

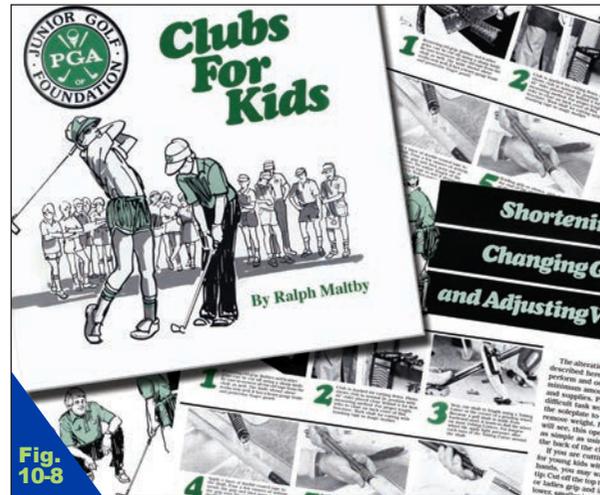
Junior's Golf Club Characteristics And Fitting Information

Introduction

Junior golf began to flourish in the late 1970's because of a concentrated effort by the Professional Golfers Association (PGA) to get the younger generation out on golf courses with the hope of growing the game and also creating life long golfers. At this time, junior golf clubs were available, but they were usually junk with little thought or research applied to actually make playable junior clubs. Many of these clubs were too long for juniors because they were simply made as a junior golf club without regard for the huge variations of junior heights, weights and ages. This was true for both boys and girls. Many juniors of the day simply played with their dad's or mom's clubs or they may get a cut down discarded dad or mom club to play with which was at least some improvement.

So, during the PGA's push for more junior golfer involvement; I was brought in to help with the program to get golf clubs into kids hands. After all, the starting point was the need for finding a lot of golf clubs before anyone could hit a shot or take a lesson. I had done the research on junior boys and girls average heights and weights by age group and I also was formulating fitting variables and ideas on better golf clubs for juniors. All this, however, was in its infancy, but no other credible information existed at the time. So, I made up a brochure for the PGA which had the average weight and height information by age group, step by step procedures for cutting down a club and regripping it. The brochure was called "Clubs for Kids" and is shown in **Figure 10-8**. It was distributed across the U.S. to every golf professional. Many foreign PGA groups also picked it up such as the New Zealand PGA. Obviously, it was not the perfect solution that

would work today because we all know that a cut down adult golf club for a very young junior golfer has a very stiff shaft and it is also usually quite heavy in total weight. But, at the time it was a great starting point to generate more interest in junior golf and it worked because thousands upon thousands of golf clubs were donated free for the "Clubs for Kids" program.



PGA Brochure "Clubs For Kids" Early 1980's.

Junior golf continued to grow at a moderate rate until Tiger Woods entered the scene in the late 1990's. His presence created a huge demand for junior golf clubs and the amount of new junior golfers was staggering. This all slowed down gradually which brings us up to the current time where junior golf is alive and well and still growing a little each year.

Golf Clubs For Juniors

When talking about which golf clubs are best for juniors there is one fact that is indisputable and one that we, as clubfitters, need to consider very seriously. This fact is that every golfer, whether a man, women, senior, junior teenager or young junior; we all hit the same size and weight golf ball. This means that for all golfers we need

enough head weight for a given swing speed to hit the ball solidly. Let's take a young junior golfer as an example: if a too light head weight golf club is used, the impact will be less solid and off-center hits will lose even more distance and feel even worse. One of our problems is that it is quite difficult for this young junior golfer to communicate this fact to us whether as teachers, mentors or clubfitters. While it is true that this golfer's swing may look better because it takes less strength to swing a very light golf club, the impact feeling may be very bad; but this golfer does not know this, thus it cannot be communicated.

One of the trends with some golf club companies is to build extremely light clubs for the younger juniors under the premise that golf clubs for years have been too heavy for younger juniors to develop a good swing. This last statement is mostly true about golf clubs in the past being too heavy as was definitely the case with most of the adult "cut-down" clubs given to kids. However, there is a limit to this reduced clubhead weight and I personally feel that some manufacturers have gone too light. I was asked by a well known golf club manufacturer to design 3 age groups of junior golf club sets with the stipulation that I use the very light head weights of another popular junior club manufacturer. I refused to do the project because I felt the head weights were too light. Admittedly, it is not easy to determine the best head weight for a certain junior golfer, but there is always lead tape to add to the head weight while the junior is hitting balls. Watching the ball flight, distance hit and listening to the impact will help determine the best head weight.

Also, some of these very light weight junior clubs use very small clubheads in the irons. A little smaller is all right and preferred but many are simply too small. This is done to convince adults that they really are junior clubs when in actuality they are closer to toy clubs. A larger easier to hit iron head can still be made in acceptable junior head weights.

I personally prefer an iron head slightly smaller than adult clubs in a cavity back version with a high moment of inertia and a low center of gravity. This would be a very high playability clubhead which is the most forgiving and easiest to hit solid. Regarding driver head sizes, a general rule would be 320 to 340cc's for 5-8 year olds and 340 to 400cc's for 9 to 10 year olds and finally 400 to 460cc's for 11 to 18 year olds. Also as a general rule, and if they are designed correctly; the larger the driver head the easier it is to hit.

I need to point out that when a young junior golfer starts to play (around 5 years and older), the most important thing is to get a golf club in his hands that can actually be used to hit the ball. It doesn't necessarily need to be perfect or even a good fit; but it needs to be close to the correct club length and have a grip on it that the junior can easily hold. This junior may start off hitting the very light practice balls around the yard. The point is to generate interest and success with as little disappointment as possible. Actually the best way to start off a boy or girl junior golfer less than 7 or 8 years old is with a putter. It is great fun to go out on the putting green and find success almost immediately when a putt goes into the hole. As interest grows, add more clubs as required.

There are lots of decisions revolving around the set make-up (number of clubs) for juniors. I give some general recommendations in the junior boys and girls fitting tables in this section but the best rule of thumb is that in the beginning, less is better. For instance, under 5 years old it is best to go with only 2 clubs maximum, a putter and a higher lofted iron of say 34° to 38°. Actually, there is nothing wrong with a first club being an all plastic toy club to knock an oversize plastic golf ball around the house or yard. Anything to generate interest in the game as early as possible is good. Generally from 5 years old and on you add more clubs based on the golfer's abilities and desires along with the parent's or guardian's desires.

When juniors get to the 14 to 18 year old category, real adult golf clubs should be used unless there is some extenuating circumstance that negates this.

Junior Fitting Guidelines And Using The 4 Fitting Tables

The following guidelines and factors are intended to provide a basis for determining the proper length, shaft flex, swingweight range and set make-up in fitting clubs for junior boys and girls between the ages of five and eighteen. See [Tables 1, 2, 3 and 4](#).

It is extremely important to understand that there will be numerous cases where one cannot simply fit golf clubs to juniors using these tables solely unless other factors are also taken into consideration and certain adjustments made. Heights and weights listed by age group are national averages and cannot possibly take into account those individuals that fall far outside the averages that help to make up those averages.

It is always best to first determine the junior's height. This factor will most importantly determine the length of clubs that he or she should probably be using. Notice that club length is also indicated by a length range to accommodate shorter or taller heights by age group.

Next, determine the junior's weight and age. These two factors usually give an indication of strength (i.e., the heavier the stronger; and the older the stronger). This will help determine what shaft flex and swingweight range that the youth fits best although for twelve years old and younger the more flexible the shaft the better.

Now look at natural athletic ability and physical coordination as other factors that must be considered as the junior gets older (usually twelve and beyond). As an example: the faster he

or she can swing the clubhead and consistently hit the ball near the center of the club face (solid hit) will also help in determining shaft flex, swingweight and the longest length of club that can be handled while still maintaining this consistency of hit and good directional control.

Keep in mind that the longer the club, the stiffer the shaft, and the less the loft, the harder the club is to hit. Conversely, the shorter the club, the more flexible the shaft, and the greater the loft, the easier the club is to hit. This applies to all golfers, as well.

The reasons are as follows:

- The longer the club, the higher the skill level required to hit the ball on the center of the club face more of the time. This affects the consistency of solid hits.
- The stiffer the shaft, the more unforgiving (in terms of feel and distance) it is on off-center hits. In other words, it feels less solid and more clunky. A stiffer shaft will tend to hit the ball lower at slower swing speeds; however, a stiff shaft will hit the ball straighter than a shaft with more flex. The lower trajectory and feel aspects explain the problems associated with overly stiff shaft flexes which also occurs when cutting adult clubs down for juniors.
- The less the loft angle (stronger loft), the greater the penetration of the club face into the ball; hence, higher head speeds are required to adequately compress the ball and a more exact center hit is required to provide a solid feel.

One area which has not been mentioned thus far is lie angle. Because of significant differences in junior's heights and address positions, it is recommended that lie should be fit according to normal methods; the most accurate of which is the "lie fitting board" method. It has already been shown in Section 4 how important lie is regarding directional control; however, when

fitting the under twelve age groups, lie is not nearly as important as proper length, loft, grip size and clubhead weight. A beginning junior just wants to hit the ball and have it fly in the air. The interest of the junior, his or her willingness to improve, and practice are all factors in determining just how far one goes in the entire fitting process and also in subsequent club fittings as the junior progresses into different age, height and weight groups.

The 4 fitting tables are set up as follows: **Table 1** is solely for fitting junior boys. It uses the average weight and average height by ages from 5 to 18 years old.

Table 2 is the same thing but for girls. Notice in the green shaded section that the recommended golf club specifications are the same as listed for boys in **Table 1**.

Table 3 is a quick reference general fitting chart with grouped data taken from **Tables 1 and 2**. This makes it a simple reference to use initially as it is more general than **Tables 1 and 2**, but again, the data is all derived from **Tables 1 and 2**.

Table 4 provides a detailed individual club length chart by age groups. This is provided to help with any set make-up desired and also help clubmakers or assemblers.

Fitting Junior Boys By Age, Average Height & Average Weight Table 1

Boys Age	Boys Avg. Height	Boys Avg. Weight	DRIVER				# 5 IRON			PUTTER			Recommended Set Make-up Also Includes Putter	Shaft Flex Equiv.	Avg. Grip Size @2" Down From Butt	Avg. Grip Size Equivalent Terminology	Grip Size Range @2" Down From Butt
			Avg. Length	Length Range	Loft Range	Weight Range	Avg. Length	Loft Range	Length Range	Avg. Length	Loft	Length Range					
5	44" (3'8")	37 lbs.	31"	30"-32"	20°-25°	11½-12½ oz. Total Weight	27"	32°-34°	26"-28"	23"	4°	22"-24"	Driver 5, 9 Irons & SW	L or LL (Ladies')	.820"	1/32" Under Ladies	.805"-.835"
6	46" (3'10")	41 lbs.	31"	30"-32"	20°-25°	11½-12½ oz. Total Weight	27"	32°-34°	26"-28"	23"	4°	22"-24"		L or LL (Ladies)	.820"	1/32" Under Ladies	.805"-.835"
7	48" (4')	47 lbs.	31"	30"-32"	20°-25°	11½-12½ oz. Total Weight	27"	32°-34°	26"-28"	23"	4°	22"-24"		L or LL (Ladies)	.820"	1/32" Under Ladies	.805"-.835"
8	49" (4'1")	53 lbs.	35"	32½"-37"	17°-22°	11-12oz. Total Weight	30½"	30°-32°	28½"-32"	26½"	4°	25½"-27½"	Driver, Hybrid, 5, 7, 9 Irons & SW	L or LL (Ladies)	.835"	1/64" Under Ladies	.820"-.850"
9	51" (4'3")	60 lbs.	35"	32½"-37"	17°-22°	11-12oz. Total Weight	30½"	30°-32°	28½"-32"	26½"	4°	25½"-27½"		L or LL (Ladies)	.835"	1/64" Under Ladies	.820"-.850"
10	53" (4'5")	67 lbs.	35"	32½"-37"	17°-22°	11-12oz. Total Weight	30½"	30°-32°	28½"-32"	26½"	4°	25½"-27½"		L (Ladies)	.835"	1/64" Under Ladies	.820"-.850"
11	55" (4'7")	73 lbs.	39"	38"-40½"	14°-19°	10½-11½oz. Total Weight	33½"	30°-32°	32½"-34½"	29½"	4°	28½"-30½"	Driver, 5 Metal, Hybrid, 5, 7, 9 Iron & SW	L (Ladies)	.850"	Standard Ladies	.835"-.880"
12	57½" (4'9½")	83 lbs.	39"	38"-40½"	14°-19°	10½-11½oz. Total Weight	33½"	30°-32°	32½"-34½"	29½"	4°	28½"-30½"		L (Ladies)	.850"	Standard Ladies	.835"-.880"
13	60" (5')	94 lbs.	39"	38"-40½"	14°-19°	10½-11½oz. Total Weight	33½"	30°-32°	32½"-34½"	29½"	4°	28½"-30½"		L or A (Ladies or Flexible)	.850"	Standard Ladies	.835"-.880"
14	63¼" (5'3¼")	109 lbs.	41½"	40½"-42"	11°-16°	C-6 to D-0 SwingWeight	36"	28°-30°	35"-36½"	31½"	4°	30½"-32½"	Driver, 3 Metal, 5 Metal, Hybrid, 5-9 Irons, PW & SW	A (Flexible)	.885"	1/64" Under Mens	.850"-.900"
15	65¾" (5'3¾")	124 lbs.	41½"	40½"-42"	11°-16°	C-6 to D-0 SwingWeight	36"	28°-30°	35"-36½"	31½"	4°	30½"-32½"		A (Flexible)	.885"	1/64" Under Mens	.850"-.900"
16	67¾" (5'7¾")	134 lbs.	41½"	40½"-42"	11°-16°	C-6 to D-0 SwingWeight	36"	28°-30°	35"-36½"	31½"	4°	30½"-32½"		A or R (Flexible or Med.)	.885"	1/64" Under Mens	.850"-.900"
17	69" (5'9")	142 lbs.	43"	42½"-43½"	10°-13°	C-8 to D-2 SwingWeight	37"	27°-29°	36½"-37½"	33"	4°	32"-34"	Same as Above & add Fairway,Hybrid or #4 Iron and/or a 60° Wedge	R or S (Med. or Stiff)	.900"	Standard Mens	.885"-.930"
18	70" (5'10")	149 lbs.	43"	42½"-43½"	10°-13°	C-8 to D-2 SwingWeight	37"	27°-29°	36½"-37½"	33"	4°	32"-34"		R or S (Med. or Stiff)	.900"	Standard Mens	.885"-.930"

NOTES: ¹Source: National Center For Health Statistics ²The recommended set make-up is actually the suggested set make-up and should be used as a starting point for reference only.

³The weight range column from age 5 through 13 lists only total weight and not swingweight. The reason for this is the proper clubhead weight and length are not sufficient in most cases to obtain known swingweight values from golf club swingweight scales. Conversely, the total weight is not shown for ages 14 through 18 because of the great number of different type shafts that are available, each affecting total weight significantly.

Fitting Junior Girls

By Age, Average Height & Average Weight **Table 2**

Girls Age	Girls Avg. Height	Girls Avg. Weight	DRIVER				# 5 IRON			PUTTER			Recommended Set Make-up Also Includes Putter	Shaft Flex Eqiv.	Avg. Grip Size @2" Down From Butt	Avg. Grip Size Equivalent Terminology	Grip Size Range @2" Down From Butt
			Avg. Length	Length Range	Loft Range	Weight Range	Avg. Length	Loft Range	Length Range	Avg. Length	Loft	Length Range					
5	43 1/2" (3'7 1/2")	37 lbs.	31"	30"-32"	20°-25°	11 1/2-12 1/2 oz. Total Weight	27"	32°-34°	26"-28"	23"	4°	22"-24"	Driver 5, 9 Irons & SW	L or LL (Ladies)	.820"	1/32" Under Ladies	.805"-.835"
6	45 1/2" (3'9 1/2")	41 lbs.	31"	30"-32"	20°-25°	11 1/2-12 1/2 oz. Total Weight	27"	32°-34°	26"-28"	23"	4°	22"-24"		L or LL (Ladies)	.820"	1/32" Under Ladies	.805"-.835"
7	47 1/2" (3'11 1/2")	48 lbs.	31"	30"-32"	20°-25°	11 1/2-12 1/2 oz. Total Weight	27"	32°-34°	26"-28"	23"	4°	22"-24"		L or LL (Ladies)	.820"	1/32" Under Ladies	.805"-.835"
8	48 1/2" (4'1/2")	52 lbs.	35"	32 1/2"-37"	17°-22°	11-12oz. Total Weight	30 1/2"	30°-32°	28 1/2"-32"	26 1/2"	4°	25 1/2"-27 1/2"	Driver, Hybrid, 5, 7, 9 Irons & SW	L or LL (Ladies)	.835"	1/64" Under Ladies	.820"-.850"
9	50 3/4" (4'2 3/4")	61 lbs.	35"	32 1/2"-37"	17°-22°	11-12oz. Total Weight	30 1/2"	30°-32°	28 1/2"-32"	26 1/2"	4°	25 1/2"-27 1/2"		L or LL (Ladies)	.835"	1/64" Under Ladies	.820"-.850"
10	53" (4'5")	69 lbs.	35"	32 1/2"-37"	17°-22°	11-12oz. Total Weight	30 1/2"	30°-32°	28 1/2"-32"	26 1/2"	4°	25 1/2"-27 1/2"		L or LL (Ladies)	.835"	1/64" Under Ladies	.820"-.850"
11	55 3/4" (4'7 3/4")	77 lbs.	39"	38"-40 1/2"	14°-19°	10 1/2-11 1/2oz. Total Weight	33 1/2"	30°-32°	32 1/2"-34 1/2"	29 1/2"	4°	28 1/2"-30 1/2"	Driver, 5 Metal, Hybrid, 5, 7, 9 Iron & SW	L or LL (Ladies)	.835"	1/64" Under Ladies	.820"-.850"
12	58" (4'10")	87 lbs.	39"	38"-40 1/2"	14°-19°	10 1/2-11 1/2oz. Total Weight	33 1/2"	30°-32°	32 1/2"-34 1/2"	29 1/2"	4°	28 1/2"-30 1/2"		L or LL (Ladies)	.835"	1/64" Under Ladies	.820"-.850"
13	61" (5'1")	103 lbs.	39"	38"-40 1/2"	14°-19°	10 1/2-11 1/2oz. Total Weight	33 1/2"	30°-32°	32 1/2"-34 1/2"	29 1/2"	4°	28 1/2"-30 1/2"		L or LL (Ladies)	.835"	1/64" Under Ladies	.820"-.850"
14	63" (5'3")	110 lbs.	40"	39"-41"	12°-17°	C-2 to C-5 SwingWeight	34 1/2"	30°-32°	34"-35"	30 1/2"	4°	29 1/2"-31 1/2"	Driver, 3 Metal, 5 Metal, Hybrid, 5-9 Irons, PW & SW	L or LL (Ladies)	.850"	1/64" Under Ladies	.820"-.850"
15	63 3/4" (5'3 3/4")	118 lbs.	40"	39"-41"	12°-17°	C-2 to C-5 SwingWeight	34 1/2"	30°-32°	34"-35"	30 1/2"	4°	29 1/2"-31 1/2"		L or LL (Ladies)	.850"	Standard Ladies	.835"-.880"
16	64" (5'4")	124 lbs.	40"	39"-41"	12°-17°	C-2 to C-5 SwingWeight	34 1/2"	30°-32°	34"-35"	30 1/2"	4°	29 1/2"-31 1/2"		L or LL (Ladies)	.850"	Standard Ladies	.835"-.880"
17	64" (5'4")	127 lbs.	41 1/2"	41"-42 1/2"	11°-14°	C-5 to C-9 SwingWeight	35 1/2"	30°-32°	35"-36 1/2"	31 1/2"	4°	30 1/2"-32 1/2"	Same as Above & add Fairway,Hybrid or #4 Iron and/or a 60° Wedge	L, LL, or A (Ladies or Flexible)	.850"	Standard Ladies	.835"-.880"
18	64" (5'4")	127 lbs.	41 1/2"	41"-42 1/2"	11°-14°	C-5 to C-9 SwingWeight	35 1/2"	30°-32°	35"-36 1/2"	31 1/2"	4°	30 1/2"-32 1/2"		L, LL or A (Ladies or Flexible)	.850"	Standard Ladies	.835"-.880"

THE DARKER SHADED PORTION ABOVE INDICATES THAT THESE SPECIFICATIONS ARE THE SAME FOR BOYS

NOTES:

¹Source: National Center For Health Statistics

²The recommended set make-up is actually the suggested set make-up and should be used as a starting point for reference only.

³The weight range column from age 5 through 13 lists only total weight and not swingweight. The reason for this is the proper clubhead weight and length are not sufficient in most cases to obtain known swingweight values from golf club swingweight scales. Conversely, the total weight is not shown for ages 14 through 18 because of the great number of different type shafts that are available, each affecting total weight significantly.

Boys & Girls

Quick Reference General Fitting Chart

Table 3

Age, Height & Weight Range	Boys and/or Girls	DRIVER Length & Loft Range	#5 IRON Length Range & Average	PUTTER Length Range & Average	² DRIVER Weight Range & Average	Grip Size Range @2" Down From Butt	¹ Recommended Set Make-Up For Playing (Also Incl. Putter)
5-7yrs. 44"-48" 37-47 lbs.	Boys & Girls	30"-32" 20°-25°	26"-28" 27"	22"-24" 23"	12-12½ oz. 12¼ oz.	.805"-.835" ⅓" Under Ladies Size	Driver, 5, 9 Irons & SW
8-10yrs. 49"-53" 53-69 lbs.	Boys & Girls	32½"-37" 17°-22°	28½"-32" 30½"	25½"-27½" 26½"	11½-12 oz. 11¾ oz.	.820"-.850" ⅓" Under Ladies Size	Driver, Hybrid, 5,7,9 Irons & SW
³ 11-13yrs. 55"-61" 73-103 lbs.	Boys & Girls	38"-40½" 14°-19°	32½"-34½" 33½"	28½"-30½" 29½"	11-11½ oz. 11¼ oz.	.835"-.880" Standard Ladies Size	Driver, 5 Metal, Hybrid, 5,7,9 Irons & SW
14-16yrs. 63"-68" 109-134 lbs.	Boys	40½"-42" 11°-16°	35"-36½" 36"	30½"-32½" 31½"	C-6 to D-0 C8	.850"-.900" ⅓" Under Mens Size	Driver, 3 Metal, 5 Metal, Hybrid, 5-9 Irons
14-16yrs. 63"-64" 118-127 lbs.	Girls	39"-41" 12°-17°	34"-35" 34½"	29½"-31½" 30½"	C-2 to C-5 C-4	.835"-.880" Standard Ladies Size	Driver, 3 Metal, 5 Metal, Hybrid, 5-9 Irons, PW, SW
17-18yrs. 69"-70" 142-149 lbs.	Boys	42½"-43½" 10°-13°	36½"-37½" 37"	32"-34" 33"	C-8 to D-2 D-1	.885"-.930" Standard Mens Size	Same as Boys 14-16 but add FW, Hybrid or a #4 Iron and/or a 60° wedge
17-18yrs. 64" 124-127 lbs.	Girls	41"-42½" 11°-14°	35"-36½" 35½"	30½"-32½" 31½"	C-5 to C-9 C-7	.835"-.880" Standard Ladies Size	Same as Girls 14-16 but add FW, Hybrid or a #4 iron and/or a 60° wedge

NOTES: ¹The recommended set make-up is actually the suggested set make-up and should be used as a starting point for reference only.

²The driver weight range column from age 5 through 13 lists only total weight and not swingweight. The reason for this is the proper clubhead weight and length are not sufficient in most cases to obtain known swingweight values from golf club swingweight scales. Conversely, the total weight is not shown for ages 14 through 18 because of the great number of different type shafts that are available, each affecting total weight significantly.

³The grip for girls only in the 11-13 year old category should be an average of .835" with the range being .820" to .850".

Boys & Girls

Quick Reference Club Length Chart

Table 4

DRIVERS FAIRWAY METALS & HYBRIDS											
Age Group	Boys and/or Girls	1	2	3	4	5	7	H4	H5		
5-7	Both					31"	30"				
8-10	Both				35"	34½"	33½"		31½"		
11-13	Both			38½"	38"	37½"	36½"		34½"		
14-16	Boys		41½"	41"	40½"	40"	39"	37"	36½"		
14-16	Girls		40"	39½"	39"	38½"	37½"	36"	35½"		
17-18	Boys	43"	42½"	42"	41½"	41"	40"	38½"	38"		
17-18	Girls	41½"	41"	40½"	40"	39½"	38½"	37"	36½"		
IRONS											
Age Group	Boys and/or Girls	4	5	6	7	8	9	PW	SW	60°	P
5-7	Both		27"	26½"	26"	25½"	25"	24½"	24½"	24½"	23"
8-10	Both		30½"	30"	29½"	29"	28½"	28"	28"	28"	26½"
11-13	Both	34"	33½"	33"	32½"	32"	31½"	31"	31"	31"	29½"
14-16	Boys	36"	35½"	35"	34½"	34"	33½"	33"	33"	33"	31½"
14-16	Girls	35"	34½"	34"	33½"	33"	32½"	32"	32"	32"	30½"
17-18	Boys	37½"	37"	36½"	36"	35½"	35"	34½"	34½"	34½"	33"
17-18	Girls	36"	35½"	35"	34½"	34"	33½"	33"	33"	33"	31½"

NOTES: _____

