage from ear, cotton in ear, or swollen glands behind ear
- B BEHAVIOUR** - rubbing or pulling ear, cupping of ear to hear, turning to the side to catch sounds, lack of awareness of communication by another person, especially ignoring quiet talk directed to the child, behaviour problems, not following directions, poor mimicry, unclear speech, requests to have directions repeated, appearance of day-dreaming
- C COMPLAINTS** - pain in ear (children will rarely complain of deafness)

## **HEARING HEALTH PROMOTION**

### WAYS TO PROMOTE A HEALTHFUL SCHOOL/CLASS ENVIRONMENT INCLUDE

- preferential seating, where a hearing problem exists
- reduction of extraneous loud noises
- use of carpets and baffles absorb noises especially in open-area classrooms

## PREVENTION OF HEARING LOSSES INCLUDE:

- systematic observation for hearing impairment in pupils
- screening for hearing at school entrance and regular intervals thereafter
- referral of suspected hearing problems
- recommendations of self-care practices that promote health of the ears

SELF CARE OF THE EARS/HEARING involves positive health practices. Some are:

- wash outer ears with a soft cloth daily: never use Q-tips to clean the ears
- eat nutritious foods from all four food groups
- find time for rest, sleep and relaxation
- wear appropriate head coverings on cold windy days to prevent frostbite to ears
- avoid excessive loud noises

### SAFETY PRACTICES FOR HEALTHY EARS

Encourage children to:

- have hearing test/medical examinations regularly
- report ear pain or discharge to a responsible parent/adult
- not put objects in ears
- wear head gear in contact sports
- buckle up in motor vehicles to avoid head injury

Sources: Physical Well-Being Teaching Aids,  
Manitoba Education 1986  
Schaefer, Otto, M.D., Otitis Media  
and Bottle Feeding, Canadian Journal  
of Public Health - Nov/Dec 1971