Worth completed a project with a research group at the University of Arizona to determine the best bat weight for players in youth league and adult baseball, as well as slow pitch and fast pitch softball. The research involved in precise measurements of bat speed for several individuals playing in each category. The measured bat speeds were then used in a conservations of momentum calculation to determine hit ball speed. Formulas were then developed to predict the optimum or best bat weight for maximum hit ball speed. It should be noted that for the baseball and fastpitch softball ball weights, the ideal bat weight for maximum hit ball speed is approximately 1 ounce heavier than the recommendation. The reason for this is that the research showed there is negligible loss of hit ball speed by reducing the bat weight 1 ounce below the ideal. Because of this, the lighter weight increases bat control which becomes an essential ingredient in making ball contact in both baseball and fast pitch softball. In three of the categories, the experimental data correlated best to player weight while in the other two, the best correlation was to player height.

BEST BAT WEIGHTS:

A. High School and College Baseball		B. Youth League Baseball (11-12 yrs)		C. Youth League Baseball (8-10 yr. olds)		D. Fast Pitch Softball (Women)	
Player Height	Best Bat Weight	Player Weight	Best Bat	Player Height	Best Bat Weight	Player Weight	Best Bat
66	27	70	18	48	16	100	23
68	27.5	80	19	50	16.5	110	24
70	28	90	19.5	52	17	120	25
72	29	100	20	54	17.5	130	26
74	30	110	20.5	56	18	140	26.5
76	30.5	120	21	58	18.5	150	27
Formula: Height/3 + 5		130	21.5	60	19	160	28
		140	22	Formula: Height/4 + 4		170	28.5
		150	23			180	29
		Formula: Weight/18 + 14				Formula: Weight/15 + 17	

Bat Sizing Guide - For ages 5 - 16

Suggested ONLY. A lighter bat may allow you to use a longer bat. "The Drop" is a common term for describing the weight of an aluminum bat. It is unique to aluminum bats as the weight of a wood bat varies somewhat within each bat. The drop simply means you take the length of the bat and subtract the drop to determine the weight. For Example: One bat is available in 32", 33" and 34". Therefore, a 32" would weigh 29 ounces, a 33" would weigh 30 ounces and so on. However, just like your driver is harder to hit than your 3 wood, a longer bat MAY be harder to hit than a shorter one depending on your age and your arm/ wrist strength. For youth fast pitch softball, you can add 1".

Height / Weight	3'-3'4"	3'5"-3'8"	3'9"-4'	4'1"-4'4"	4'5"-4'8"	4'9"-5'	5'1"-5'4"	5'5"-5'8"	5'9"-6'	6'1"-over
under 60	26"	27"	28"	29"	29"					
61-70	27"	27"	28"	29"	30"	30"				
71-80		28"	28"	29"	30"	30"	31"			
81-90		28"	29"	29"	30"	30"	31"	32"		
91-100		28"	29"	30"	30"	31"	31"	32"		
101-110		29"	29"	30"	30"	31"	31"	32"		
111-120		29"	29"	30"	30"	31"	31"	32"		
121-130		29"	30"	30"	30"	31"	32"	33"	33"	
131-140		29"	30"	30"	31"	31"	32"	33"	33"	
141-150			30"	30"	31"	31"	32"	33"	33"	
151-160			30"	31"	31"	32"	32"	33"	33"	33"
161-180				31"	31"	32"	32"	33"	33"	34"
181-190						32"	33"	33"	34"	34"
190 +							33"	33"	34"	34"

Bat Length by Age Guide

AGE	5-7	8-9	10	11-12	13-14	15-16
LENGTH	24"-26"	26"-28"	28"-29"	30"-31"	31"-32"	32"-33"

Source: http://eteamz.active.com/northtexasbees/files/batsize.htm