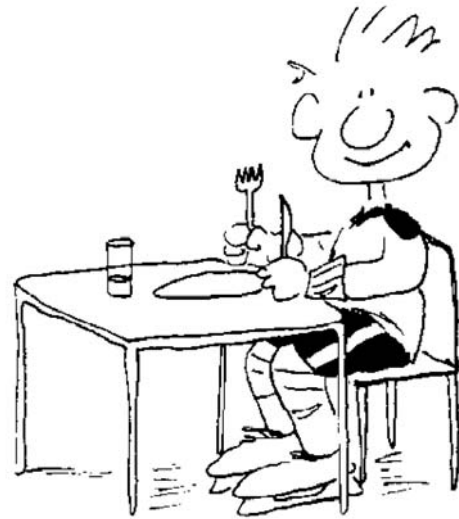




# PHYS ED

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## Human Performance

Grade 12

### Hall Visit Activity:

Read the chart in the Montreal Canadiens' dressing room on diet and nutrition. Using the team schedule listed below, plan meals for the three-day period given. Be sure to take into account the players' energy requirements on a game day as opposed to a travel day.

Day #1	Day #2	Day #3
10 AM – Practice 8 PM - Home Game	10 AM – Flight 3 PM – Weight Training	10 AM - Practice 8 PM - Away Game

## Hall Visit Activity:

Play each of the three levels of the interactive goalie game. What factors make each level increasingly difficult? At what point do you begin to feel fatigued? Using your knowledge of aerobic and anaerobic exercise, briefly describe what is happening to your muscles at this point.

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With a partner, alternating after every turn, play the interactive goalie game on the same level, at least three times each. Does your score improve the more you play? What stage proved to be the most difficult? Why?

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## Post-Hall Visit Activity:

List some training techniques that would improve a goalie's performance. How and why would these activities help a goaltender?

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## Hall Visit Activity:

Make notes of some of the coaching tips by former coach Dick Irvin in the dressing room.

## Post-Hall Visit Activity:

How do techniques change when dealing with first-time hockey players (10 years old) as opposed to those who have been playing for some time (18 years old)? i.e. The concept of fair play is stressed more for the younger children.

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## Hall Visit Activity:

When you walk into the Montreal Canadiens' dressing room, you will see a replica of the real dressing room in Montreal. Further into the room is a training/physiotherapy area. There are several screens which cover the following topics:

Aerobic Training

Flexibility Training

Speed and Agility Training

Anaerobic Training

Strength Training

Sport Specific Training

View 3 of these videos and answer the following questions. After the trip, there will be a follow-up assignment at your school. The videos contain all of the information you need to answer the questions to complete this assignment.

## ANAEROBIC TRAINING:

1. Describe what anaerobic training involves. How is it useful to a hockey player?

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2. What example is given for anaerobic training? List five examples of anaerobic activities that will help a hockey player.

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3. List some tips for proper training. \_\_\_\_\_

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## AEROBIC TRAINING:

1. Describe what aerobic training involves. How does it help the hockey player?

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2. What example is given for aerobic training? List five examples of aerobic activities that will help a hockey player. \_\_\_\_\_

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3. List some tips you would give an athlete for aerobic training.

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## FLEXIBILITY TRAINING:

1. Explain the benefits of flexibility training to a hockey player.

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2. What example is given for flexibility training? List five examples of flexibility activities that will help a hockey player.

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3. List some tips you would give hockey players when stretching.

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## STRENGTH TRAINING:

1. Explain how strength training is of great benefit to the hockey player.

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2. What example is given for strength training? List five examples of strength activities that will help a hockey player.

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3. What three tips are given in the video?

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## SPEED AND AGILITY TRAINING:

1. Describe what speed and agility training involves. How does it help a hockey player?  

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2. What example is given for speed and agility training? List five examples of speed and agility activities that will help a hockey player.  

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3. List some tips you would give an athlete for speed and agility training.  

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## Post-Hall Visit Activities:

### *Sport specific training:*

Sport specific training allows a hockey player to take the components of aerobic, anaerobic, flexibility, strength and agility training and create drills which are directly related to the sport of hockey. When properly formulated, this dry land training should be able to simulate actions found in hockey without the necessity of having an ice surface. In a complete activity such as skating, the legs, arms, trunk and head all contribute to the efficiency of the motion. This efficiency can be improved with a hockey-specific exercise that helps the athlete practice the natural movements within the activity.

Create and develop *five* dry land exercises where the athlete can simulate actions found in hockey. What tips would you give to the athlete regarding this type of training?

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Hockey is a sport where anaerobic training is of great benefit. Hockey players can extend the length of time in which they can perform at such levels while playing close to their maximum heart rate. For example, players can condition themselves to keep on skating hard even through their legs are burning.

As a coach, how would your knowledge of each of these concepts help you better prepare your athletes?

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Other than factual knowledge about these systems, what other information must a coach take into account?

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Describe what pre-season, in-season and off-season training means to a hockey player.

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The following is a list of game dates for the Toronto Maple Leafs for the month of October in the 2006-2007 NHL season.

DATE	OPPONENT	TIME
Wed., Oct. 4	Ottawa	7:30
Thur., Oct. 5	@Ottawa	7:00
Sat., Oct. 7	Montreal	7:00
Mon., Oct. 9	Florida	7:30
Thur., Oct. 12	@New Jersey	7:30
Sat., Oct. 14	Calgary	7:00
Wed., Oct. 18	Colorado	7:30
Fri., Oct. 20	@Columbus	7:00
Sat., Oct. 21	NY Rangers	7:00
Tues., Oct. 24	Ottawa	7:30
Thur., Oct. 26	@Ottawa	7:30
Sat., Oct. 28	@Montreal	7:00
Mon., Oct. 30	Atlanta	7:30

Would the coach of the Maple Leafs have to alter his coaching style based on the schedule presented?

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Explain your answer and make reference to energy systems and recovery of energy systems. Would there be any other considerations?

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Visit the “Women in Hockey” display in the Royal Canadian Mint World of Hockey Zone. Women have been involved in the game of hockey for a long time. Can women compete with men in the game of hockey at any level? Justify your response.

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## Hall Visit Activity: Skill analysis

Visit Source For Sports *Shoot Out* in the NHLPA Be A Player Zone.

Shoot with your dominant hand. Have a partner explain in words exactly what you are doing. Use the following to help you analyze the skill and break it into its component parts:

*(HINT 1: think of words and phrases like balance, rotation, weight transfer and extension)*

*(HINT 2: work description from large muscle groups to small muscle groups)*

Ready position \_\_\_\_\_  
Initial movement back swing \_\_\_\_\_  
Force producing movement \_\_\_\_\_  
Critical instant contact \_\_\_\_\_  
Follow through \_\_\_\_\_

Switch places and have your partner shoot. However, your partner is to use the non-dominant hand. Try and talk your partner through the exercise until the shot is done fluidly.

*(HINT - If your partner fails, you've missed a step!)*

Was it hard to use your non-dominant hand? Explain.

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Does it make a difference if you have a lot or little experience playing hockey? Explain.

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Why was an attempt with your non-dominant hand suggested?

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Why would a coach need to know about skill analysis?

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**Visit the *Shut Out* area.** (Located in the NHLPA be a player zone)

Choose one member of the class who does not have a hockey background. Have them complete the activity at the rookie level. Let them take a five minute break and repeat. Then repeat once more. Repeat above with a classmate who is very experienced in hockey.

Is there any difference between the first, second or third attempt for either participant? Yes or No? Explain.

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What skills were participants expected to exhibit?

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Was the novice level too easy or difficult for either participant?

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What changes occur in simulated game play when you move to junior or expert level of play?

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How would you improve the skill of the participants? Think of activities you could do on or off the ice.

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## Post-Hall Visit Activities: Extension Application

1. Provide a skill analysis of a hockey shot on videotape. Plan a skill progression, a teaching session and a method for evaluating skill improvement.
2. Develop a training plan for your girls' or boys' varsity hockey program. Provide athletes with information about limits, types of exercises and testing. Place plan in weight room with appropriate timeline for high school pre-season work and help athletes through progression and evaluation.
3. Visit a hockey practice. Based on the work-to-rest ratio for hockey at the age level being viewed, determine if practice time on ice is efficient and if practice is preparing athletes to play at a game pace. What information must you also consider when making the evaluation? An interview with the coach will help you determine the goals of the practice viewed.
4. Complete an NCCP coaching course and report to the class the value of program and preparation received.
5. Create a one month dry land training program for an 18-year-old female hockey player.

## LENGTHENING A CAREER

### Pre-visit Activity:

Professional sports are not generally designed for career longevity. Take a small population sample from each of the four major professional sports in North America and using the period from 1975 to present, determine the average length for each.

Sport	Sample population number	Average length of career
Baseball		
Basketball		
Football		
Hockey		

### Hall Visit Activity:

The length of a hockey player's career is influenced by a host of factors. When you visit the Hockey Hall of Fame, select an Honoured Member from each list and conduct a formal investigation into the length of their career. The information can be obtained from the computer terminals in the MCI Great Hall or the various displays and exhibits throughout the Hall.

A

Jean Beliveau  
John Bower  
Gordon Howe  
Aurele Joliat  
Terry Sawchuk  
Larry Robinson  
Lionel Conacher

B

Irvine "Ace" Bailey  
Mike Bossy  
Bill Durnan  
Howie Morenz  
Bobby Orr  
Toe Blake  
Bernie Parent

Your study should contain general career statistics, length of play, individual and team accomplishments.

## Post-Hall Visit Activity:

*Note: Students may visit [www.hhof.com](http://www.hhof.com) for more information on the Honoured Member*

Examine the route to the NHL. Was the player adept at other sports? Is there a connection between the other sports and hockey? What common characteristics do the other sports have that strengthen hockey skills?

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When did the player leave the game? Was it for his own reasons or was it dictated by external forces and declining productivity or physical demands?

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If the player was forced to leave the game because of a career-ending injury, examine the player's career and recommend a series of activities or exercises that would help strengthen the weakened area that led to the decline.

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## Extension Activity – Group Work:

Outside of the external factors such as a career-ending injury, examine the length (childhood, youth, adulthood and senior) of the average individual attempting to involve themselves in organized hockey from Pee Wee to the professional level of hockey. Select one area and answer these questions.

What steps has the community taken to accommodate the needs of the individual lifecycle groups through programs and facility access?

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What rule modifications has been taken into account that allows this particular group to progress while participating in the organized game?

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Design a series of warm-up and developmental exercises for the particular group to ensure continued participation and injury-free play.

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## SPORT IN SOCIETY

### Grade 12

#### Preamble:

Ideally, every community should provide its members with the opportunity to lead healthy, active lives. Study of this concept involves examining the relationship between sport and society.

#### Pre-visit Activity:

Hockey has been a long-standing institution in Canada. Prior to your visit to the Hockey Hall of Fame, make notes on the sociological importance of the sport to Canadians. Specifically, focus on:

- the significance of hockey in Canadian lifestyles, including the impact of geographical factors;
- the reasons for the popularity of the sport that reflect variety of participants in Canada;
- the motivators or inhibitors for participation;
- the influence of professional hockey on participation;
- the influence of the media on participation; and,
- the influence of “spectatorism” on hockey.



# Terminology

community	tradition	big league	prairie place
gender	ritual	suburb	society
masculinity	fantasy	culture	symbol
civic boosterism	sub-culture	social class	

## Hall Visit Activity:

The “Origins of the Game” exhibit presents us with a view of the game in its earliest form. It also presents us with some reasons for the game evolving as it did. Answer the following questions to help you interpret the social climate of the time.

Explain the importance of the game originating in Eastern Canada.

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Club teams such as the Montreal AAA and Montreal Victorias were representative of the social attitudes at that time. What social statements can be made given the nature of these clubs?

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There are various images of women hockey players in the exhibit. Were these images *typical* of the time? Why?

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The large mural in this display depicts a game in Montreal’s Victoria rink. How important is this rink to the Canadian culture? What timely statements are being made in that image?

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The end of the 19th century marked the beginning of organized hockey leagues throughout Canada. This expansion later led to the development of hockey “communities”; places such as Saskatoon, Peterborough and Red Deer are all representative of this. Consider the following questions:

Would there be a difference in attitudes towards the sport in smaller centres as opposed to urban centres? \_\_\_\_\_

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As you walk through the Hall, attempt to develop a picture of the ideal hockey community. What attitudes and values would be present in this community? Be sure to visit the Panasonic Hometown Hockey Team Photo Album and the NHL Zone ‘Legends’ Display.

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Maple Leaf Gardens is considered to be a “symbol” of a long standing “tradition” in the community. Despite the Great Depression of the 1930’s, Conn Smythe was able to build the “Carlton Street Cathedral” in only six months. How was he able to do this and how are those attitudes reflected in today’s Toronto?  
*(Check Grand Old Houses of Hockey Zone)*

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Hockey’s “Original Six” franchises have a long standing tradition of excellence. However, there have been other franchises that were not as fortunate. As you walk through the Hall, keep a list of franchises that have been unable to keep afloat. What were some of the possible reasons for their demise based on location, time period and drawing power? \_\_\_\_\_

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As the game of hockey expands at various levels of international competition, the marquee attraction is still the National Hockey League. Examine the careers of the following Honoured Members and their effect on the cities and times they played in.

1. King Clancy \_\_\_\_\_

2. Ray Bourque \_\_\_\_\_

3. Gordie Howe \_\_\_\_\_

4. Bobby Orr \_\_\_\_\_

Foster Hewitt's influence on the game was invaluable. His contributions led to the institution we know as "Hockey Night In Canada". How important is this program to the Canadian identity?

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What did the broadcasting of hockey give to us as a nation, especially during the 1930's and 1940's?

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"Spectatorism" is a concept that is clearly displayed in North America. How has *this* changed the game? Use the NHLPA Be a Player Zone and Spirit of Hockey retail store to back up your points.

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# THE ARENA

## Grade 12

### Preamble:

From the smallest community to the international level, hockey has played a significant and constantly changing role in our cultural identity. As the game of hockey evolves and develops, so too must the environment in which it is played.

### Hall Visit Activity:

*“November 12, 1931, the dream came true. Something had been built that became famous across Canada....” Conn Smythe*

Between the Grand Old Houses of Hockey display and the Montreal Canadiens’ Dressing Room, there are pictures of arena scenes from days gone by. Name five (5) things that stand out as being very different from the modern-day entertainment facilities. (Hint: for example, look at the time clock.)

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*“To you from failing hands we throw the torch, be yours to hold it high!” John McCrae, excerpt from “Flanders Fields”*

As the game became sophisticated, so too did the players. Nowhere is this more apparent than in the “Dressing Room” Zone. Compare the two Canadiens’ dressing rooms based on: a) how they maintain and clean equipment; b) game preparation; c) treatment of injuries; d) size; e) each player’s individual changing area; f) how the past is celebrated; g) anything to motivate players.

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## Post-Hall Visit Activity:

NHL hockey teams are finding that the older arenas no longer satisfy the needs of a competitive, contemporary professional organization. As a result, the traditional hockey arenas are being gradually replaced by larger, revenue-generating, state-of-the-art sports complexes. Determine the host city for your new club. Using a city street map, find a suitable location – keeping in mind central areas. Design a unique, new arena for a new hockey club. In your design, consider:

- |                              |                               |
|------------------------------|-------------------------------|
| ice size                     | public relations              |
| access to dressing rooms     | ice maintenance               |
| audience size & distribution | services for players and fans |
| press boxes                  | handicapped patrons           |
| luxury boxes                 | non-hockey functions          |
| advertising                  | atmosphere                    |
| parking and public washrooms | transportation                |

Examine the changes you have noticed from older rinks to new rinks. How have they adapted over the years and how do you anticipate further changes?

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Go to any arena where hockey is played. Note the following:

1. Functions it was built for beyond hockey \_\_\_\_\_  
\_\_\_\_\_
2. Age of patrons \_\_\_\_\_  
\_\_\_\_\_
3. Seating capacity \_\_\_\_\_  
\_\_\_\_\_
4. Dressing room size and provided services \_\_\_\_\_  
\_\_\_\_\_
5. Pictures or displays (trophies, banners, paintings, etc.) \_\_\_\_\_  
\_\_\_\_\_

6. Is there a community centre nearby? \_\_\_\_\_

\_\_\_\_\_

7. Is there a bulletin board? What is it used for? \_\_\_\_\_

\_\_\_\_\_

8. Size and products in pro shops or snack bar. \_\_\_\_\_

\_\_\_\_\_

Talk to the arena attendant. Ask about the age of the arena.  
Discover the ways it has been used, significant events or visitors,  
and based on your above research points, how it has changed and  
evolved. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Answers to Phys Ed Questions

## Anaerobic Training:

1. This type of training involves short bursts of high-intensity exercise with a short rest and recovery period between bouts. It allows the body to perform at a higher level of intensity for longer periods of time than usual.
2. The example given in the video is a stationary bike interval program featuring 30-second bursts followed by 90 seconds of active recovery.
3. This type of training is very strenuous, thus it should be used only after the aerobic base training program has progressed to the point where a good recovery between the short bursts can be attained.

## Aerobic Training:

1. Aerobic training helps the heart muscle grow stronger, increases lung capacity, and controls body weight. Results show improved performance due to increased ability to a quicker recovery.
2. The example given in the video is riding a stationary bike for 30 minutes at no greater than 60% to 80% of the Maximum Heart Rate. (220-Age)
3. Tips given are; don't exceed the 'target rate zone' and sustain the activity at a consistent level for 15 - 20 minutes at first.

## Flexibility Training:

1. Improving flexibility allows a hockey player to increase mobility and helps prevent muscular injuries. When properly performed, flexibility training can remove stress on the joints and increase the range of motion.
2. The example given in the video is performing a front thigh stretch held for 20 seconds in a position of comfortable muscular pulling.
3. Stretching exercises should only be performed after a proper circulatory warm-up. Each stretch should be held for 20 seconds with no bouncing motion.

## Strength Training:

1. This type of training allows hockey players to increase their capability to sustain high workloads upon the major muscle groups of the body. The three areas in which the muscular performance of the body can be improved are: overall strength, power, and endurance. Muscle strength is the maximum amount of force that can be exerted by a muscle in a single effort, such as shooting a puck or pinning a player to the boards. Muscle power is the ability to use the strength of the whole muscular system explosively, through an entire movement such as during a bodycheck or slapshot. Muscular endurance is the ability to exert sub-maximum force for a prolonged period of time. This can help a hockey player skate hard every shift over the length of an entire game or wrestle for the puck in the corner during a long shift.
2. An example of strength training is leg extension curls, isolating on one leg at a time. The weight is set at a level in which the load can be lifted through the full range of motion.
3. Three tips given are:
  - a) *Muscle Strength* – In doing weight training to attain general strength, it is best to use a weight which allows you to perform between 6 and 12 repetitions over two to six sets for each exercise, with two to three minutes rest between sets.
  - b) *Muscle Power* – Can be improved through a weight training program in which a limited number of repetitions are performed at an explosive speed, with long periods of rest between sets.
  - c) *Muscle Endurance* – Interval training, combining long work sessions with short rest periods, is an effective way to improve muscle endurance. These can be done on- or off-ice, or using weights with high repetitions, at least twenty over three or more sets with short rests between sets.

## Speed and Agility Training

1. This type of training is also known as *plyometrics*.
2. This type of training is useful as it contributes to muscle development, but it is related to the speed at which certain activities are performed. Based on the ability of the muscles to respond to rapid stretching with forceful contractions, it is a reflex action that is commonly used in the send up phase of shooting a puck, for example. It is also an effective way to improve a player's reaction time for such activities as taking face-offs, poke-checking and goaltending.
3. Two examples of this type of training are: 1) clap push ups for the chest and shoulders and 2) box jumps for the legs.

## Sport in Society

### Hall Visit Activity:

Some discussion should have taken place prior to the Hall visit. Although there may be more information at the student's disposal, have the student focus on the pertinent information. Questions that deal with the social implication of the game being started in Eastern Canada, etc. are interpretive.

The question about Maple Leaf Gardens as a "symbol" is another example of a purely open-ended question.

The same applies to the "Original Six" question below it.