



INTRODUCTION TO ARCHERY

TARGET ARCHERY

This the most commonly practiced form of archery worldwide and is practiced within most Archery Australia clubs. Target tournaments are conducted regularly and held both indoors and outdoors. Shooting distances vary from 18 metres (indoor) to 90 metres (outdoor), with target sizes being 40 or 60 centimetres for indoors and either 80 or 122 centimetres for outdoors.

Targets have five colours with each colour being divided into 2 to provide 10 scoring zones. The innermost ring is given a value of 10 points, down to the outermost ring with a value of 1 point.

Target rounds involve shooting a set number of arrows over one or several distances. Indoor events involve shooting a total of either 30 or 60 arrows; with outdoor events shooting 72, 90, 120 or 144 arrows are shot.

FIELD ARCHERY

Field archery is a challenging outdoor discipline in which the archer takes on the terrain as well as the target. Field archery is a combination of archery, golf, and bush walking. A course is set up in a bush land setting taking advantage of hills, slopes, angles and light and shade.

A field course is made up of either 24 or 28 targets depending on the round being shot. The archer is required to shoot either three or four arrows at each target. Distances range from 10 to 60 metres and target face sizes vary from 20 to 80 centimetres.

CLOUT ARCHERY

Clout archery is another popular discipline in Australia because due to its fun aspect. Clout archery is derived from medieval warfare where archers would lob arrows onto the advancing army. A target measuring 15 metres in diameter is marked on the ground, with a triangular marker placed at its centre. The archer's task is to lob arrows into this ground-target from distances up to 180 metres depending upon gender and equipment.

ARCHERY EQUIPMENT

There are two main styles of bow used today, recurve or compound bow. Also used in Archery Australia but not as popular are traditional longbows and crossbows where permitted by state law.

Modern recurve bows are sophisticated devices. Typically made in three sections with a handle made from cast or machined aluminium, fitted with flexible limbs on each end made from laminates of carbon, fibreglass, and wood. Space age, non-stretch materials are used for bowstrings.

Recurve equipment is the classic archery style and the only equipment used at the Olympic games. In the recurve style, few technical devices are permitted to enhance accuracy, assuring that the archer's strength and skill become the main factors that determine performance.

Compound bows are much more technically sophisticated than the recurve, the bow employing wheels or 'cams' at the tip of the limbs. Acting on a lever principle, these wheels allow an archer to draw and hold a bow with relative ease.

The compound style also permits the use of aids to assist with accuracy such as hand-held 'triggers' for releasing the bowstring, and peep and magnifying sights.

So what is the best equipment to use? It is the archer's choice of recurve or compound equipment; some prefer the graceful yet demanding aspect of recurve archery, and others prefer the intensity and deadly accuracy of compound equipment. Modern archery caters for both styles, as well as the other traditional styles such as crossbow and the traditional longbow.

Arrows are made from either aluminium or carbon tube or a combination of aluminium tube wrapped in carbon fibre. These arrows provide a combination of both strength and lightness that allows them to reach speeds of up to 70 metres per second.

Arrow Specifications

For the archer's safety the length of the arrows used must always be slightly longer than that of the archers draw length otherwise the archer may end up pulling the arrow right back off the bow which is very dangerous. Equally important is the stiffness of the arrows used by the archer. Arrow shafts are available in a huge range of strengths designed to match the draw weight of different bows.

This is very important since, if excessively weak arrows are shot from powerful bows they may snap when the string is released. At the same time, slight mismatches between arrow strengths and bow strengths will tend to cause poor arrow flight and thereby reduce accuracy. 'Matching' arrows to different bows is quite a science.

Beginning archers should always consult a club coach or archery shop professional before purchasing arrows.

COST OF ARCHERY EQUIPMENT

Most archery equipment used in Australia is imported from wither the USA, Korea or Europe. The equipment is high-tech, reliable, extremely safe, and accurate. The price of equipment is roughly equivalent to new golf gear.

A considerable second hand market for archery equipment exists within most archery clubs, which trade at prices typically 50%-75% of the original cost. Some retail archery shops also sell second hand and reconditioned equipment, and occasionally offer good deals on superseded bow models.

Before buying any archery equipment though, it is worthwhile consulting an accredited archery coach in order to work out all of your archery measurements and specifications. For more information contact your local archery club.

A TYPICAL ARCHERY ROUND

The program for a typical target archery round might run something like this - 30 arrows shot at a distance of 60 metres, then 30 arrows shot at a distance of 50 metres, and then the final 30 arrows shot at a distance of 40 metres.

This round is called a Canberra (or FITA 900) and is a very popular round shot regularly in most clubs.

In the Canberra round arrows are shot in groups of 6 arrows, which is called, an "END". The scoring and retrieval of arrows takes places after each end. A number of consecutive ends (5 in a Canberra round), each shot to a four minute time duration completes each distance. Such a round would take around three hours to complete. Archery Australia has devised a number of rounds that are shot in clubs. These rounds involve various combinations of arrows at various distances and provide both variety and a challenge.

TOURNAMENTS

Many of the rounds recognised by Archery Australia are shot at tournaments There are 3 types of tournaments Open, Divisional and Handicap. Tournaments also cater for the various types of equipment and sub equipment categories.

Recurve or Compound Freestyle (using a sight and accessories)

Barebow (not using a sight or accessories)

Longbow (always shot Barebow)

Crossbow (in some states you will need a permit)

Open Tournaments. Open tournaments cater for people of all standards although people shooting in a particular equipment and sub equipment category compete against all comers in the category irrespective of ability. These tournaments do cater for gender (male and female) and age sections such as

Open - All competitors (usually aged from 18 to 50 years) **Veteran (Masters)** – There are two age categories 50 to 60 and 60 plus. **Juniors** - There are 4 age categories Under 12, Under 14, Under 16 and Under 18.

Divisional Tournament. There are many Divisions tournaments. These divisions relate to score levels within a given gender and age section. Such as Men Recurve Division 1, Division 2 and Division 3. Careful categorization by age, gender, and bow style aims for a situation in which archers possessing the same skill level and equipment are allowed to compete between themselves for the prizes. In a tournament, the highest overall place getters in each Division win the Divisional trophies or medals.

Handicap Tournament. In this type of tournament, a handicap system similar to that used in golf is used. In a Handicap Tournament' each archer's pre-set handicap determines a certain number of 'bonus points' that are added to the total score shot in the event. A Handicapper sets and adjusts these handicaps according to a formula provided **In a handicap tournament there are no Divisions. Typically, the tournament winner will be the archer who shoots best score relative to his or her existing handicap.**

Matchplay Tournament. Another exciting type tournament is Matchplay. These are knockout competitions based on the system used by in the Olympic games. Archers first shoot a 'ranking' event to determine the draw for the competition, and then compete head-to-head in consecutive knockout matches to determine medal placing's. 'Ends' are usually reduced to 3 arrows to further intensify the competition

GETTING STARTED

The most important part of getting started in archery is to obtain correct advice and instruction.

You should consult your local Archery Club or archery centre that can provide instruction given by an accredited archery coach. Most clubs provide equipment for instruction so you don't require your own equipment although you will be expected to obtain your own equipment if you wish to continue with the sport.

How long is an Instruction Classes? This is up to the requirements of the club and coach, some provide "Come N Try" instruction, which is a quick session of about two hours while others provide formal instruction which could go for 3 to 4 weeks of 2 to 3 hours a session.

Eye Dominance

The dominant eye is that which focuses on the target (while the non-dominant eye gives depth of field to one's vision). To shoot correctly the arrow should be located directly below the dominant eye.

Eye dominance therefore determines which hand the archer should hold the bow with, and which hand the string should be drawn with. If the right eye is dominant then the bow must be held with the left hand and the string drawn with the right hand.

Right eye dominance means that the archer should use what is called in archery right-handed equipment. If the left eye is dominant then the bow must be held with the right hand and the string drawn with the left hand. Left eye dominance means that the archer should use left-handed equipment.

A simple method of determining eye dominance; Extend both arms directly to the front at Shoulder height, fingers together and palms facing away. Link the hands together so that V's are formed by the index finger and thumb to form a small opening.

With both eyes open, look at a distant object through this opening. Now, looking at the object slowly draw your hands to your face. The opening created by your hands will end up over your dominate eye.



Strength Threshold

The physical part of archery - drawing the bowstring against the pressure of the bow's limbs - is essentially a weight lifting exercise. The amount of force required to draw the string fully is measured as a draw weight, in pounds of force.

The stiffness of a bow's limbs and the length of draw determine this draw weight. In archery events the archer may be required to draw this weight up to 150 repetitions so using a sensible draw weight is important.

Recommended Draw Weight (in pounds) at the archer's full draw length for your first bow:

	Recurve	Compound		Recurve	Compound
Junior (under 13)	10 – 15lb	20 –30lb	Adult Women	15-25lb	25 – 35lb
Junior (13- 18)	15 – 20lb	25 – 35lb	Adult Man	20-30lb	30lb – 40lb

Most modern compound bows have adjustable draw weights that allow the archer to set the bow within a 10-pound range. For example, an average sized 14 year old boy would get good service from a compound bow marked "20-30 lb Adjustable" by setting the bow on 20lb as a beginner, then increasing the draw weight a few extra pounds as his size, skill and experience grows.

Recurve bows on the other hand are typically adjustable to within only two or three pounds of draw weight. Selection of a sensible draw weight at the beginning is therefore very important. As a rule of thumb, the higher-end weight ranges listed in the above chart should only be selected by recurve archers who are either naturally very fit or strong, or who are prepared to train regularly.

'Natural draw length' is a term used to describe how far the archer draws back the bowstring to a fully extended shooting position. To determine an archer's natural draw length a light poundage bow fitted with a long arrow should be drawn to a comfortable 'full draw' position, with the arm holding the bow fully extended, the head held straight and

upright, and the string drawn straight back until it touches the nose.

The arrow is marked at the back (far side) of the bow. The archer's 'draw length' is measured (in inches) from this mark to the bottom of the arrows nock groove (i.e. where the end of the arrow clips onto the bow string). When purchasing a bow, this draw length must be specified.

AWARDS

Archery Australia provides a number of classification awards for an archer's performance at club state, state and national level. The award classifications in archery, in ascending order, are Third Class, Second Class, First Class, Master, and ultimately Grand Master. An archer improves their Classification by recording appropriate scores several times over the course of a calendar year

There are a number of 'Performance' Awards' available from the Archery Australia. These include awards for the achievement of 6-out-of-6 'GOLD' (i.e. scores of 9 or 10) in an 'end', or 6 out of 6 arrows in the 'TEN' (called a Perfect) at all distances from 18 to 90 meters.

Archery Australia also awards medals for achieving scores at various events called Australian Stars and FITA Star, FITA Arrowhead are awarded for field and FITA Performance Awards for many other target events.

SHOOTING CONTROL AND SAFETY

Archery Australia and its Clubs take pride in their safe conduct of tournaments and club activities. Rules and procedures have been developed for the safe conduct of archery – this has assured archery an injury-free and accident record since its introduction as a public sport in 1948. Know the safety rules before you commence any shooting.

RULES FOR SCORING

Scoring takes place after each 'end'. A competitor must not touch the arrows or the target face until the scoring values of all arrows on that target have been recorded on the scorecard. The scoring zone values are 10, 9, 8, 7, 6, 5, 4, 3, 2, & 1 from the centre outwards. Arrows are scored according to the position of the shaft in the target face. Should the shaft of an arrow touch two colours, or touch or intersect any dividing line between two scoring zones, that arrow always scores the higher value of the zones affected. Should a missing fragment of a target face make scoring difficult (e.g. a fragment that includes a dividing line) then an imaginary line is used for judging the value of this arrow.

An arrow hitting a scoring zone in the target and then rebounding to the ground, scores according to its impact on the target, provided that all arrow holes have been previously marked and an unmarked hole can be identified (it is recommended that competitors mark all new arrow holes with a pencil at the conclusion of scoring for each end).

An arrow hitting another arrow already in the target and remaining embedded, scores the value of the arrow struck. This is called a "Robin Hood".

JUDGING

In most tournaments accredited judges are available to determine close arrow calls and answer any disputes.

For more information go to www.archery.org.au or email info@archery.org.au

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