

DOCUMENT RESUME

ED 129 528

RC 009 493

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TITLE Outdoor Pursuits: Self to Nature Activities -- A Supplement to the Physical Education Course of Study. The Protestant School Board of Greater Montreal, March 1974.  
INSTITUTION Protestant School Board of Greater Montreal (Ontario).  
PUB DATE Mar 74  
NOTE 48p.  
EDRS PRICE MF-\$0.83 HC-\$2.06 Plus Postage.  
DESCRIPTORS Academic Enrichment; \*Activity Learning; Athletic Equipment; Camping; Class Organization; \*Course Content; Elementary Secondary Education; \*Guidelines; Instructional Aids; Learning Activities; \*Needs; Objectives; \*Outdoor Education; \*Physical Education; Physical Recreation Programs; Safety; Skill Development; Supplementary Education

ABSTRACT

In keeping with the Department of Education's course content in physical education, this supplement to the Physical Education Course of Study was prepared. Suggestions for teaching and organizing classes in 16 "Self to Nature" activities are outlined. Activities are: backpacking, bicycling, boating, camping, canoeing, fishing, hebertisme (an outdoor gymnastic or obstacle course), mountaineering, orienteering, sailing, skating, skiing (Alpine and Cross Country), snowshoeing, swimming, and tobogganing. Objectives, equipment needed, skills, precautions necessary, class organization, and preliminary instructions are given for each activity. The location of the school in relation to the facilities required, the availability of the equipment needed, and the ability of the staff to conduct classes in these outdoor pursuits, will determine what activities can be offered to the students. Schools which have conducted classes in these outdoor pursuits have financed the facilities, equipment and transportation through such means as the athletic budget, field trip budget (transportation), direct charge to the participants, student sponsored money raising events, and assistance from the Home and School Association. (NQ)

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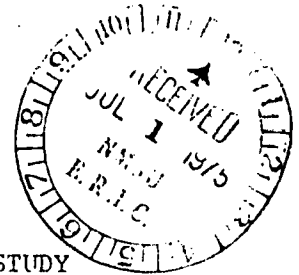
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THE PROTESTANT SCHOOL BOARD OF GREATER MONTREAL

# OUTDOOR PURSUITS

SELF TO NATURE ACTIVITIES

A SUPPLEMENT TO THE PHYSICAL EDUCATION COURSE OF STUDY



U.S. DEPARTMENT OF HEALTH,  
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RC009493

MARCH, 1974

# THE PROTESTANT SCHOOL BOARD OF GREATER MONTREAL

## PREFACE

In keeping with the Department of Education's course content in physical education, a committee formed by the physical education department heads of the Protestant School Board of Greater Montreal has prepared this supplement to our Physical Education Course of Study.

This supplement entitled "Outdoor Pursuits", includes in outline form, suggestions for teaching and organizing classes in sixteen "Self to Nature" activities.

The location of the school in relation to the facilities required, the availability of the equipment needed, and the ability of the staff to conduct classes in these outdoor pursuits, will of course determine what activities can be offered to the students.

These activities therefore must, for the time being, be considered an elective part of the course of study.

Schools which have conducted classes in these outdoor pursuits have financed the facilities, equipment and transportation through some of the following means.

- 1) The athletic budget
- 2) The field trip budget (transportation)
- 3) A direct charge to the students involved
- 4) Money raising events sponsored by the students
- 5) Assistance from the Home and School Association

It is highly recommended that some outdoor pursuits be included in the physical education program from the fourth grade through high school because of their contribution to personal development.

Walter Mingie,  
Consultant in Physical Education.

# THE PROTESTANT SCHOOL BOARD OF GREATER MONTREAL.

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### OUTDOOR PURSUITS

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PHYSICAL EDUCATION COURSE OF STUDY SUPPLEMENT

OUTDOOR PURSUITS  
(Self to Nature Activities)

CONTENTS

1. Back Packing
2. Bicycling
3. Boating
4. Camping
5. Canoeing
6. Fishing
7. Hébertisme
8. Mountaineering
9. Orienteering
10. Sailing
11. Skating
12. Skiing (Alpine)
13. Skiing (Cross Country)
14. Snowshoeing
15. Swimming
16. Tobogganing

BACKPACKING

OBJECTIVES

1. To develop the skills involved in walking on rough terrain for several hours at a time.
2. To develop an awareness of an activity that can be enjoyed in the fresh air alone or in a group.
3. To develop love and respect for nature.

EQUIPMENT NEEDED

1. Comfortable hiking boots.
2. Light, warm, waterproof clothing.
3. A backpack.
4. A sleeping bag and tent, tarp or ground sheet for overnight trips.
5. Cooking utensils.
6. Food.
7. Miscellaneous items depending upon circumstances - extra clothing, knife, compass, whistle, stove, sunglasses, matches, first aid kit, insect repellent, etc.

SKILLS

1. Walking over rough ground at a steady and comfortable pace.
2. Outdoor cooking.
3. Setting up and breaking camp.
4. Organizing and carrying a pack.
5. Routefinding and map-reading.

CLASS ORGANIZATION

1. Divide class into groups of 4 - 6 according to strength and agility.
2. Place one student in charge of each group.
3. One teacher should lead the way and another should bring up the rear.
4. Arrange points of rendezvous for every couple of hours.
5. Give slow groups a chance to rest at rendezvous points. They are more likely to be tired than the fast walkers.

PRELIMINARY INSTRUCTION:

Some instruction should be given before the trip on the quantity and quality of the equipment. The object is to have the greatest comfort with the least exertion. Unnecessary equipment should be left at home; necessary equipment should be light.

Students should have preliminary practice in organizing the pack, arranging it on the back, and carrying it on short hikes.

REFERENCES

Manning, Harvey: Backpacking: One Step at a Time, Vintage Books, New York, 1973, pp. 356.



B I C Y C L I N G

OBJECTIVES

- A) To develop an awareness of an activity which can be enjoyed alone or in a group.
- B) To develop the skills and coordination involved in controlling a bicycle at all times.
- C) To develop an awareness and knowledge of bicycle safety.

A bicycle is one of the most popular and one of the fastest machines by which a person can use his own power to get from one place to another. A bicycle is one of the cheapest forms of transportation. The bicycle offers enjoyment and healthful exercise to the rider.

EQUIPMENT NEEDED

- A) A bicycle in good order with all essential parts.
- B) Accessories should include
  - tire repair kit
  - extra chain links
  - tire pump
  - horn or bell
  - light
  - licence plate
  - utility carrier for transporting objects
    - basket
    - rack
    - equipment pouch

S E T T L E S

1. Forward Motion

- A) While in seated position on bike, push off with one foot on ground while other foot begins pedalling process. After initial push commence pedalling with 2nd foot.
- B) There should now be a constant power shift from leg to leg to push the bicycle ahead.
- C) Head should be up and eyes looking straight ahead.
- D) There should always be two hands on handlebar for proper control of direction.



D) Bicycle posture is determined by angle of bicycle handlebars:

- If bars are high the trunk of body is in a vertical position.
- If bars are low then trunk of body will fall into an oblique position forward.

### 2. TURNS

- A) Pedalling action should slow down so that speed of bicycle reduces.
- B) There should be a slight body lean to side of turn - e.g., right turn - body leans slightly to right side.
- C) Steering bars should be turned slowly with a gliding action so that turn is smooth and efficient.

### 3. BRAKING

- A) Foot brakes - pedalling motion is ceased and pressure applied to pedals in reverse direction.
- B) Hand brakes - pressure is applied as necessary, firstly and mainly to rear brakes and apply lesser pressure to front brakes to avoid catapulting action over front wheels.

### 4. SAFETY SKILLS

- A) Signalling with hand signals to indicate a turn or stopping.
- B) Keeping the bicycle rolling smoothly in a straight line and avoiding the side to side swerving or weaving action.

### 5. ACCESSORY SKILLS

- A) Steering bicycle with one hand while signalling with other.
- B) Pedalling while in a standing position to make steep grades easier to climb.

## ORGANIZATION AND SUGGESTED VEHICLE PRACTICE

Because bicycling comes naturally, ability grouping is not really necessary. This entire unit is really a study and appreciation of this activity.

To practice students could get in a long line, one behind the other, or small groups of 10 and use a follow-the-leader type of activity in the school yard or on neighbouring streets around the school.

A safety or bicycle course could be set up with markers so as to include starts, stops, curves, circles, turns, special hand signals, obstacles, crosswalks, speed zones and the like.

## TEACHING AIDS

Pre-trip check list:

- A) Telephone local police authorities along route to be taken from starting point to destination, giving the police such information as day of trip and time of day you plan to be passing through their area. They will indicate to you safest roads to take at that time of day on that specific day, according to their records on regular traffic flow.
- B) Go over route of trip on a map with students.
- C) Try to locate spots along the way so that students may rest, eat or drink, washroom facilities, etc.....
- D) Check knowledge of students on safety rules and impress importance of these rules on them (single file, etc.)
- E) Have students check their bicycles to make sure they are in good running order and have all parts and accessories necessary (e.g. pumps, patches, etc.).
- F) Place students in groups of 10, as a line of more than 10 bicycles in a row may cause traffic hazards. Impress on students importance of sticking close together.
- G) Discuss the importance of proper attire for cycling
  - pant legs, dangling scarves (caught in chain)
  - light coloured clothing
  - all this together with respect for weather.

- 10) Suggest that it is easier to carry luggage such as lunch bags, extra clothing, cameras, etc. on bicycle racks, or in bicycle baskets, rather than in knapsacks on back as this gets tiring, and uncomfortable.

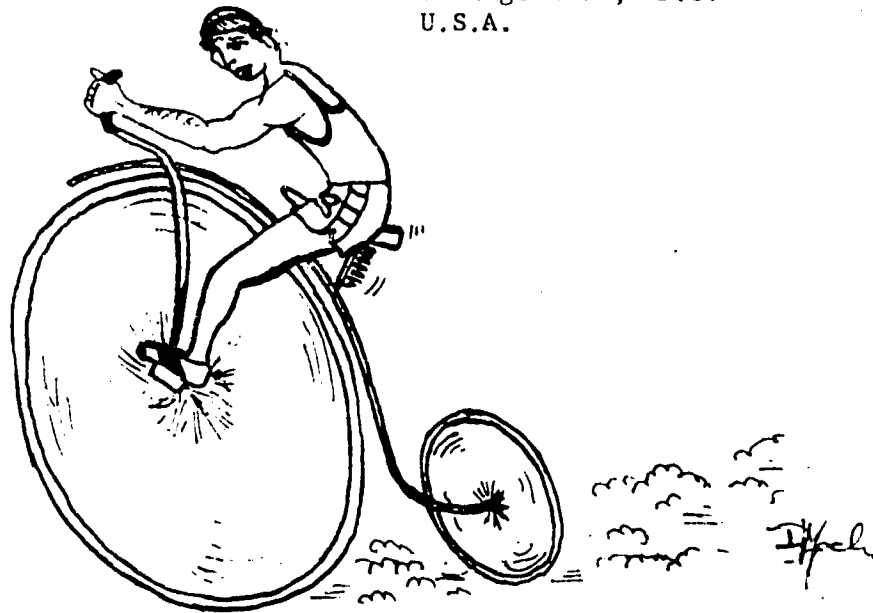
FINAL CHECKLIST DAY OF TRIP

- Extra bicycle chain links
- Tire repair kits
- Tire pumps
- Small first aid kit for minor cuts and bruises
- Final check of bicycles themselves.

Bibliography:

"Bicycle skills and Safety" - published by The Peel County Board of Education.

"Cycling in the School Fitness Program" - published by  
A.A.H.P.E.P.  
1201 Sixteenth Street, N.W.,  
Washington 36, D.C.  
U.S.A.



BOATING

Boating is interpreted as meaning: To row with oars a small open flat-bottomed boat.

OBJECTIVES

1. To learn to row a boat in a straight line.
2. To master the use of oars so as to enable the boat to be handled in an effective and efficient manner under all conditions.
3. To learn and apply the safety rules of boating.

EQUIPMENT

A boat, a pair of oars, a life jacket.

SKILLS

- General: 1) Manner of steadying a boat.  
2) Ways of entering  
3) Seating position  
4) Heel supports
- Rowing: 1) Boat balance  
2) Facing the stern  
3) Two hands on oars  
4) Pull, press down, and circle
- Advanced: 1) Turning with pull on one oar  
2) Turning using forward and reverse stroke  
3) Reversing on both oars  
4) Slalom course

SAFETY

1. Wear a life jacket. This applies to both non-swimmers and swimmers. \*
2. Non swimmers must be under direct competent supervision.
3. No standing up in or rocking a boat.
4. Rules of "right-of-way"
5. Rules of departure from beach or wharf and rules of docking.
6. Proper storage of Boats, Oars, and Life Jackets.

\* Life Jackets may not be required if all the following conditions are met:

1. Student passes a swimming test taken in the lake.
2. Student shows proficiency in handling a boat.
3. Student displays a good sense of judgement and will follow safety rules.
4. If conditions are such that tipping is unlikely, and the water is not cold.

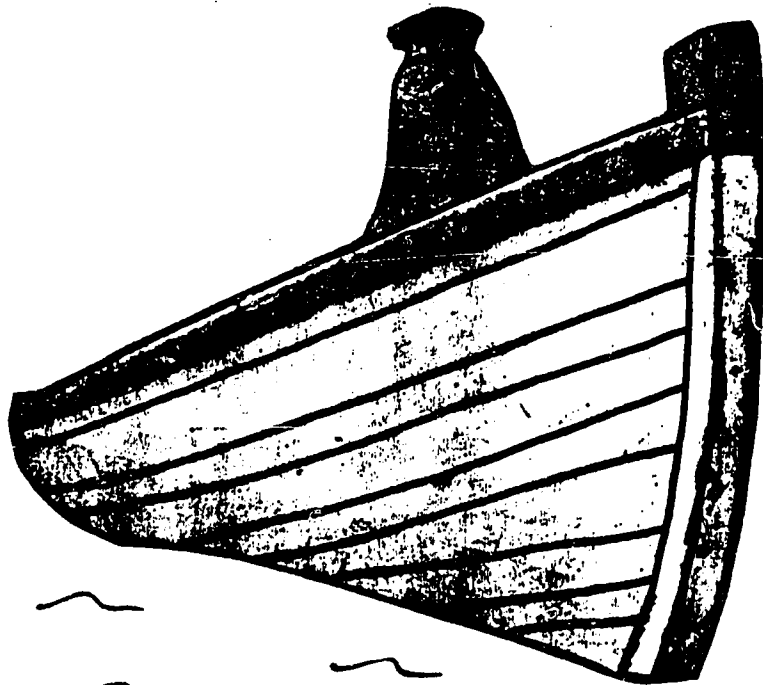
## COMPETITIONS

Regattas may be organized, featuring races such as:

1. Single rowing
2. Single rowing with a steersman
3. Double rowing
4. Slalom course.

## ADVANCED LEVEL.

Boating clubs offer racing instruction in sculls and similar specialized craft.



CAMPING

A residential camping experience is an important extension to education. Camping can provide fun and adventure while learning in, for, and about the outdoors.

OBJECTIVES

To provide an opportunity

1. To learn outdoor skills in the area of: (a) cooking, (b) axemanship, (c) firebuilding, (d) shelter making and, (e) outdoor survival.
2. To participate in the outdoor pursuits of hiking, boating, swimming, canoeing, orienteering, hébertisme, etc.
3. To become aware of the natural environment and to develop an aesthetic appreciation of nature's wonders.
4. For character growth through positive human relationships encompassing the qualities of co-operation, self-reliance, and consideration of others.

EQUIPMENT NEEDED

This will vary depending upon the specific aims, and the group's experience, and could include:- (1) cooking utensils, (2) axes, hatchets, knives, (3) string and rope, (4) boats and canoes, (5) maps and compasses, (6) tents.

SKILLS

1. Learning how to use tools and equipment: e.g. axes and knives, hammer and saw, fishing rod and line, compass and map, bow and arrow.
2. Learning how to make and when to use different types of fires: e.g. tepee, council, pit, criss-cross, reflector.
3. Learning how to cook out of doors: e.g. pot and pan, cooking in ashes, dutch oven cooking, stick cooking, baking, including menu preparation, and quantity estimation.
4. Learning how to live outdoors: e.g. conservation practices, elements of ecology, shelter construction, orienteering.
5. Learning skills needed for outdoor pursuits: e.g. boating, swimming, archery, gardening, fishing, lashing, building, toolcraft, camcraft, photography.

## ORGANIZATION

The program structure is dependent on many factors, the main ones being health and safety, type of activity, and learning environment.

It is recommended that there be a competent adult for every 15 students, and a leader for every 8 students in order to provide quality supervision and a good learning environment.

An overall structured program is recommended with some periods for individual choice for the short residential camping experience. The doing of chores should be organized on a fair rotational basis.

## GAMES AND RECREATION

The camp program should provide periods of recreation offering students a choice of recreational games or individual relaxation and contemplation. Games could include: (1) softball, (2) volleyball, (3) ping pong (4) boating, (5) swimming, etc.

## TEACHING TECHNIQUES

- 1) Form small groups with a group leader for skill practice.
- 2) Organize some large group recreational activities.
- 3) Make sure the spirit of adventure and fun are a part of the experience.

## BIBLIOGRAPHY

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- 2) The Canadian Camping Magazine, Published by the Canadian Camping Association, Toronto, Ontario.
- 3) Teaching in the Outdoors, by Hammerman and Hammerman, Published by Burgess Publishing Company.

CANOEINGOBJECTIVES

1. To develop an awareness of an activity which can be enjoyed by people of all ages and sexes.
2. To develop the skills and coordination involved in movement on a water medium.

EQUIPMENT NEEDED

Canoes (kinds of canoes: canvas, birch bark, aluminum, fiberglass plastic)  
 Paddles (white ash, white spruce, hard maple)  
 Canada Approved Life Jackets

CANOE NOMENCLATURE

Bow; stern; stern seat; bow seat; stern deck; bow deck; stern thwart; bow thwart; (thwarts are the cross braces); keel; gunwales; ribs; planking (in cedar or canvas canoes); bang plate; painters (lines for tying the canoe to a mooring while loading)

SKILLS

1. Paddling Position in a Canoe - kneeling or semi-kneeling.  
 To assume the complete kneeling position, you should first sit on the seat and then kneel, but in such a way as to leave most of the body weight resting on the seat, the knees merely acting to steady your balance and give you good stance.  
  
 In the semi-kneeling position the same general principle applies, except that one leg is brought forward until your weight is distributed at three points: the greatest on the seat, a part on one knee, and a part on your extended foot. For relief, you can alternate leg position.
2. Strokes - Established nomenclature - J, Bow, Back Water, Sweep, Quarter-sweep, Scull, Crossbow, Draw and Underwater. When taking a stroke, do it in the most natural manner possible; then try pushing the upper hand forward much more than you have been doing, while the lower hand is used in the way that comes most natural to you. At the same time let your body bend forward comfortably on each stroke. Don't overdo it. The force that one gets on a paddle by using it as a sort of a lever is tremendous. Do not pry your paddle against the gunwales. Paddle as close to the canoe as possible without dragging against the canoe. Keep the lower hand close to the water but not in it.



3. Embarking and Landing - The canoe is first placed right side up on the ground, with one person at each end of the center thwart. The canoe is then picked up by both persons at the center thwart, where it is balanced and carried stern first - not bow first - to the water. Here the stern is let down, and the canoe is fed hand over hand along the gunwales into the water. The bow paddler, standing upright, holds the bow of the canoe between his legs to steady it, while the stern paddler walks down the center of the canoe to the stern, supporting himself by holding onto the gunwales. The stern, now being heavier, raises the bow from the shore, so that the bow man can get in to push off.
4. Tracking or Lining a Canoe  
The idea is either to pull the loaded canoe upstream or to run it downstream with the tow ropes (50 to 100 feet long) attached to the bow and to the stern. The work becomes interesting when one discovers that the canoe can be steered either away from or toward shore by pulling on one or the other line.
5. Portaging - yoke, paddle or well fitting light weight set of football shoulder pads - one or two man carry (one man carries the canoe with the paddles resting on his shoulders) A simple two-man carry for short portages and lift-overs is to rest the bow-seat on the back of the neck of one carrier and the stern seat on the back of the neck of the other carrier.
6. Keels - give stability and protection. A shoe keel is the most useful. It is a wide shallow strip of wood, or of metal on the aluminum canoe, which does not greatly reduce manoeuvrability in the rapids so long as the loading is kept to the center of the canoe and away from the ends.

#### CLASS ORGANIZATION

- (a) The instructor demonstrates, with the class standing or sitting in a semi-circle, the 9 basic strokes for paddling.
- (b) Students practice these basic strokes in a land drill.
- (c) If class is a large one, divide it according to paddles available. Follow land drill with paddle blades entering the water if it is available.

GAMES Canoe jousting, canoe races, upsetting and uprighting a canoe against time (only for advance canoeists) Canoe filling, tug of war, tail end race, in and out race.

#### TEACHING AIDS

Illustrations, demonstrations, movies.

#### BIBLIOGRAPHY

The New Way of the Wilderness by Calvin Rutstrum.  
Canoeing by Donald Seymour Stone.

FISHING

This relaxing, quiet, reflective, yet exciting outdoor activity, that provides pleasurable anticipation as well as introducing a life-time recreational activity for individual enjoyment of the outdoors, should be encouraged. Much of the fisherman's pleasure comes from the selection, use, and care of his equipment.

OBJECTIVES

- 1) To teach the skills involved in various types of fishing.
  - 1) Hook and line fishing
  - 2) Trolling
  - 3) Spinner
  - 4) Bait casting
  - 5) Fly casting
- 2) To develop the art of fishing, including the preparation for it, care of equipment, and the cooking of fish.
- 3) To promote an interest in and enjoyment of, the outdoors.
- 4) To study the fishing laws of the province.

EQUIPMENT NEEDED

Depending on the type of fishing:

- 1) Boat or other method of reaching desired location
- 2) Rods, reels, lines, hooks, and bait.
- 3) Accessories; minnow pail, scaler, knife, lures, etc.
- 4) Cooking utensils and ingredients.
- 5) Fishing licence if necessary.

BASIC SKILLS

- 1) To properly prepare fishing tackle for use
- 2) How to hook a fish
- 3) Landing a fish
- 4) Cleaning a fish
- 5) Preparation for cooking and eating

ADVANCED SKILLS

- 6) Bait casting
- 7) Use of a spinning reel
- 8) Fly casting

ORGANIZATION

Small group instruction is best, with plenty of time for individual engagement in fishing. Have students pair up so that they can help one another.

If fish are caught, only those suitable for eating should be kept, the others should be returned unharmed to the lake. Also, any edible fish caught should be cleaned, cooked and eaten.

### TEACHING TECHNIQUES

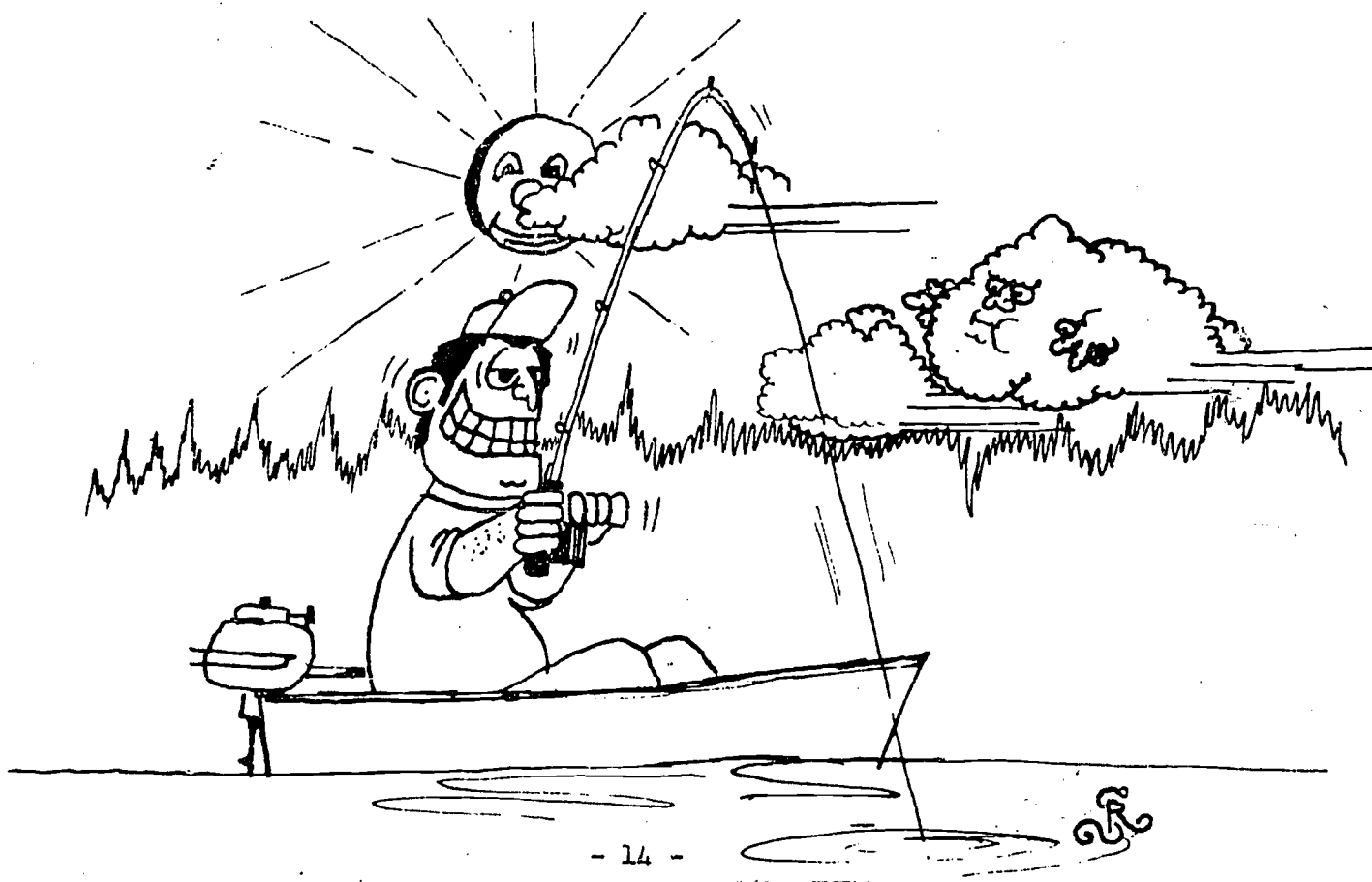
To teach casting, a playground, field or gym may be used. Accuracy should be achieved before trying for distance.

Teach:

- 1) Stance
- 2) Rod angle
- 3) Reel release
- 4) Arm and body motion
- 5) Reeling-in techniques

### BIBLIOGRAPHY

- 1) Outdoor Education, Smith, Carlson, Donaldson, Masters, Pub. Prentice Hall Inc., Page 138 - 140
- 2) The NAACG Manual for Tournament Fly and Bait Casting, Pub. American Casting Association, P.O. Box 51, Nashville 2, Tenn.
- 3) Casting and Angling, Pub. American Association for Health, Physical Education, and Recreation, 1958, Washington, D.C.



HEBERTISME

(An outdoor gymnastic or obstacle course)

DEFINITION

A Hébertisme course consists of a number of pieces of "apparatus" making maximum use of the natural terrain, including trees, rocks, hills, etc. constructed with rope and nails and a minimum of other manufactured equipment.

HISTORICAL BACKGROUND

Georges Louis Hébert prepared such a course in the forests of France during the First World War, on which he trained and conditioned sailors of the French navy, from whence comes the name hébertisme.

OBJECTIVES

The objectives are:-

- 1) To promote physical fitness through the development of strength, agility, and flexibility.
- 2) To provide a physical challenge.
- 3) To develop skills in the area of climbing, crawling, jumping, and balancing.

EQUIPMENT

The only requirement is good, non-slip footwear.

SKILLS

1. Climbing
  - 1) Flexed arm hang
  - 2) Chin-ups
  - 3) Over-head hand-walk
  - 4) Monkey-bar walk
  - 5) Rope climb
  - 6) Ladder Climb
2. Balancing
  - 1) One foot balance on ground
  - 2) Blindfold balance on ground
  - 3) Walk on low beam
  - 4) Walk on beveled edge beam
  - 5) Stump or stone jumping
3. Jumping
  - 1) Running broad jump
  - 2) Stride jumping (take off on one foot, land on the other)
  - 3) Hurdling over small objects.
  - 4) Jump from low heights and land properly

4. Crawling

- 1) On hands and knees
- 2) Flat on stomach, using elbows and knees
- 3) On back, pushing with feet

CLASS ORGANIZATION

It is essential to work in small groups (6-8 students) so leaders must be trained ahead of time. Start with the low, easy apparatus. Have students experiment with different ways to master the apparatus. Move from the easy to the more difficult apparatus.

Always teach the safety aspects. Students can work in pairs and assist one another.

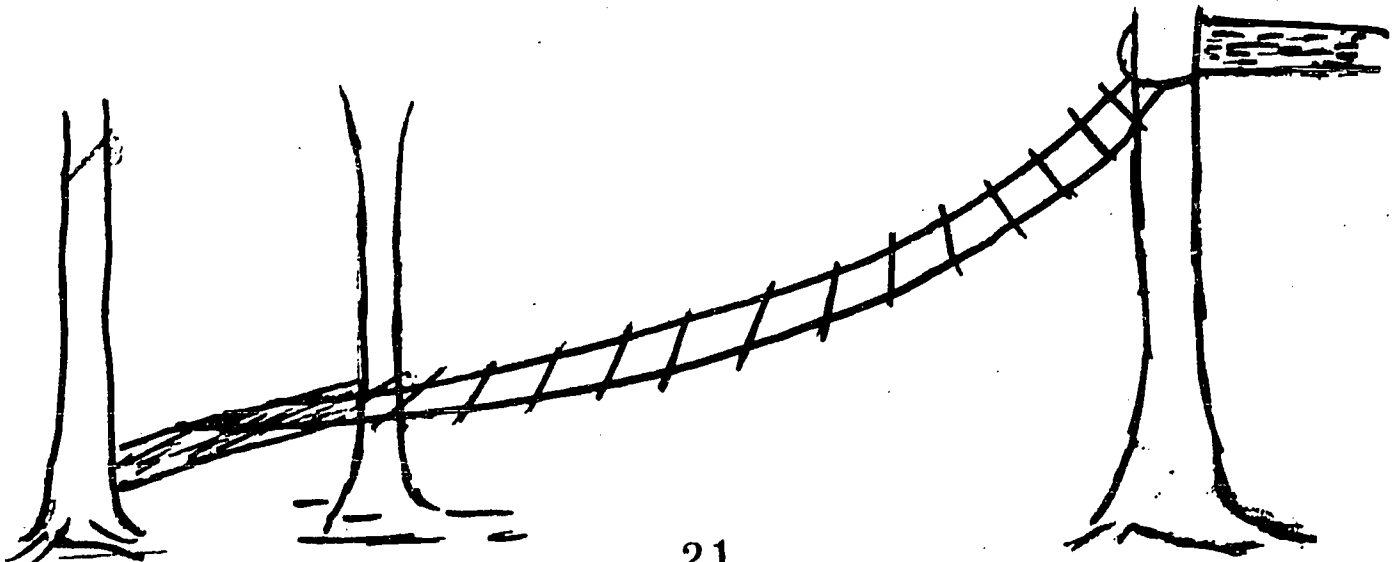
The motivation for participating in the hébertisme course is to have challenging apparatus. Although called a course, it is not designed to be run as an obstacle course, but rather as series of apparatus to be mastered.

Part of the challenge too, for older students, is to construct additional apparatus. All apparatus must be checked for safe construction, and the use of it must always be under competent supervision.

REFERENCES

Canadian Camping Magazine, Publ. Canadian Camping Association, P.O. Box 661, Downsview, Ontario (Spring issue 1972)

Many residential summer camps for boys and girls, listed in the Quebec Camping Association Inc. Directory of Camps, 2233 Belgrave Avenue, Montreal, H4A 2L9, P.Q.



MOUNTAINEERINGObjectives

- (a) To provide a physical and intellectual challenge in a wilderness setting which engenders self-knowledge and resourcefulness and satisfies a basic spirit of adventure and exploration.
- (b) By close association with the elements and the flora and fauna of wilderness areas to develop an understanding of, and a sympathy for, the natural world.

Skills(a) Map & Compass orientation

As clearly defined paths may be non-existent in mountainous terrain, map-reading and taking accurate compass bearings are essential skills in mountaineering.

(b) Rock-climbing Techniques

Few mountains may be scaled without some knowledge of rock-climbing techniques -

- 1. tying into a rope
- 2. belaying
- 3. using the piton and karabiner
- 4. rappelling or abseiling

(c) Snow & Ice Techniques

- (1) The use of the ice-axe for
  - (i) climbing & descending a snow slope
  - (ii) for step-cutting
  - (iii) for belaying
- (2) The use of crampons for
  - (i) progressing on ice-slopes

- (d) A knowledge of the effect of weather changes on the terrain in mountain areas, i.e., snow and ice avalanche possibilities.

Equipment Needed for Mountaineering

- 1. Vibram-soled boots
- 2. 120 ft. nylon rope - for leader only.
- 3. sling and karabiner
- 4. ice-axe (for snow & ice only)
- 5. crampons " " " "

NOTE:

Although there are no accessible mountains in Eastern Canada which have truly alpine conditions, rock faces are readily available which will permit a beginner to use all the basic climbing techniques. Winter conditions in Quebec are such that there is not too much difficulty in finding terrain where step-cutting and the use of crampons may be practised on hard snow and ice slopes.

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	White Mountain Guide	Appalachian Mountain Club
	Alpinisme au Quebec	Andre Hebert

Techniques in climbing and orienteering

The Foundations of Climbing	Showell Styles
Be Expert with Map and Compass	Bjorn Kjellstrom

Books by Climbers and Famous Guides

Climbs in the Canadian Rockies	Frank S. Smythe
Cloud Walkers (in the Rockies)	Paddy Sherman
On the Heights	Walter Bonatti
The White Spider	Heinrich Harrer
Annapurna	Maurice Herzog
Conquistador of the Useless	Lionel Terray
Glace, Neige et Roc	Gaston Rebuffat
Scrambles in the Alps	Edmund Whymper
Matterhorn Centenary	Sir Arnold Lunn
High Adventure	Sir Edmund Hillary
Mountains and Men	Wilfred Noyce

ORIENTEERINGObjectives

To develop the skills required to use the map and compass in the out of doors.

To develop an ability to move with freedom and confidence in any environment.

To discover the enjoyment of Orienteering.

Skills

1. Map Reading - an ability to read a map
  - an understanding of map symbols
  - to orient a map
2. Compass - Know the parts of a compass
  - Compass bearings
  - Travelling by compass

Equipment Needed

- Compass (preferably one per student)
- Area Maps
- Markers or Flags

Class Organization

- very informal
- requires brief instruction on maps and on compass, which can be done indoors or outdoors.
- for practicing bearings and pacing, a straight line is often useful.

TYPES OF ORIENTEERINGScore Orienteering

The object in score orienteering is to gather as many points as possible by visiting as many control points as possible during the time allowed. The course-setter must take care to spread the control points throughout the area to be used and to set out more controls than can possibly be visited during the time limit. Each control has a specified point value. Those near the start-finish area have a low point value while those further away or difficult of access are valued higher. Points should be graded according to the accessibility of the control site.

Each competitor carries a control description sheet and a map. The map locates each control by number while the description sheet describes the location of each control site and gives its point value. Each control marker carries an identifying mark or letter which must be copied by the competitor to show that he has been there.

A penalty system must be enforced whereby competitors lose points when they exceed the time limit. No points are awarded for early finishing.

APPLICATION: This type of orienteering competition can be started anywhere there is space enough to keep people active from 5 minutes on up. A school campus or park can be used in the beginning. All that is needed is a well-planned course and a sketch map of the competition area which will show the main identifiable features, so that the competitor can orient his map. With such restrictions of time and space a score competition can be run comfortably within a class period.

Of course score orienteering competitions can be expanded greatly from this simple beginning. The time limit could be stretched up to three hours and the terrain greatly expanded, so that the skills of topographic map reading and compass work would come into use.



## TYPES OF ORIENTEERING .....

### Cross Country or Point-to-Point Orienteering

This is the pure form of orienteering from which the other types are derived. Winners are decided strictly on a time basis provided they have completed the course properly. Competitors are started at time intervals. After the start the competitor follows a well-marked route - usually marked with brightly coloured streamers - to a mastermap area where he copies the location of the control points onto his own map. He must visit each of the control sites in the specified order. Once again each control is identified by a code symbol which must be copied onto a control card.

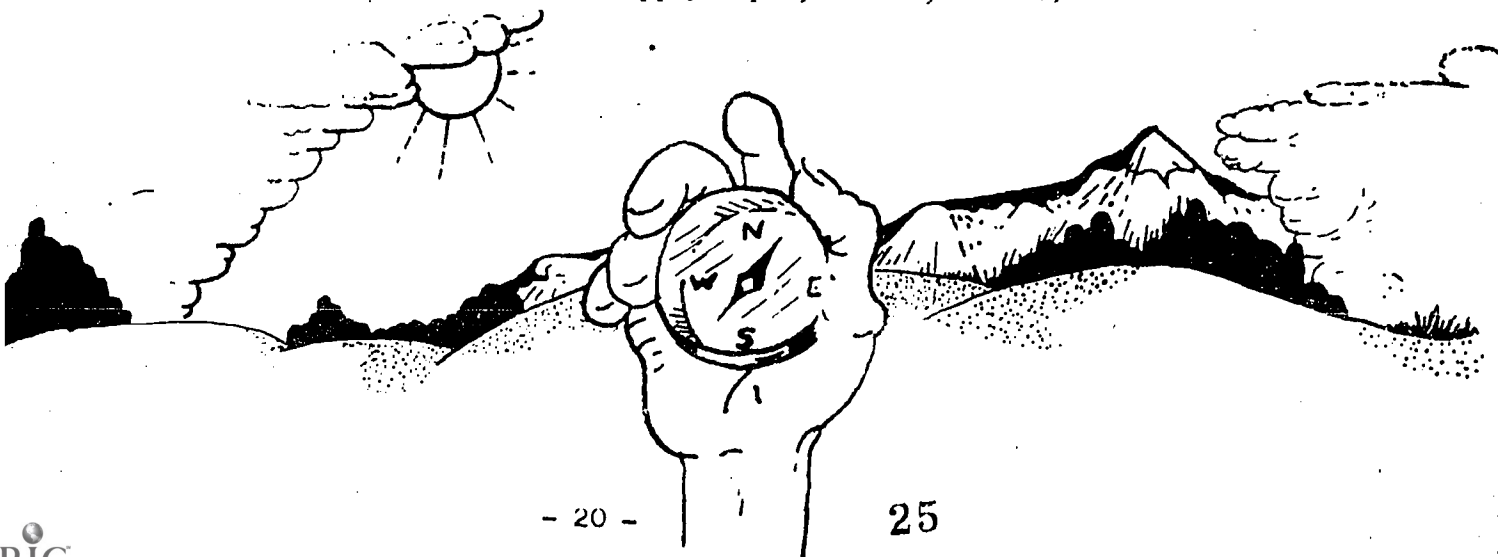
APPLICATION: This type of competition will usually take a few hours to complete so a complete morning or afternoon is necessary. Accurate maps are also a requirement for cross-country orienteering. The competition area should be undulating with identifiable physical features and should be at least partially wooded.

Other variations include:

- Line Orienteering
- Route Orienteering
- Night Orienteering
- Team and Relay Orienteering
- Project Orienteering

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- Orienteering - An Aid to Training - by Capt. J.R. Chapman (British Cadet Supply Dept., London, S.W.I.)

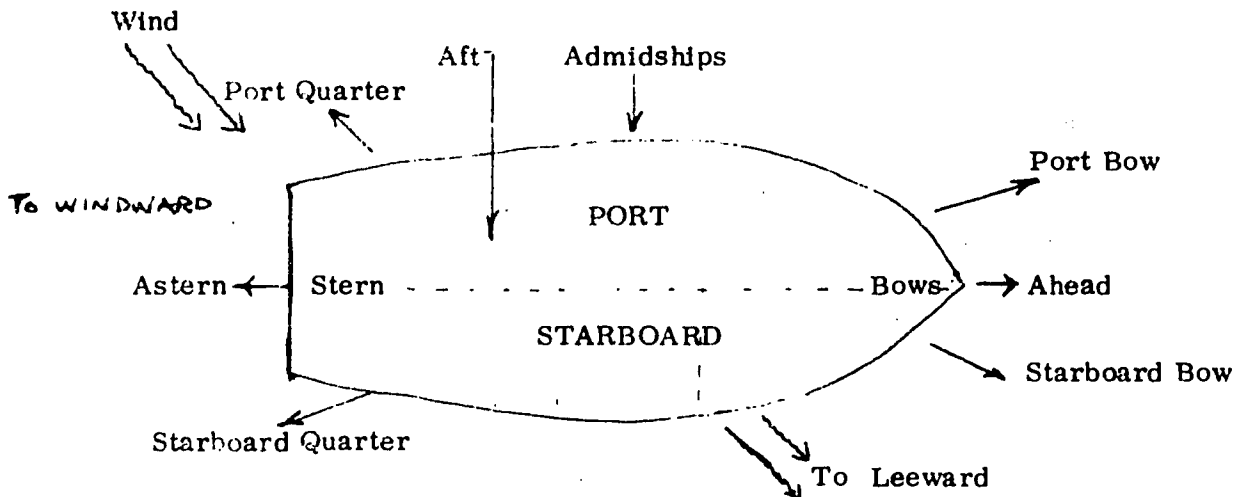


SAILING1. OBJECTIVES:

- (a) To develop appreciation of an activity which can be enjoyed as a racing activity and/or a leisure time activity.
- (b) To develop the skills and knowledge needed to sail safely and enjoyably.

2. EQUIPMENT NEEDED:

- ( i ) Non-slip rubber-soled shoes.
- ( ii ) Life jacket.
- (iii) Sailboat complete with sails, paddle, and flotation.
- ( iv ) Bailing can.

3. BASIC VOCABULARY:(a) Direction on Board a Boat(b) Basic Sailboat

- ( i ) Catboat: Rigged with one mast, one boom, and a mainsail.
- ( ii ) Sloop: " " " " " " " a mainsail and a smaller sail called a "jib" (head sail).

(c) Small Boat Nomenclature

- ( i ) Hull: The main body of the boat; occupants will be seated on floorboards, thwart (seat), or gunwale (Gun'l).
- ( ii ) Spars: The mast and the boom.

- ( iii) Standing Rigging: The guy wires which support the mast from moving sideways are shrouds; from tipping forward or backward are stays.
- ( iv) Running Rigging: The ropes which raise and lower sails (halyards) and which haul jib and boom in and out (sheets).
- ( v) Rudder: Instrument by which a boat is steered.
- ( vi) Tiller: Handle attached to head of rudder which turns rudder to port or starboard.
- ( vii) Centerboard: A flat plate of wood or metal which can be raised or lowered through a box in the center of the hull. It prevents side slipping.
- (viii) Mainsail: The large sail rigged to the mast and the boom.
- ( ix) Headsail: The "Jib" rigged to forestay and controlled by jib sheets. (Sloop rig only). (A Catboat rig has no headsail).

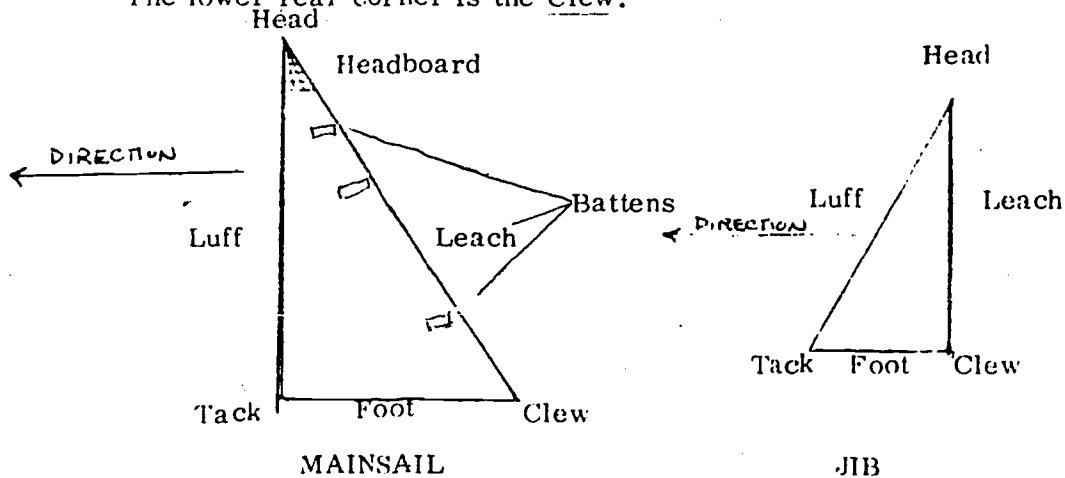
#### 4. PARTS OF A SAIL

(a) Edges:

The leading edge is the Luff .  
 The bottom edge is the Foot .  
 The trailing edge is the Leach.

(b) Corners:

The top corner is the Head. (The solid piece sewn inside to add strength is the Headboard).  
 The lower leading corner is the Tack.  
 The lower rear corner is the Clew.



(c) Battens:

Small, flexible wooden pieces inserted into the leach of a mainsail to prevent it from curling.

## LAUNCHING AND RIGGING THE BOAT:

- (a) Place all gear in boat (life jackets, sails, paddles, rudder & tiller, bailing can).
- (b) Lower boat into water.
- (c) Fasten bow line to dock so that the bow points into the wind.
- (d) Step into boat by placing feet on floorboards (not on gunwale) and lower the centerboard.
- (e) Fasten rudder and tiller.
- (f) Hoist mast on sail(s):
  - (i) Fasten mainsail halyard shackle to headboard and draw headboard partway through luff track on backside of mast.
  - (ii) Draw clew of sail through slot on boom so that the foot of the sail is now secure in the slot. Secure the clew.
  - (iii) Insert battens in the batten pockets on leach of mainsail.
  - (iv) Hoist mainsail and cleat the mainsail halyard.
  - (v) If the sailboat is a sloop shackle tack of jib to fitting on bow. Secure the jib snaps to the forestay. Shackle jib halyard to headboard. Secure jib sheets to the clew of the jib, and run the sheets through proper fairleads. Raise the jib and cleat the halyard. (Always raise mainsail before the jib; always lower jib before the mainsail).
  - (vi) The mainsheet is secured to the boom and to a traveller on the transom or to a block on the cockpit sole (bottom).

## SKILLS:

- (a) Sailing to windward (Bow more into the wind than away from it).
  - (i) Locate object on shore line and point toward it.
  - (ii) Keep course steady -- let out sail(s) slowly until it begins to luff (flap at leading edge), then bring it in (harden up) till the "luffing" just disappears. Sail(s) are now trimmed.
  - (iii) If wind shifts watch for "luffing" and head boat away from wind slowly (laying off).
  - (iv) Test wind direction by heading up slowly into wind until sail(s) luff(s) then lay off slowly.

(b) Coming About (changing tack)

- (i) Bring boat **up close** to the wind and haul in sails. (Boat will be on edge of luffing).
- (ii) Skipper's Commands.
  - (i) "Ready about" -- Jib sheet taut; sails close-hauled.
  - (ii) "Helm Alee" -- Tiller moved to lee side; bow moves up to face wind.  
Crew releases jib sheet as bow swings crew pulls in on other jib sheet and moves to windward side of boat.  
The new tack should be about  $90^{\circ}$  to the old.  
Trim jib again (mainsail **does** not need adjustment).

(c) Sailing on Broad Reach

- (i) The wind is coming from the side but not astern.
- (ii) Set desired course.
- (iii) Adjust sails by trimming to the point of luffing then trim in the sails.
- (iv) Check continuously for wind shifts by letting out sails slowly until luffing begins.

(d) Sailing on a Run (wind astern)

- (i) Mainsail should be  $90^{\circ}$  to wind direction.
- (ii) If there is a jib it should be  $90^{\circ}$  to wind direction but on side opposite to mainsail.

Danger: If the wind shifts the mainsail can be swung suddenly to the opposite side and cause the boat to tip over. (Accidental Jibe).

(e) Jibing:

- (i) "Stand by to Jibe" -- warning command.
- (ii) "Jibe Ho" -- Crew pulls in mainsheet hand over hand until boom is in center of boat.  
Skipper alters course a few degrees toward the new windward side.  
Crew **pays out** sheet **hand over** hand.  
Crew and skipper move to other side.

7. CAPSIZING ("DUMPING")

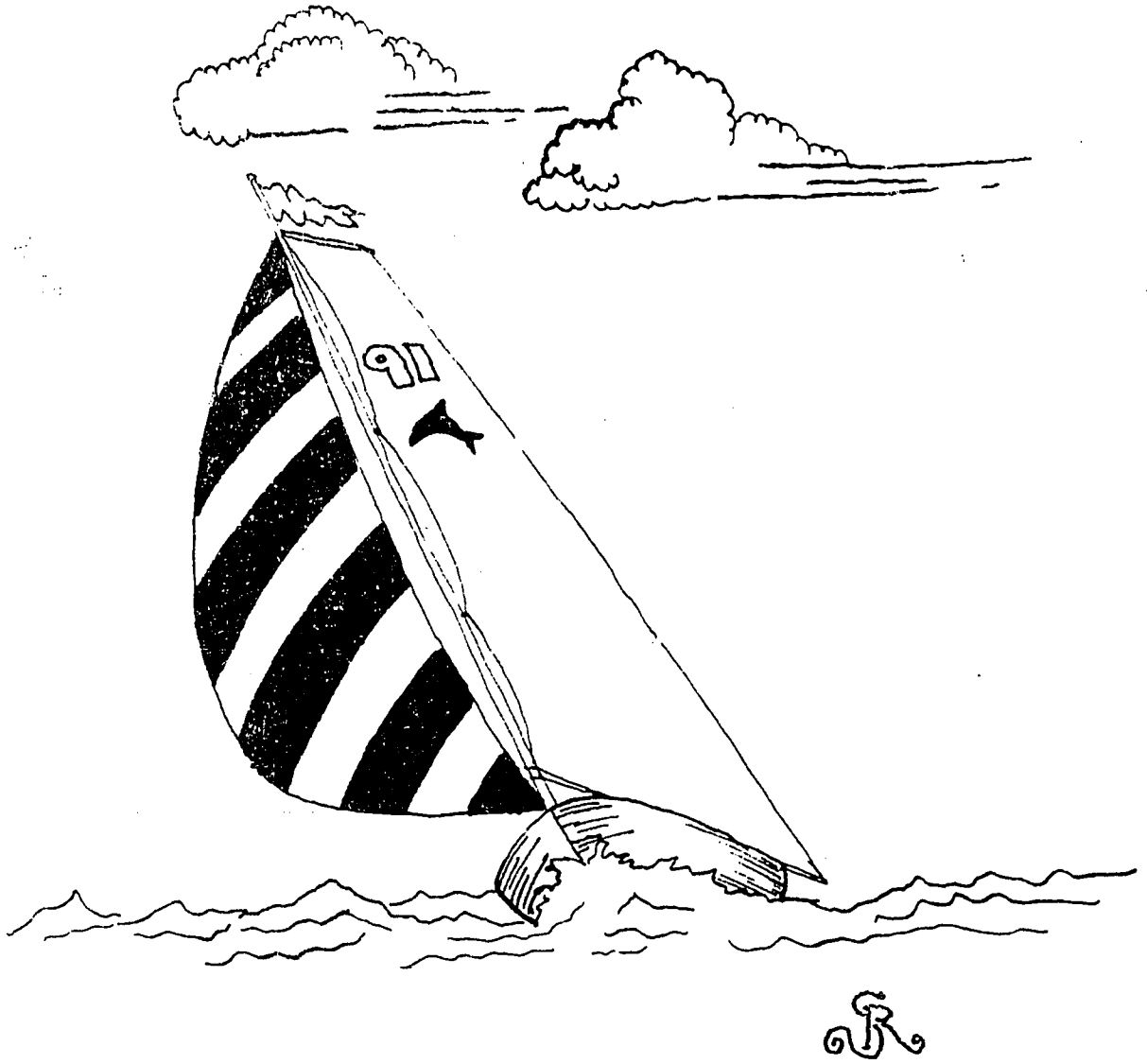
- (a) Make certain crew is not entangled.
- (b) Lower sail(s).
- (c) Turn capsized **boat** so that bow points into the wind.
- (d) Stand on centerboard and right sailboat.
- (e) **Board** by the stern: do not put weight on gunwale.
- (f) Secure towline to bow chock and mast.
- (g) As rescue boat prepares to tow raise centerboard part way.
- (h) Remain seated at stern and open seacock, to drain the boat (water will float out while under tow).

8. GAMES

- (a) Timed dumping drills.
- (b) Short races -- A Beat, or Reach, or Run, or combinations.

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- 25a -

SKATINGObjectives:

- a) To develop an awareness of an activity which can be enjoyed alone or in a group.
- b) To develop the skills and co-ordination involved in movement on an ice medium.

Skills:

## 1. Skating Forward:

- a) Bent knees and forward lean
- b) Driving from inside blade of one skate, toeing out shifting weight to glide on other skate. Drive leg straightens to complete drive.
- c) Recovering glide leg by bringing it in close to glide skate shifting weight as leg moves forward and beginning drive with other leg.
- d) Stopping - Snow Plow - toes in and heels out, knees bent!  
 - 'T' Stop - weight on glide skate, other skate forms a 'T' behind glide skate.  
 Gradual shift of weight to rear skate.  
 - Parallel Stop - raise up on toes, turn sideways - shift weight gradually on to forward skate (both skates assist in this stop).
- e) Direction Change - glide on both skates - turn by turning head and shoulders - weight on glide skate pump with other skate.
- f) Turning - crossing left leg over right or right over left

## 2. Skating Backward:

- a) Bent knees and forward lean as in skating forward.
- b) Driving by toeing in with drive foot and shifting weight on to glide skate.
- c) Recovering drive foot by bringing it in close to glide skate and shifting weight on to it as the drive begins with the other skate.
- d) Stopping - weight on glide skate use other skate behind as in movement for forward drive  
 - Parallel stop



- c) Turning - Glide with weight on one skate, pump with other.
  - Leg over leg left in front of right or right in front of left.

3. Reversing Direction:

i.e., skating frontwards to skating backwards and the reverse of this.

- a) Glide both feet, raise up on toes, pivot with shoulder movement.
- b) One foot pivot (in stride) and turn.

4. Accessory Skills:

- Skating in pairs frontwards and backwards in unison
- Skating in pairs facing each other
- Balancing on one leg in swan position
- Gliding on two skates squatting and rising
- Gliding on one skate squatting with one leg extended in front
- Gliding with skates at 180°
- Continuous reversal of direction, i.e., front to back to front
- Figure '8'

Class Organization:

Most classes will have a great divergence of ability which necessitates a considerable amount of grouping

"Face-off" circles and the center circle are "natural" areas for setting off groups.

Divide class into ability groups at beginning of session.

Teach fundamental listed above to whole group.

Separate groups according to individual needs with specific objectives to challenge each group.

A Few Formations:

1. Skating rink in a figure '8' pattern for developing turns.
2. Skating "face-off" circles for developing turns.
3. Stop and go on whistle for developing stopping ability.
4. Same for reversing position, i.e., go backwards on whistle.
5. Skating the square - for quick change of direction.

Suggested games:

- BRITISH BULLDOG - for developing quick stops and changing direction skills
- SPEEDBALL - (no kicking) with a playball - for general ability on ice.
- HOCKEY - using skates only
- RELAYS - Shuttle type
  - Continuous (with Baton) - (backwards and forwards)
  - From goal line to blue line (stop without crossing but touching blue line)

Figure Skating:

May be included as a class activity using the same basic class organization as above.

BIBLIOGRAPHY

Duhamel, Roger, F.R.S.C.: Figure Skating Manual - Fun for Everyone,  
The Queen's Printer and Controller of Stationery, Ottawa, Ontario.

C.A.H.P.E.R.: How to Play Better Hockey, Vanier City, Ottawa.

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ALPINE SKIING

Objectives

1. Generate an interest and awareness in skiing as a leisure and life time sport.
2. Develop an appreciation for the skills of co-ordination, balance and stability associated with down-hill skiing.
3. Develop individual achievement and satisfaction through skiing.

Equipment

1. Skis with steel edges, preferrably of length less than or equal to 6 inches more than the individuals height.
2. Ski bindings with forward and sideway release angles. Ensure that they are well adjusted. Probably the most important part of your equipment.
3. Ski boots preferrably of the newer man made materials with firm ankle and foot support.
4. Poles preferrably of the aluminum, fiberglass or steel type. Length is determined by holding pole upside down under basket, the forearm should be parallel to the ground.

Skills

The ultimate goal of every skier is to be able to make "parallel" turns. This calls for the development of co-ordination, balance, stability and control and is accomplished through a series of exercises progressing to the parallel turn.

The beginner skier passes through fundamentals building to the final product through the following steps: -

- a) Relaxed Body Position
- b) Edge Control - control of edges by rolling knees and ankles
- c) Feeling of Sliding
- d) Snow plow - as a maneouvre to control speed
- e) Unweighting of skis - both up-unweighting and down-unweighting
- f) "Carving" of a ski - weighting and "progressive" increasing of edges
- g) Rythmn - flowing from one turn to the next

### Skills (cont'd)

As the skier combines these various skills, he will naturally progress from the more gentle ski slopes to the more challenging, learning as he goes, the skills involved in riding ski tows.

It must be emphasized here that skiing is an individualistic sport, where the person's intrinsic ability governs how well and how fast he progresses.

### Class Organization

Classes of up to 10 skiers have been shown to progress adequately.

Skiers should be segregated as to level of achievement, and homogeneous groups formed for best results.

Beginners should never be taken up lifts until such time as they have reached the "Snow plow turn" stage.

Keep members of classes lined up close together and off to the sides of trails for safety reasons.

When skiing, always have each skier stop below the rest of the class to prevent accidents.

Keep classes interested and motivated by making lessons varied and challenging.

Minimize verbal explanations and maximize demonstrations of the ski manoeuvre. A "picture is worth a thousand words" Keep classes moving to prevent students from getting cold.

### Games

1. Follow the leader - develops control and balance.
2. Set-up "courses" for the class to ski down - develops control, balance, agility and loss of fear of skiing faster.

### Competition

#### Racing

Slalom - relatively short course constructed of "gates" requires precise tight turns and is slowest type of race.

### Competition (cont'd)

Giant Slalom - longer than slalom, wider turns and considerably faster.

Downhill - longest of all, the basic idea to get to the end of the course as quickly as possible skiing around "controls" or intermittent gates. In international competition speeds can reach 60 - 70 mph.

### Freestyle (Hotdogging)

This is a new form of competitive skiing gaining tremendous popularity.

Precision Skiing (Bullet) - combining various "trick" skiing manoeuvres into a ski run. Speed is not essential and points are allocated on degree of difficulty, rhythm and variety.

Free Ski (Hotdogging) - the idea here is to reach the end as quickly as possible on difficult terrain, no "gates" are used.

Aerial Acrobatics - trick aerial skiing such as flips, split jumps, high and long jumps.

### Safety

Skiing can be a dangerous sport. It is up to you to make students aware of simple common sense rules which go to making skiing safe and pleasant such as the following: -

1. Have bindings checked regularly at reputable ski shops
2. Use safety straps, preferably the "two point" type
3. Never ski alone
4. Always ski under control
5. Always look ahead



CROSS COUNTRY SKIING

Cross Country Skiing has an excellent carry-over value - it offers healthy recreation to both sexes of all ages. For the more energetic there is racing orienteering, touring and camping. For the nature lover it offers an opportunity of spending hours outdoors in winter enjoyment.

OBJECTIVES

- a. To develop an awareness of the variety of winter enjoyment cross country skiing offers.
- b. The development of skills necessary to enable one to participate comfortably.

EQUIPMENT NEEDED

- a. Cross Country skis and bindings
- b. Ski poles
- c. Cross Country Ski boots
- d. Ski preparation materials

SKILLS

- a. Preparation of skis - An understanding of how and why skis require wax is necessary. A properly waxed ski will glide as long as it is in motion. Once the gliding stops or slows down, it is possible to apply weight and the ski will stand firm for a Kick-Off. This is the basic principle of Cross Country Skiing; Kick-Off and Glide.

Cross Country Skis have a wood base which must first be coated with pine tar and/or base wax to protect the wood from moisture, and provide an adhesive for final waxing. Pine tar and base waxing is done two to three times a year, and is done with a torch heating the tar and wax so it penetrates the wood. There are three surface waxes most generally used:

Red for Temperature	30° F to 34° F
Blue for "	18° F to 32° F
Green for "	21° F and below.

Alternatively it is possible to mix or use a combination of these after more experience.

- b. Glide and Kick-Off (Diagonal Stride)

The body moves as it would using a fast walk or march step. Lean forward ready to plant the right pole, then with a slight, and rapid sinking in both knees begin your Kick-Off with the right ski; as your right leg is extended you should plant your right pole. During this sequence you have transferred your weight from right to left leg, now when the left ski glide ends,



bring your right leg up to your left and Kick-Off with the left. This alternating action should be done in a smooth rythmical manner. The pole is merely an assist in this manoeuver. Most of the propulsion should come from the Kick-Off.

c. Up Hill

The diagonal stride can be used up hill as well. Use a shorter glide phase the steeper the hill. Extremely steep hills may have to be climbed by using the herring bone, tracking turns or side stepping.

d. Down Hill:

Depending on the incline snow plow, step turn to tracking turns or side step.

#### TEACHING AIDS

The Norwegian Council has excellent visual material, and books are available in most sports outlets.

#### CLASS ORGANIZATION

- a. Begin on a flat surface with 50 yard to 70 yard runs.
- b. Practice Kick-Off and glide diagonal stride without poles first.
- c. Move to a circular track then figure eight.
- d. Find small hill and try up and down hill techniques.

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Pamphlets published by Fédération des Clubs de ski du Quebec Inc., 2322 Sherbrooke St. East, Montreal, H2K 1E5, Quebec.

"The New Cross Country Ski Book" by John Caldwell, published by Outdoor Canada Magazine Ltd., Suite 300, 181 Eglinton Ave. E., Toronto M4P 1J9, Ontario.

Complete Cross-Country Skiing and Ski-Touring by William J. Lederer and Joe Pete Wilson, published by Outdoor Canada Magazine Limited.

SNOWSHOEINGObjectives

To develop the skills required to be able to snowshoe with ease and enjoyment.

Equipment

- Snowshoes: - Type varies according to need
- Standard - made of wood frames
    - best regardless of shape
    - light, strong, do not clog easily
    - require care and maintenance
  - Synthetic- made of plastic substance
    - can endure extreme colds
    - very durable, strong
    - can take any kind of footwear without damage, including heels
    - less expensive
    - slightly heavier, tend to clog with damp snow, require more unclogging
    - good for schools where footwear will differ from person to person
    - take a lot of abuse - little maintenance
- Harness: - Leather - By far the best and most durable
- Lampwick - Adequate for multiple use snowshoes

- Skills - Skills needed for Snowshoeing are not much different than walking.
- Be sure foot is secure in snowshoe and shoe is on straight.
  - Skill consists of - walking normally
    - determine stride which will allow one snowshoe to fall just in front and to side of other
    - develop stride to resemble normal walking motion so as to avoid undue strain on new muscles and fatigue.
    - Learn techniques for climbing, traversing, group snowshoeing, and woods travelling.
    - Learn about snowshoe care and maintenance.

Class Organization:

- Equipment needed:- 1 pair snowshoes for each member of group
  - warm clothing.
- Area: - Any out door area such as a playground, wooded area, golfcourse, countryside, etc.
- Teaching: - Group session for basic instruction
  - Loose group practice sessions
  - individual instruction for people having difficulties
- Time - easy to do in class period or longer

- Games: - Most open area games which require steady movement.
- Some good ones are: Orienteering, nature scavenger hunts, races, hill climbing races, etc.

BIBLIOGRAPHY - The Snowshoe Book, by Osgood & Hurley.



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SWIMMING

The emphasis on aquatics in the school program should be placed on the below-average or non-swimmer, with instruction directed toward giving every individual an easy familiarity with this oft-feared element, primary consideration being given to the value of water-play activities.

Objectives

- a) to teach water safety
- b) to teach a person to be a competent swimmer
- c) to develop a person physically
- d) to teach carry-over skills.

Skills and KnowledgeA) Water Safety

It is possible to teach these without the use of pool facilities.

- (1) Water safety theory, i.e. Red Cross water safety
- (2) Self preservation
- (3) Rescue
- (4) Artificial respiration

B) Swimming

Students should be tested and grouped according to their ability in order to be taught effectively. Subsequent testing and regrouping should be carried out at the discretion of the instructor.

## (1) Orientation:

- a) Teach students to get into the water by the ladder and walk in water
- b) Complete submergence
- c) Open eyes under water
- d) Rhythmic breathing (bobbing)

## (2) Buoyancy:

- a) Front float
- b) Jelly fish float
- c) Back float
- d) Glides - front and back (push off from side)

## (3) Propulsion:

- a) Front float and flutter kick
- b) Back float and flutter kick
- c) Arm action (dog paddle or human stroke)
- d) Back-finning (with back flutter kick)

B) Swimming (cont'd)

(4) Stroke Mechanics:

Basic strokes - front crawl  
back crawl  
breast  
side  
elementary back

Supplementary skills -

- a) Treading water
- b) Sculling
- c) Head first entry into the water
- d) Surface dive
- e) Stride jump
- f) Legs only (frog; whip kick)
- g) Shallow dive; running dive

(5) Advanced swimming:

This section could more properly be left to extra-curricular activities and/or outside swimming clubs than to teaching periods.

- a) Advanced diving
- b) Racing
- c) Synchronized swimming
- d) Waterpolo

Class Organization and Presentation

- A) Working from the previously stated divisions, one group might be divided into three more manageable groups: Advanced - Average - Below Average. Give concentrated attention to one sub-group per lesson. Skills pertaining to the group should be rotated for the three first lessons. The fourth lesson should be a review lesson for the whole group.
- B) With a class that has not been screened as suggested, students having shown ability should be assigned as class leaders to help with the instruction of the groups. The teacher must still circulate among the groups.

Equipment and Teaching Aids

- a) Flutter boards
- b) Reaching pole
- c) Ring buoys
- d) Pool dividers
- e) Resussi-Anne
- f) Resussi-tube
- g) Diagrams and charts (Water safety)
- h) Films and filmstrips (e.g. Johnson and Johnson-film on respiration)

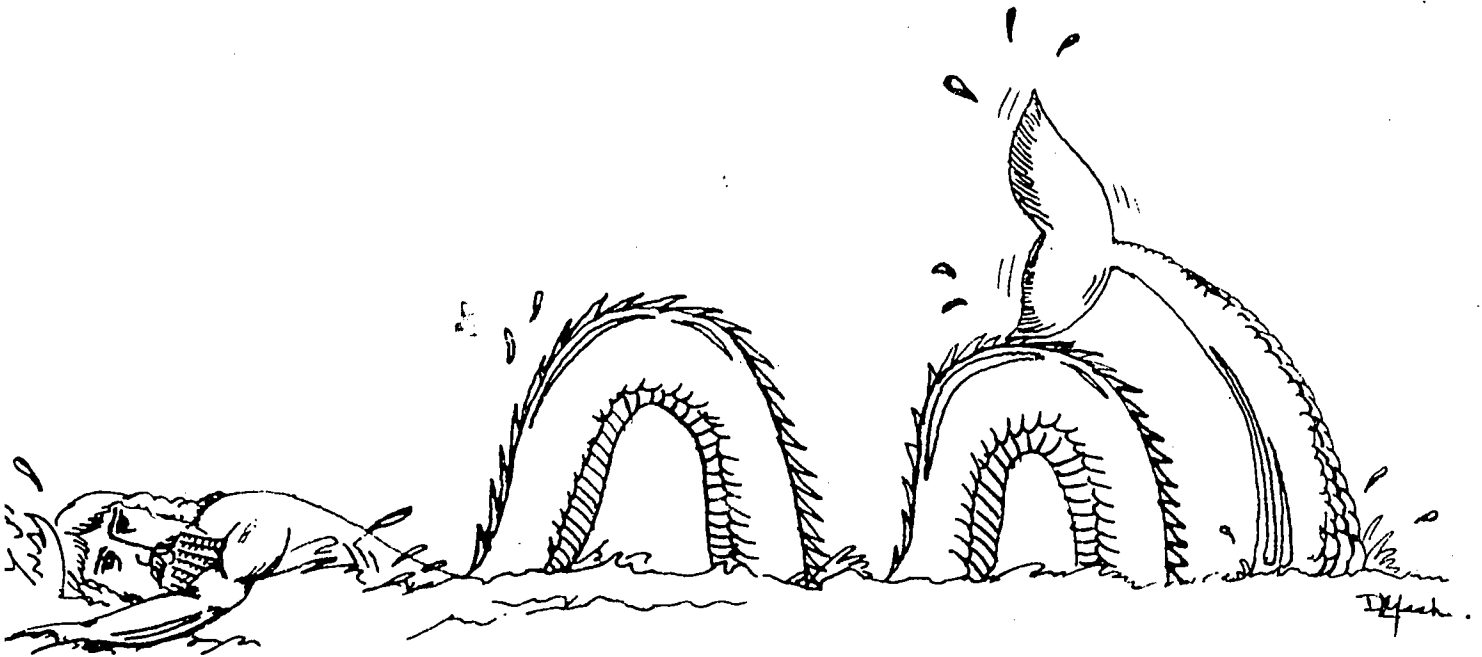
## Testing

The greatest part of the course in swimming follows closely the program outlined in the Water Safety Manual of the Canadian Red Cross Society. It is therefore suggested that all students taking instruction be given the various tests provided by the Red Cross.

## BIBLIOGRAPHY

The Canadian Red Cross Society Water Safety Manual, distributed by the Canadian Red Cross Society, 2170 Dorchester Blvd. W., Mt.

Royal Life Saving Society Manuals, distributed by the R.L.S.S., 455 St. Jean Street, Montreal, H2Y 2R5.



TOBOGGANING

Under this heading sleighing and other types of sliding are also included.

Objectives

1. To develop body balance, and perceptual motor co-ordination, as well as physical fitness.
2. To work individually **and** in co-operation with **others**.
3. To teach a recreational activity that may be pursued during spare time.

Equipment

A toboggan, sleigh, or "carpet" and suitable hill.

Skills

Start with a small slope and progress to a larger slope after steering skills have been developed and confidence built up.

Common Positions

- a. Kneeling
- b. Prone
- c. Sitting

Steering Methods

- a. Dragging one foot at rear
- b. Pressing on one side at front
- c. Shifting body weight

Organization and Safety

For the safety of all, the following are suggested:

1. The area to be used for climbing back up the hill be designated. (This is usually to one or both sides of the sliding hill). No one should be permitted to climb up the sliding hill itself.
2. As soon as a toboggan stops, the student should look behind to make sure all is clear, then dismount, and pull the toboggan forward so that he is out of range of other tobogganists.
3. If the student falls off his toboggan during the descent, he should immediately get back on, and continue downhill.
4. Students should call "Track" to warn of their approach towards another toboggan.

5. Instruct students to ALWAYS fall off their toboggan rather than run into another toboggan, person, or tree.

#### Variations

1. Larger toboggans may accommodate two, three or more students at one time.
2. Steeper or bumpier slopes may be chosen.
3. Luge sleighs may be used, requiring more skill in steering.
4. Man made toboggan runs may be used, on which speed is greatly increased.

#### Locations

1. Mount Royal Park at Beaver Lake in the center of Montreal.
2. Local Parks
3. Mount Avila, southern slope, near St. Sauveur.
4. Mount Habitant, eastern slope, in St. Sauveur.

