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What Is the Difference Between Compound and Re-curve Bows?

Hello. I'm Nick from Southern Regional HS in New Jersey. I was an archery instructor at a scout camp, I was also taught how to shoot by a silver medal Olympic archer; and your question immediately caught my eye. I hope I can help shed some light on the differences between a re-curve bow and a compound.

There are many differences between compound and re-curve bows, even though they both shoot arrows, and both operate under the same mechanical principles. The main



of

difference is that compound bows, being more modern and advanced, have a pulley system using cams and cables that allow the shooter to draw at a heavier weight. Then, once the shooter reaches about $\frac{3}{4}$ draw, the cams, or pulley, release some the tension so that at full draw the shooter is only holding a portion of the bows weight.

Re-curves on the other hand hold the same draw weight throughout.

There is no let off, or release in weight. When shooting a compound bow; once the string is released, the cams snap back to full power and shoot the arrow at greater speeds (averaging 280 to 300 feet per second with 50lbs of draw) than a re-curve bow of the same power (around 180 to 200 FPS). Re-curves do not have cams or a cable system, but their distinctive double curve give the bow much more power than a long



bow of the same power

Another major difference is in the materials used to build each bow. Compounds are generally made using aluminum or magnesium composites, allowing the bow to have a draw weight of up to 150lbs without breaking; while re-curves are generally made of traditional wood or fiberglass and only have a weight of a max 100lbs. Even though compounds offer many advantages, many shooters still prefer to use more traditional techniques and shoot using re-curve bows or **long bows***. And those are the differences that set re-curves and compounds apart from one another. Thank you for your question Kathrine, and good luck on your own blank white page assignment.

* These (**long bows**) are almost the same thing although, on a re-curve bow, the limbs of a re-curve bow double back in a distinctive double curve. This allows the bow to be shorter yet still just as powerful, if not more so, than its longer and straighter relatives.

Sources:

http://www.princeton.edu/~achaney/tmve/wiki100k/docs/Compound_bow.html

<http://www.discoverarchery.org/equipment/the-recurve-bow-what-you-need-to-know/>

<http://library.thinkquest.org/27344/typebows.htm>

Personal Experience; Archery Instructor (3 Months)

Professionally Trained(3 Weeks)

Personal Shooting (6 Years)

