

## **Camp Classen YMCA Archery for Outdoor School**

### Recommended Qualifications of Instructors

The Standards are written to reflect both safe minimum operating standards and quality instruction. These items are marked as safety requirements.

1. Instructors must be mature and capable of maintaining discipline.  
At least one instructor over 18 is recommended.
2. Instructors must have knowledge of archery including safety rules, range management rules, technique, equipment and safe equipment maintenance.
3. Instructors should be able to shoot and demonstrate correct shooting form.
4. Instructors should be familiar with the various sighting systems.
5. Instructors must know how to:
  - Inspect arrows for cracked nocks, loose or missing fletching and severe bends.
  - Check bowstrings for broken or loose strands
  - Check the arrow rest to insure that it is not broken or loose.
  - Match equipment to the shooter for length or arrows, weight of bows and fit of finger guards.
  - Straighten and make minor repairs on arrows, for example replacing points, nocks or fletching
6. Instructors must be able to correctly demonstrate the safe methods of stringing and unstringing the bow.
7. Instructors must control the firing line with authority. The following commands or similar should be explained and used.
  - Archers to the firing line
  - Archers load and fire when ready
  - All clear
  - Archers retrieve arrows
  - "Cease fire"
8. Instructors should be capable of maintaining control of all participants. There should be a maximum of ten shooters per instructor and assistant on duty at the range.

Note: It is the responsibility of the Camp Director to observe and evaluate the safety standards of each archery instructor. Directors should only operate their Archery activity when they are fully confident with their instructor's skill and judgment.

**Things to Remember:**

1. Safety is always the utmost concern on the archery range.
2. Remember Murphy's Law. Stray ammunition will undoubtedly find a bow and arrow.
3. If a strange person approaches the range, arrows should be locked away in the storage locker.  
Call the field or business office to find out why this person is at your range.

**Range Rules and Information:**

1. All bows and arrows are to be pointed down range at all times during class.
2. All campers must stay away from and out of the storage shed.
3. Only shooters are allowed beyond the safety line. All others should remain seated on the benches.

**Setting Up The Archery Range:**

There should be no more than 5 stations set up at any one time.

**Range Lines:**

Firing Line - Red

No one is permitted to cross the firing line until all bows are hanging from the nail. The Firing Line must be clear and permission given from the range master before targets are retrieved.

Transit Way - the area between the firing line and the benches

**Range Commands:**

1. Clear the Range
2. Relay to the Ready Line
3. Relay Ready
4. Relay Commence Fire
5. Relay Cease Fire
6. Relay change your targets
7. Clear the Range

# Archery Range Commands

## RELAY TO THE READY LINE:

Relay should stand behind a bow and arrows.

## RELAY READY:

Get in position; pick up the bow and practice sighting at the target.

Make sure everyone knows which target is his.

Do not knock arrows!

## COMMENCE FIRE:

Knock arrows; fire at own speed. When finished place the bow down.

Remain quiet and on the mat until every-one is finished and the next command is given.

CEASE FIRE: (to be used at the end of a relay or when a potential danger arises).

Counselors should check that all bows are in the correct position, unloaded and that the bolts are open and pointed upward. If campers are firing, the bow must be immediately un-knock.

## RELAY MOVE BEHIND THE SAFETY LINE:

The campers return to the benches until given further instructions.

(Making the Range Safe) At this time, before anyone passes beyond the firing line to repair or change targets, each instructor must visually inspect each of his weapons to see that they are clear and safe, and confirm this to the range master. After this confirmation, the range master can make his next commands.

## RELAY GET YOUR ARROWS:

Campers walk out the transit way to get their arrows and count their score. When the relay returns, everyone is to sit down on a bench and wait for his or her counselor to come by and grade his or her targets.

## CLEAR THE RANGE:

At this time the Range master must make sure that the range is clear and that all campers are seated behind the bench. Then they may call for the next relay. A complete check of the range should be made to make sure that all campers are where they should be. (the correct number of campers should also be accounted for). The range and ravine should also be checked for wildlife. When the range is clear and safe, the next relay may commence.

## **Requirements for A Safe Camp Archery Range**

1. Range should be located with safety as the first consideration. A hillside backstop is ideal. Targets should not be located in front of housing, roads or other activity areas. Brushy areas behind targets should be cleared as much as possible. Sufficient open space behind the targets and alongside the range should be considered safety priorities.
2. Ranges should be set up so that if possible shooters will be facing north. Shooters should not shoot toward the west. This will minimize the sun's glare while looking at the target.
3. The shooting area should be marked by well-defined lines. These lines should be taped, limed or roped. Marked lines are not necessary when no other scheduled activity takes place within 50 yards of the range. Signage should be added when the range is not viewed easily, from a broad distance or when pedestrians or auto traffic are allowed nearby.
4. Spectators should be kept at least 6 yards behind the shooters.
5. Shooters are required to straddle or toe the firing line. An entire activity group must all use the same technique. This will prevent accidents caused by one shooter being behind another.
6. All shooters must use the same firing line. Targets may be moved up and back to accommodate different skill levels.
7. Targets must be sufficient density to accept an arrow, while disallowing complete penetration. Commercial Styrofoam or straw products are recommended.
8. A typical safe range is diagramed below.

# Archery Information

## A. History

1. There are 25,000 years of History
2. 1972 - Olympic games, the publicity contributed to the popularity

## B. Equipment:

### 1. Bow - Working re-curve and Semi-re-curve.

- a. Wood, fiberglass, composite
- b. Weight of bow - #s at 28"; desired weight of bow is 10-15 lb. for 8-10 yrs old, 15-20 for 11-15, 25-30 for 16-19 and 30 lb. and up for 20 and up.

\*\*Most common mistake made in the selection of a bow is to choose one too heavy for the person going to be using it. Easily drawing back the string leaves your mind and body free to develop good and consistent shooting habits from the very beginning.

### 2. Bowstrings

- a. Dacron - long-lasting and stretches very little
- b. Double looped - must be the correct length c. thickness of string:  
20-30 lbs use 8 strands  
25-30 10  
35-45 12  
45-55 14  
55-80 16

### 3. Arrows - wood, fiberglass, or aluminum

- a. Length is from the bottom of the slit in the nock to the back of the point.
- b. Arrow length needed is determined by the length of the arms: Place the end of a yardstick against the breastbone. Extend both arms out toward the side at shoulder height, bringing them forward; still parallel to the ground, without stretching or reaching and touch the yardstick. Where the fingertips touch the yardstick is the correct length for the arrow.
- c. It is always better to start beginners with arrows that are too long as overdrawing can be dangerous.

### 4. Armguards: protect your bow forearm from strikes by the string

### 5. Finger Protection - Tabs and Gloves

- a. prevents finger abrasion
- b. makes for smoother release

### 6. Quivers

- a. Holds the arrows while shooting
- b. Shoulder, hip and pocket quivers

## II. Safety: “ An ounce of prevention is worth a pound of cure. See Below

## III. Bracing and Un-bracing a Bow

### 1. Bracing - The Push-Pull Method:

Stand in a side stride position, toes pointed straight ahead, with feet farther apart than the width of your hips. Hold the bow with the left hand on the grip, upper limb up, and the curve of the bow toward you. Place the lower tip of the bow on the instep of your left foot, being careful to keep it off the ground. Put your left elbow against your body near your hipbone. This will bring the bow very close to you and straight across the front of

your body. Shift your weight to your left foot and bend your knee forward so that the limb is near the inside of your left calf. Place your right palm on the back of the bow, just below the loop, so that the thumb is on one side of the bow and your index finger is on the other. Keep the remaining three fingers straight. Look at a spot straight ahead and not at your right hand (It is dangerous, because if your hand slips off, the tip will fly back into your eyes.) Keeping your body upright, pull with your left hand and at the same time thrust with your right shoulder and push against the back of the bow. Let your right hand slide toward the bow tip and guide the loop toward and into the notch. When you feel the loop slip into the notch, hold onto the string with your right hand and bring the bow in front of your body, with the string away from you. When the bow is parallel to the ground, look to see if the string is securely in both sides of the notch. If so, take your hand away; if not, replace the bow in bracing position and push-pull until the loop is in proper position.

**2. Un-bracing - Push-Pull Method:** To un-brace your bow simply follow the same procedure, pushing and pulling until the string hangs slack on the bow. Then, with your right index finger, ease the loop out of the notch and let it slip down the limb toward you. Do not look at the bow tip while you are un-bracing it.

**3. Bracing - Step through Method:**

Stand in a side stride position, weight evenly distributed, with the inside edges of your feet 20 to 24 inches apart, toes pointed straight ahead. Hold your bow in your right hand, about midway between the grip and the upper tip. The back of the bow should be toward you. With your left hand, hold the string about 18 inches from the upper loop, then pull it away from the bow until it is taut. Place your rt. leg and foot between the face of the bow and the string so that the re-curved section of the lower limb is in front of your left ankle. Let go of the string and move your left hand to the upper limb, near the notch. Adjust the bow so that the grip section is high on your right buttocks (or as high on the right thigh as you can get it). Now slide your right hand to a spot just below the loop; with the palm of your hand on the back of the bow and your finger extended. Bend your bow by pushing against the back of it with the palm of your right hand, and at the same time, push against the grip section with your buttocks. Guide the string into the upper notch with your left hand.

**4. Un-bracing - Step Through Method:**

Follow the same procedure as bracing, bending the bow until the string hangs slack, then slip it out of the notch with your left hand.

## **IV. Target Archery Technique**

### **1. Body Position**

Straddle the shooting line, assuming a square stance so that your feet are equidistance from the firing line, on each side of it. The inside edges of your feet should be 12 to 16 inches apart, and your weight should be divided evenly. A line drawn from the tip of your right shoe to the tip of your left shoe and extended toward the target should end in the center of the target. Your head should be turned toward the target so that your chin is above your left shoulder and you are looking out toward the target on a line that is parallel to the ground and perpendicular to the firing line.

## **2. Holding the Bow**

Using your left hand, circle the grip of the bow so that the knuckle of your index finger and the first joint of your thumb are about equidistance from the ground. The tips of these fingers should slightly overlap each other. The grip of the bow should rest in the palm of your left hand so that the “life line” follows and pushes against the grip near the pivot point. The base of your little finger, near your wrist should be just to the left of the grip. The fingers and thumb should exert no pressure on the sides or back of the bow.

## **3. Knocking the Arrow**

Hold the bow at your left side parallel to the ground with the palm of your hand facing the ground. Take hold of an arrow by the nock and lay it on top of the bow so that it is touching the arrow rest and the index feather is extending straight up toward the sky. Slip the nock onto the string just below the nock indicator so that the arrow is approximately 1/8 inch above a perfect right angle. Place your right hand in position so that the string is precisely in the first joint of the three string fingers. The arrow nock is between your index and middle fingers. There should be very little contact with the arrow and no pressure on it from these two fingers. The fingers should form a right angle with the string. Curl these fingers, but keep the back of your hand flat and relaxed.

## **4. The Pre-draw**

Keeping your fingers in their correct position, move the bow and arrow up and toward the target until your bow is perpendicular to the ground and your left arm is straight. Draw the string back 2 or 3 inches so that the grip exerts a slight pressure on your bow hand. Relax your left wrist and forearm and check to see that the pivot point is pushing against the correct spot on your bow hand. Look at your string hand to see if the fingers are still at right angles to the string and the back of your hand is flat and relaxed. Close your left eye and move your bow until your bow sight is lined up with the proper aiming spot. Now get your head into correct position by moving it until you see the string running down the center of the face of the upper limb.

## **5. The Draw**

This step consists of moving the string and the right hand and arm from the pre-draw position to the anchor position. It must be a smooth movement, neither too slow nor too quick. While it is being done, all the details of the preceding steps must continue to be correctly performed. Begin the draw by using the muscles of your upper right arm, shoulder and upper back. Your shoulders must be kept down and the shoulder blades squeezed together behind you. Your right elbow moves back from the very beginning of the draw and should be up and at the same height as your arrow. When you reach your anchor point, there should be a straight line from the tip of your arrow to the tip of your right elbow. If you turned your hips off the line to the target during the pre-draw, you must bring them back to the line as you draw the string back in this step, so that your feet, hips and shoulders are again on the line to the target. The draw ends when the string is touching the center of your chin and the tip of your nose and your string hand is in its correct anchor spot.

## **6. The Anchor**

The top edge of your right index finger must be placed firmly in contact with a precise and definite spot under your jawbone, so that the arrow nock is directly under your nose. This is your anchor spot or anchor point. Your right thumb and little finger must remain relaxed and the thumb will rest somewhere near your Adam's apple. The string should be firmly touching the tip of your nose and the center of your chin. Keep your lips together and back teeth touching.

## **7. Holding and Aiming**

The term 'holding' refers to maintaining every detail of correct technique thus far described until the act of 'aiming' can be completed. Assuming that you are 'holding' in perfect form, allow your self-time to settle down so that your bow sight appears to be perfectly still on the proper aiming spot on the target face. Then check the blur of the string in front of your eyes to see if you have moved your head, or you're no longer in the proper anchor position. If every thing is in order, the string should still bisect the face of your bow. If the string pattern has moved to the right or left, move your head or string hand on the anchor spot until it appears correct. Now, once more check to be sure that your bow sight is resting steady on the aiming spot, and when it is you are ready to fire.

## **8. Releasing**

In this step, continue to do everything that you have been doing up to this instant, with this one exception. Simply, easily and smoothly allow your string fingers to relax - just let them become limp. When this has been done, the string will roll gently off your fingertips. As it does, it will make a smooth getaway. Avoid forcing your fingers to straighten out - let the string do that job when you relax. Because the tension between your shoulder blades is still being kept your right hand and arm will automatically move back and away from the target, and will slide back until your shoulder blades have met. This is a reaction to the force of the string leaving your fingers. During the release, your left hand must remain relaxed and all other details of the technique must remain as they were before the release.

## **9. Follow Through**

After relaxing the fingers of your string hand and allowing the string to move forward, hold your shooting position for 4 or 5 seconds. This is the follow through and it serves 2 main purposes:

1. Knowing that you are going to hold your shooting position makes you less apt to allow your shoulders to collapse as you release.
2. It gives you the necessary time to check for possible errors in your shooting form so that you will not repeat them on the next arrow.
  - a. Your left eye should be closed and the right eye still on the proper aiming spot
  - b. You should be squeezing your shoulder blades together
  - c. Your bow hand and arm should still be up and in line with the gold on the target face.
  - d. Your right hand should still be in contact with and under your jawbone, fingers relaxed and palm facing in toward your neck. These 4 things can easily be checked in 4 or 5 seconds if you train yourself to do so. After having determined which of these errors

you made. Lower your arms to your side and rest your fingers, hand, arm, shoulder and back muscles. Use the next 10 or 12 seconds to concentrate on perfecting the next shot.

### **ARCHER'S CHECKLIST**

Step 1: Body Position feet in same spot weight evenly distributed

Step 2: Holding the Bow, bow hand in exactly the same spot each time fingers and wrist relaxed

Step 3: Knocking arrow knocked correctly string fingers properly placed on string back of the hand and wrist relaxed and flat

Step 4: Pre-draw bow perpendicular to the ground pressure of the bow on the hand in the proper spot bow arm, wrist and fingers relaxed left eye closed string pattern correct bow sight lined up with target center left elbow rotated teeth together, lips closed

Step 5: Drawing squeeze the shoulder blades together keep the left shoulder down and back hips and shoulders come back onto the line of the target

Step 6: Anchoring right index finger under the jawbone string touching the tip of the nose and center of the chin

Step 7: Holding and Aiming tension between the shoulder blades maintained string pattern still correct sight steady and on the proper aiming spot

Step 8: Releasing relax fingers on the string hand maintain tension between the shoulder blades

Step 9: Following Through aim eye still focused on target left eye still closed tension between shoulder blades still maintained bow arm still up and fingers relaxed right hand in its proper position and fingers relaxed

### **Rules For Safe Care and Use of Equipment**

1. Check your equipment everyday before you use it. Be on the lookout for such things as frayed strings, loose fletching, nocks or points that are not secure, bent or splintered shafts and damage to the bows.
2. Change frayed strings before they break.
3. Never use an arrow that is too short for you; the danger of injury from an overdrawn arrow is great.
4. Never release a string without an arrow on it (DRY FIRE), since this may damage the limbs of the bow.
5. Wear an arm guard and finger tab.
6. Before you begin to shoot be sure there is no one at or behind the target, or between you and the target.
7. Be aware of people. Look where you're going when you're carrying arrows.
8. In the absence of a quiver, put the arrow points in the palm of your hand and spread the arrows out fan shaped, with the nock down, so that the fletching is not crushed and the nock is not pushed into someone.
9. On the way to the target watch for arrows embedded in the grass and pick them up. Arrows can be broken and toes injured by running into the nock of an arrow hidden in the grass.
10. When you pick up arrows from the grass use care to prevent injury to the fletching and to archers who are nearby. If the fletching is embedded in the grass, pull the arrow

through the grass point first, gradually angling upward. If the feathers are not caught, pull the arrow out nock first.

11. Before pulling an arrow from the target, make sure no one is standing directly in front of the target.

12. When removing arrows from the target, place the back of one hand against the face of the target and around the arrow. Place the other hand on the arrow as close to the target face as possible.

Pull the arrow from the target at the same angle, which it entered. If the arrow is embedded, twist it a few times to remove it.

13. If any part of the fletching is embedded in the target, or target face, go to the back of the target and pull the arrow through point first.

14. If the point of the arrow is embedded in the wood, take hold of the shaft as close to the point as possible and carefully work the arrow back and forth to enlarge the hole and free the point.

### **RULES FOR SAFETY ON THE RANGE**

1. Space yourself far enough apart on the shooting line that you will not bother or endanger other archers.

2. Observe the whistle signals and voice commands.

3. Straddle the shooting line so that no archer is standing slightly ahead or behind the others

4. When knocking an arrow keep the point aimed toward the target.

5. If you drop an arrow in front of the firing line, pull it back using the tip of your bow. If you cannot reach it, consider it as having been shot and pick it up when the signal to retrieve arrows is given.

6. When you have finished shooting your arrows, steps back 10 feet from the firing line so that the instructor can easily see when all the archers are through. Wait for the signal to retrieve arrows before you move toward the targets.

7. Help your target mates find lost arrows. Do not return to the line without them.

Leaving one person hunting for lost arrows may result in his being overlooked and shot at.

8. Do not run with arrows in your hand.

### **RULES FOR SAFE CONDUCT**

1. Be safety conscious at all times

2. Be alert at all times. The archery range is no place for day dreaming, goofing off or horsing around.

3. Do not point a knocked arrow at anyone. A knocked arrow is like a loaded gun.

4. Be considerate of others. Use good common sense.

5. Respect your equipment and care for it properly.

6. Never shoot an arrow into the air. There is no way of knowing where or on whom it will land.

7. Wear comfortable, dry clothing and shoes.

8. Cooperate with those in charge. Obey the safety rules and report any unsafe practices that are being followed by others.

9. Don't take chances. Be a living, walking, talking example of good safety practices in archery.