

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 and popularity.

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

INTRODUCTION

Persons of varying ages and skill levels can enjoy bowling. Persons with physical disabilities can bowl too by using various kinds of adaptors made specifically for them.

Bowling is truly a universal 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 of 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 the score on the next roll. If a spare is made on the final frame, one extra roll is permitted.
- O 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 follow-through, 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

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 can get a chance to bowl, both young and old.

Bowling is played competitively at several levels. Many high school teams operate under the jurisdiction of their school district and state athletic association. At the college and university level the National Collegiate Athletic Association (NCAA) sponsors women championship tournaments yearly. For women competitive college bowling used to be available at the club level only. However, in 2004 the NCAA added it to the roster of women's athletics. Sponsored by the National Junior College Athletic Association (NJCAA) junior and community college offer this sport for both men and women.

Bowling is also a professional sport with both men and women participants. In 2010 Kelly Kulick was the first woman ever to win a regular Professional Bowling Association (PBA) tour title, winning the PBA Tournament of Champions. Top bowlers have won as much as \$1.7 million in prize money during their careers.

Keep current with the circuit of competition for this popular sport. It is exciting to watch professional bowlers roll up top scores on television.

To find out more about this sport visit these bowling websites:

www.ncaa.com

www.pba.com

STUDENT RESPONSE PACKET BOWLING

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NAME _____ DATE _____

NAME _____ DATE _____

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.

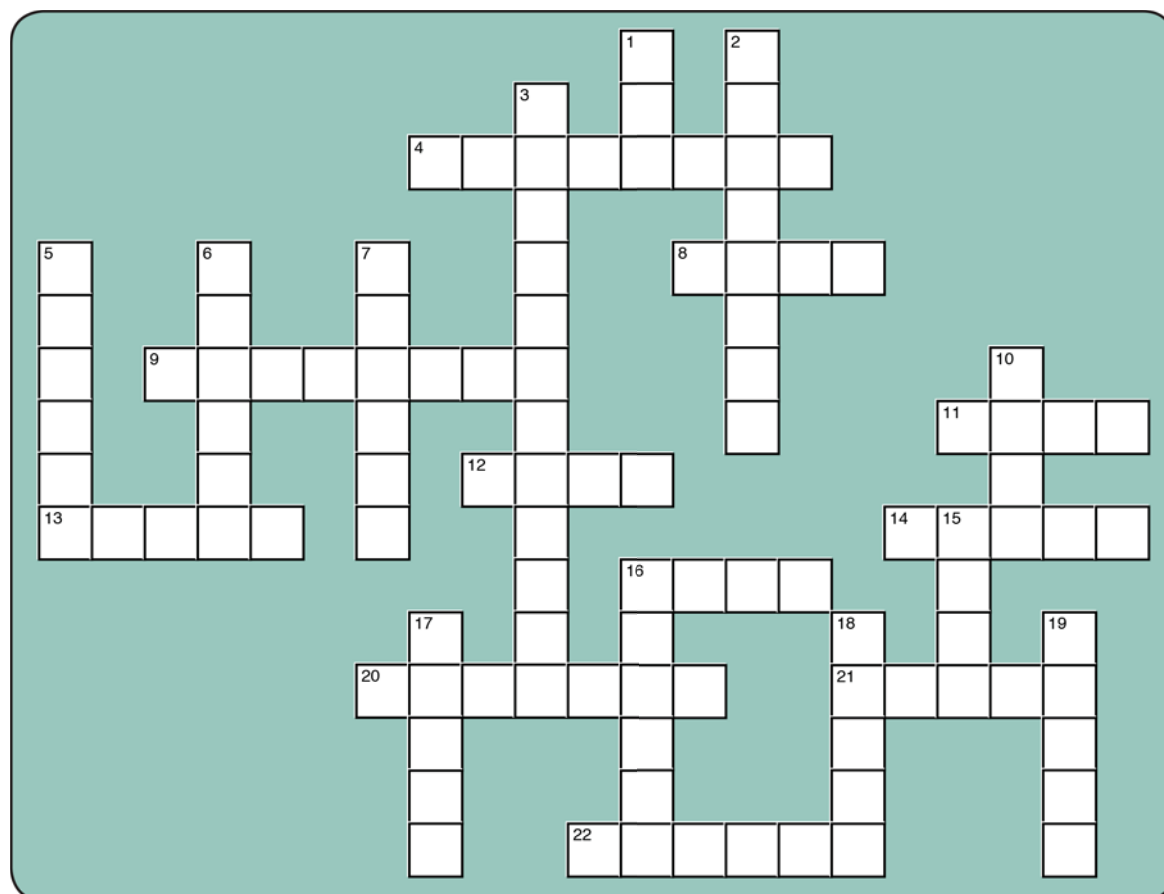
1. What types of physical benefits can be obtained from bowling?
2. What basic equipment is needed for bowling?
3. What factors are important in selecting a bowling ball?

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?

CROSSWORD

BOWLING

Name: _____ Date: _____



Across:

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

Down:

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

WORD SEARCH

BOWLING

Name: _____ Date: _____

E	Y	O	N	Y	E	N	Y	C	Q	G	P	K	Z	K	D	Q	R	R	K
P	F	V	O	Y	E	T	J	Q	C	U	T	G	M	E	A	N	X	K	N
L	J	H	B	S	V	D	M	U	W	A	A	K	W	W	C	C	Y	W	K
E	W	Z	S	R	D	N	S	O	G	S	S	K	D	Z	Q	V	T	K	B
I	H	M	Y	P	P	L	H	U	W	P	P	W	T	T	I	X	O	W	W
G	N	A	K	G	A	U	M	K	F	P	F	F	W	P	X	Y	Y	R	J
T	V	Y	T	E	V	R	U	C	D	G	D	G	Z	U	H	Z	N	B	O
L	L	G	J	X	E	C	E	I	Y	H	B	G	D	T	N	N	E	Q	A
G	F	Q	Y	E	G	P	Q	L	R	V	A	C	N	J	S	A	V	C	B
U	K	U	S	S	L	T	G	U	W	W	T	E	H	Z	P	Q	W	B	H
P	A	L	E	Y	T	J	I	K	B	O	O	I	C	F	L	B	C	F	T
K	T	V	A	H	T	S	M	O	O	H	B	Q	Q	O	I	A	R	Y	F
N	O	I	H	N	S	G	E	M	F	O	S	Y	G	U	T	T	E	R	S
T	J	D	O	Z	E	N	N	P	W	P	I	C	Z	L	K	L	A	E	I
K	P	Q	R	U	M	K	W	L	T	O	Y	O	B	I	L	M	O	V	I
O	J	B	U	G	R	X	I	K	O	O	H	U	P	A	E	H	P	I	J
O	P	X	I	G	B	N	B	R	Q	C	G	I	B	S	S	C	B	L	I
I	I	G	T	H	G	I	A	R	T	S	N	A	I	T	P	Y	G	E	V
Y	X	L	Y	W	P	S	B	I	J	S	K	I	P	Z	S	A	F	D	Y
H	W	Q	J	L	Y	N	P	Z	L	S	Z	S	L	E	K	U	N	L	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

COMMON CORE QUESTIONS / ACTIVITIES (AT TEACHER'S DIRECTION)

1. What is the geometric shape of the bowling alley?

2. Graph the following bowling scores (do not change the order of the scores): Monday's score 110, Tuesday's score 95, Wednesday's score 115, Thursday's score 85, and Friday's score 125.

3. Compare and contrast the "straight shot" with the "hook shot".

4. If you have access to a computer find the names of the bowlers who were inducted into the PBA Hall of Fame, class of 2015. Then write one to two paragraphs about each bowler's successful career.