## BOWLING

## INSTRUCTIONS

This Learning Packet has two parts: (1) text to read and (2) questions to answer.
The text describes a particular sport or physical activity, and relates its history, rules, playing techniques, scoring, notes and news.

The Response Forms (questions and puzzles) check your understanding and appreciation of the sport or physical activity.

## INTRODUCTION

Persons of every age and level of skill can enjoy bowling. Persons with physical disabilities can bowl too by using various kinds of adaptors made specifically for them.

Bowling is truly a democratic sport-one that almost everyone can learn to play and enjoy. It's a good way to socialize, exercise and
 compete all at the same time!

## HISTORY OF THE GAME



The history of bowling can be traced back at least seven thousand years. The ancient Egyptians enjoyed a version of the game, as indicated by bowling balls and pins found buried in an Egyptian child's grave.

By the 1840s, bowling had become popular in America. The first indoor bowling lanes were built in New York. Abraham Lincoln was among the many famous Americans who enjoyed bowling.
The American Bowling Conference (ABC) was founded
for men in 1895. A women's organization, the WIBA, was founded in 1916. The two organizations now work together to develop and enforce the rules of the game. The combined membership of the ABC and WIBC was approximately ten million people in 1992. That's almost $4 \%$ of the entire population of America, and it doesn't even count all those everyday bowlers who don't belong to a conference, but who bowl occasionally just for the fun of it.

## HOW BOWLING IS DONE

## THE BOWLING ALLEY

Bowling is done in a bowling "alley," or "lane," as it is sometimes called, which is 62 feet 10 inches long and about 41 inches wide. The area where the bowler stands is called the "approach area," and is 15 feet in length.

The foul line separates the approach area from the alley. Nine-inch-wide gutters run along both sides of the alley. At the other end of the alley, ten bowling pins stand, arranged in a triangular formation as shown on the right.

The object is to knock down as many pins as you can each time you send the ball down the alley. The more often you knock all of them down each time you bowl, the higher your score will be. Each pin that is
 knocked down counts as one point.

Each game is divided into ten "frames," during which each player has a chance to knock down the pins. If you knock down all the pins during each frame, you will score 30 points per frame and 300 points for the game.

For a novice bowler, a score or 120 or so is considered good. A score between 160 and 180 is good for a regular bowler, while professionals average more than 200 points in a single game.

In each frame, the bowler gets two chances unless the first try is a strike (knocking all the pins down at one time). The scores are all marked on a score sheet using symbols as follows:

X This stands for a strike, which means that all the pins have been knocked down in one turn.
/ This stands for a spare, which means that all pins have been knocked down in two turns. A bowler is awarded 10 points plus a bonus of he score on the next roll. If a spare is made on the final frame, one extra roll is permitted.

- The zero is used to show a split ball, which occurs when the headpin is down and the remaining pins have another pin down immediately ahead of or between them. Remember that a split leaves pins that are not close together standing and it is therefore harder to knock them down in one try.

F This mark means a foul, which happens when a player goes beyond the foul line. A hand or arm, however, may extend over the foul line with no penalty. When a foul occurs, no score is recorded for that shot.

## PLAYING TECHNIQUES

## BASIC BOWLING MOVES

## FOUR-STEP DELIVERY

The bowling pins may be approached in many different ways, but the most basic is called the "four-step delivery." Here is a summary of each step:

STEP ONE: If the bowler is right-handed, he or she should make the following seven movements:

1. Bend forward
2. Move the right foot forward about 12 inches.
3. Hold the ball forward and to the right.
4. Allow the left hand to leave the ball.

5. Keep the right wrist firm.

6. Keep shoulders parallel to the target.
7. Focus the eyes on the target.

STEP TWO: This step focuses on the left foot and right arm. Keep the right arm as close as possible to the body as the ball is swung backwards.

STEP THREE: The ball now reaches the peak of the backswing (about shoulder height). Keep the movements smooth and deliberate and don't rush.

STEP FOUR: This step involves twelve movements:

1. Push forward off the right foot.
2. Slide on the front of the left foot.
3. Bend the left knee.
4. Bend at the waist and lean forward.
5. Let the ball swing forward under its own momentum.
6. Keep the right wrist and arm straight.
7. Keep the thumb positioned at " 11 o'clock" ("1 o'clock" for left-handed persons).
8. The left knee continues to bend as the left foot slides to a stop.
9. The slide is completed a few inches from
 the foul line.
10. The left foot is pointed straight ahead.
11. The ball is released across the foul line.
12. The left arm and right foot extend for balance.

## FOLLOW-THROUGH

When the ball is released, the thumb comes out first, followed by the other fingers.

At this point, the arm is in a forward position and should continue to rise up to shoulder level. Some bowling instructors don't emphasize the followthrough, claiming instead that it occurs naturally if the ball is thrown correctly. Other instructors feel that follow-through is an important if neglected part of bowling. Try both to see which one works better for you.


## FOUR BASIC SHOTS

The four basic shots indicate the way in which the ball rolls down the alley. These four shots are the:

> straight ball
hook ball
curve ball
backup ball


The straight shot is exactly what its name implies except that it is rolled down the alley slightly off center in order to hit the first pin at an advantageous angle.

The hook shot consistently beats other shots in producing strikes. The hook, if thrown properly, will start a chain reaction among the pins. The hooking motion of the ball's
trajectory results from the way in which the middle and ring fingers are released as the ball is thrown onto the alley.

The curve ball is difficult to control. It is actually an exaggerated version of the hook shot, but because of the side path, there is more room for error in this shot.

The backup shot is seldom used. It works from left to right, the exact opposite of the other three shots. Most professional players advise against using this type of shot.

## EQUIPMENT AND CLOTHING

The two essential pieces of equipment needed in bowling are a bowling ball and a pair of bowling shoes. Clothing can be any comfortable, loose-fitting sportswear that allows room for free movement.

Weight, span and pitch must all be considered in selecting a bowling ball. "Span" is the distance between the thumb hole and the finger holes. "Pitch" is the angle at which the finger holes are drilled. With regards to weight, the rule of thumb is to select the heaviest ball that can be handled with ease. Choosing a ball that is too heavy and becoming fatigued from using it defeats the purpose of the game.


A good pro shop can help a beginning bowler decide where holes should be drilled in the ball to insure a comfortable fit.

The choice of bowling shoes depends upon which hand the bowler uses to roll the ball. For example, if the bowler is right-handed, the left shoe needs to allow sliding while the right shoe provides the necessary traction. The opposite is true for left-handed bowlers.

## BOWLING NOTES AND NEWS (Information taken from a variety of sources including ESPN, NCAA, Wikipedia and newspapers)

Bowling is one of the most popular pastimes in North America. Friends, families and other ordinary folks meet at local lanes to bowl a few frames. Kids and grownups alike enjoy the game. Because recreational bowling doesn't require long hours of conditioning for strength or endurance, everybody gets a chance to bowl, both young and old.

## Kelly Kulick

Kelly Kulick is the first woman ever to win a regular PBA tour title, winning the 2010 PBA Tournament of Champions in Las Vegas. After finishing the qualifying as the number two seed she defeated Mika Koivuniemi to advance to the final against 12 -time title winner, Chris Barnes. In the final
 she threw 10 strikes to beat Barnes 265-195.

In 2011 Kelly Kulick secured the top seed in the Women's US Open averaging 241.35 for the 48 games. She also won the 44th Singapore International Open In Singapore in 2011.


Additionally, she had the chance in 2011 to be the first woman in 32 years to successfully defend a U.S. Women's Open title, when she averaged over 241 and qualified as the \#1 seed for the event. But Kulick rolled her lowest game of the entire tournament in the televised finals, getting upset by Leanne Hulsenberg 218-183.

## Chris Barnes

Chris Barnes, a right-handed bowler, is currently one of the leading professionals on the tour. He has won almost $\$ 1.7$ million (U.S.) in total prize money during his twelve-year career on tour, and has earned at least $\$ 100,000$ in each of the last eleven seasons (1999 through 2009-10).

He is one of only six players in PBA history to earn a career "triple crown" (accomplished by winning the U.S. Open, PBA World Championship and Tournament of Champions). Through the end of the 2010-11 season, Barnes has rolled 40 perfect
 300 games in PBA competition.

Keep current with the circuit of competition for this popular sport. It is exciting to watch professional bowlers roll up top scores on television. It is also interesting to keep track of how professional as well as college bowlers are doing at a variety of web sites:
http://www.bowlingmuseum.com/ http://www.pba.com/

# STUDENT RESPONSE PACKET BOWLING 

NAME $\qquad$

DATE $\qquad$

## WHAT TO DO

The following questions will help you to have a greater appreciation and understanding of bowling. Write your answers in the spaces below the questions. If there is not enough room, write on the backs of these sheets. Be neat, spell correctly, and write in complete sentences.

1. What types of physical benefits can be obtained from bowling?
2. What basic equipment is needed for bowling?
3. What factors are important in selecting a bowling ball?
4. Describe the stages in a four-step delivery.
5. What is meant by "follow-through" in bowling?
6. What are the four basic shots in bowling?
7. What is a split ball?
8. What constitutes a foul in bowling?
9. How many times does each player get to bowl in a typical game?
10. How many frames are there per game? How many possible points can a bowler make? What would be a good score for a beginning bowler?

Name: $\qquad$ Date: $\qquad$


## Across:

4. Kids and $\qquad$ alike enjoy bowling
5. The number of basic shots in bowling
6. This bowling shot does not curve
7. One of the shots in bowling
8. When a player goes over the line while bowling
9. The term used to describe knocking down all the pins in two turns
10. Where bowling is done
11. Distance on the ball between the thumb and finger holes
12. They come out last when the ball is released
13. Angle which finger holes are drilled
14. How heavy a bowling ball is can be referred to as its $\qquad$

## Down:

1. Number of pins in bowling
2. Area where bowler stands
3. Recreational bowling doesn't require long hours of this
4. Games are made of ten of these
5. When the ball rolls off of the alley it ends up here
6. Points for knocking down all pins in one frame
7. One does this to the bowling ball to knock down the pins
8. This foot slides for right-handed bowlers
9. Knocking down all the pins in one throw
10. If the bowler is right-handed, this shoe provides traction
11. A situation where the head pin is down and other pins are still up
12. This comes out first when the ball is released

Name: Date:

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| JHBSVDMUWA AKWWC |  |
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| NAKGA |  |
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| USSLTGUWWT |  |
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| doz NNPWP1 |  |
| QRUMKWLTOYOBIL |  |
| BUGRXIKOOHUPAE |  |
| X |  |
| X |  |
|  |  |
|  |  |

Find these words in the above puzzle. Circle the words.

| Bowling | Gutters | Ball |
| :--- | :--- | :--- |
| Egyptians | Pins | Straight |
| Lincoln | Frames | Hook |
| ABC | Strike | Curve |
| WIBA | Spare | Shoes |
| Alley | Split | Span |
| Lane | Delivery | Pitch |
| Foul | Bowler | PBA |
|  |  | Kulick |

