Procedure Title	**Biological Hazards**		
Date of Issue	April 28, 1999	**Related Policy**	BP 3801-D
Revision Dates		**Related Forms**	
Review Date	January 1, 2002	**Originator**	System Administrative Team
References			
BP 3801-D - Health and Safety; Occupational Health and Safety Act; Ontario Regulation 833 Section 3			

Procedure:

1. Authority:

- Bluewater District School Board Policy BP 3801-D Health and Safety regulates the Occupational Health and Safety requirements to ensure all students and staff have a safe environment.
- The Occupational Health and Safety Act, Revised Statutes of Ontario 1990 and Ontario Regulation 833 Section 3, require the protection of employees from exposure to a hazardous biological agent because of storage, handling, processing or use.

2. Definitions:

Biological agents: Living things, or substances produced by living things, that can cause illness or disease in humans. Biological agents include: bacteria, viruses, fungi, parasites and plants.

3. Board Requirements:

- That all potential biological hazards are identified to ensure the safety of employees and students.
- That all engineering controls, work practices and necessary personal protective equipment have been provided and are used.

4. Administrative Controls:

4.1 Board Responsibilities:

- Establish a procedure to identify and control biological hazards.
- Provide the employee(s) with personal protective equipment when the potential for exposure to biological agents remains.

4.2 Principal Responsibilities:

- Ensure employees are knowledgeable about exposure to biological agents.

- Identify the sources of all potential biological agents in the school.
- Ensure control of the biological agent in the school through containment, removal or use of personal protective equipment.
- Provide employees with written instructions when working with potentially hazardous biological agents.
- Ensure that employees adhere to safe working practices and use the required personal protective equipment.

4.3 Head Custodian Responsibilities:

- Arrange for the clean up and disposal of potentially hazardous biological agents.
- Arrange for the cleaning and disinfecting of school areas and equipment that may have been exposed to biological agents.

4.4 Employee Responsibilities:

- Follow written and verbal instructions to minimize the potential exposure to biological agents.
- Wear the provided personal protective equipment as required.
- Report all real or potential sources of biological agents to the supervisor.
- Clean up and disinfect student equipment, area and accidental spills caused by students.
- Undergo such medical examinations and clinical tests as may be required to comply with Regulation 833.

Attachments:

Appendix A: Prevention & Universal Precautions
Appendix B: Sharps Containers
Appendix C: Body Substance Waste
Appendix D: Blood and Body Substance Clean Up
Appendix E: Cage and Tank Cleaning
Appendix F: Disinfection Procedures
Appendix G: Other Sources of Microbiological Contamination

Appendix A: Prevention Practices

The most important and frequent method of spreading illness, is by direct or indirect contact transmission. The three following prevention practices are considered essential by public health practitioners and disease control centres:

1. Hand Washing
2. Universal Precautions
3. Safe Handling of Sharps

Hand Washing

Hand washing is the single most important measure for the prevention of disease or infection.

When should you wash?

- Before and after contact with potentially contaminated or soiled items.
- Before donning and after removing gloves.
- After using the washroom.

- When hands are visibly soiled.
- Before eating.

How should you wash?

- Cover thoroughly with soap and rub hands together vigorously, covering all surfaces of hands and fingers, for at least 10 seconds. Rinse well with running water and dry.

What soap should you use?

- Plain, mild liquid hand soap in a self-contained dispenser is acceptable. The use of bar soap is not acceptable because organisms can grow on the soap and in the pooled water that collects under the soap.

Universal Precautions

Universal Precautions were the precautionary measures introduced, by the health care practitioners, when it was acknowledged that blood and certain body fluids can transmit bloodborne pathogens. Recognizing that all body substances have the potential to be infectious, a standard approach for the handling of blood and body substances evolved. The thrust is to place a protective barrier between the handler and the substance.

Protective Barriers

- Gloves - waterproof gloves (non-latex) should be worn when contact with blood and/or body substances is likely. **Gloves must be changed and discarded after each contact**. Gloves must be worn when handling surfaces and/or articles contaminated with blood or body substances.
- Do not wear one pair of gloves all day. The hands are exposed to a dark, wet, warm environment and if viruses or bacteria are present, and skin is non-intact, there may be potential for infection.
- **Gloves do not replace hand washing**
- Aprons - waterproof aprons must be worn when skin or clothing is likely to be soiled with body substances.
- Bandages - any cut or broken skin, such as scratches, rashes, scrapes or puncture wounds, should be protected by a bandage.
- Eye/Face Protection - wear a face shield or goggles when body substances are likely to splash up into the eyes, nose or mouth.

Safe Handling of Sharps

Bloodborne infections are usually transmitted by sharps injuries. The following practices will minimize the risk of sharps injuries.

- Do not recap needles.
- Discard sharps **at the point of use** in a designated sharps container.
- Each person using a sharp must dispose of it him/herself.
- Do not pass needles.

If a sharp is found on school grounds or in the school, staff should follow the following procedures:

- Do not leave the sharp(s) unattended - have another staff member remain there until a custodian, with proper disposal equipment, is available.
- Follow universal precautions, wear non-latex gloves and heavy leather work gloves.
- With a suitable sharps container, broom and dustpan gather up all the pieces and place then into the sharps container.
- Disinfect interior or hard, e.g., concrete, areas where the sharp was found.
- Remove gloves and wash hands.

Appendix B: Sharps Containers

In schools where individuals use needles for medication, a sharps container must be maintained.

A sharps container is a dedicated, puncture-resistant, leak proof container which is impenetrable by sharps under normal circumstances. It should have a carrying handle, tight fitting lid, a biological hazard label and be designed so that used sharps can be dropped in with one hand. It should be easily accessible and in the designated "point of use" area. Do not fill the container with disinfectant. Fill to 3/4 capacity, close the lid securely, remove and replace the container.

Sharps containers are available from:

G.H. Wood & Company Limited 1-800-361-7691 Parts number: 255995
SETON 1-800-263-1623 Parts number F14545

An emergency sharps container can be made from any impenetrable container that is large enough to contain the sharp, e.g., a clean used large plastic mayonnaise jar with a screw-on lid.

Contact the Board's Safety Officer for sharps waste disposal directions.

Appendix C: Body Substance Waste

Body substance waste, including feces, urine, vomit, soiled treatment equipment, soiled diapers and sanitary napkins may be disposed of with general waste.

- Store body substance waste in a garbage container with a tight fitting lid.
- Use plastic bags to line the garbage containers. Use a second garbage bag to maintain an interior lining. If the inner bag leaks, or has holes, use the outer bag for disposal.
- Do not overfill garbage containers.
- Do not place sharp, hard or heavy objects into the plastic bags with body substance waste.
- Seal garbage bag and dispose of daily.
- Disinfect garbage containers used for body substance waste weekly.

Appendix D: Blood and Body Substance Waste Clean Up

School staff are often faced with an emergency clean up of spilled blood, vomit, or other body substance waste. These spills must be removed quickly and safely, to protect the employees and other building occupants. The following procedures, based on the universal precautions, are provided as a guide.

- Keep other occupants away from the spill. Move them to another area if necessary.
- Wash hands thoroughly and dry.
- Wear non-latex gloves and eye protection. If the spill is large, wear a face shield and waterproof apron.
- Cover the spill with the absorbing material from the spill kit.
- Allow the absorbing material to solidify the spill.
- Using the scraper from the spill kit and a dust pan, scrape the solidified mass up and place into a garbage bag.
- Wipe up any absorbent with damp paper towel or work cloths and dispose of into the garbage bag.
- Mop the area with hot water and soap. rinse with high-level disinfection solution, followed with a clear water rinse.
- Dispose of the garbage bag, into general waste, double bag if necessary.
- Dispose of water used to mop up and thoroughly rinse buckets and mop(s).
- Wash hands after removing and disposing of gloves.

Appendix E: Cage and Tank Cleaning

Pets and animals can be an invaluable aid in the classroom. They are very helpful when teaching biology and nature or to instil a sense of responsibility for the proper care and treatment of animals. Unfortunately, some animals may cause diseases in humans. This is especially true of turtles, birds and rodents.

- Wash hands thoroughly and dry.

- Wear non-latex gloves and if necessary, waterproof apron and face protection.
- Move the entire cage or tank to an area with a slop sink, body substance garbage can and properly equipped handwash sink.
- Place the animal in a temporary cage or container.
- Remove feed pans, dishes and water containers.
- Remove bedding material, gross contamination and droppings into a garbage can used for body substance waste.
- Scrub the feed pans, dishes and water containers.
- Scrub the cage or tank, in place or immersed, with water and detergent.
- Disinfect the cage and food containers with high-level disinfectant procedure.
- Rinse thoroughly with potable water and air dry.
- Replace feed pans, water and bedding, then return the animal to cage or tank.
- Return the cage or tank to original location.
- Clean and tidy up work area.
- Wash hands after removing and disposing of gloves.

Appendix F: Disinfection Procedures

Low Level Disinfection - is usually used in a daily cleaning procedure.

- sodium hypochlorite - 1:500 dilution of household bleach prepared daily (1 tsp in 10 cups of water)

The chemicals cannot be relied upon to destroy bacterial spores and often fail to kill many fungi and viruses.

Intermediate Level Disinfection - low concentration soaking solution, 6 to 12 hours of contact time required to be effective.

- sodium hypochlorite - 1:100 dilution of household bleach prepared daily (1 tsp in 2 cups of water)
- 70% ethanol or isopropanol

This disinfectant does not kill large numbers of bacterial spores but can kill most other organisms with 6 to 12 hours of contact.

High Level Disinfection - demonstrated level of activity against bacterial spores and all other forms of micro-organisms.

- boiling water - fully covered contact time of at least 20 minutes in continuously boiling tap water. Rinse thoroughly with sterile water, then allow to air dry.
- sodium hypochlorite - 1:50 dilution of household bleach prepared daily (1 tsp in 1 cup of water). High-level chemical disinfection requires a contact time of 20 or more minutes.

Appendix G: Other Sources of Microbiological Contamination

There are many other potential sources of microbiological contamination in the school. Building leaks, plants and soil, refrigerator condensation pans, seals on refrigerators, humidifiers, freezers and microwaves are potential sources of bacteria, mould, dust mites and their by-products.

The following steps can be taken to prevent the growth and spread of mould and bacteria:

- Control humidity and ventilation to prevent persistent condensation on walls and windows.
- Repair building leaks.
- Disinfect mouldy surfaces with high-level disinfectant procedures.
- Clean unit ventilators and replace regularly.
- Keep traps and drains filled with fresh water. In high risk areas, fill traps with disinfecting sodium hypochlorite solution.
- Display animals and plants in locations where the air flow from the ventilation system does not blow over the cage or plant.
- Do not store books on or near forced air ventilation systems.