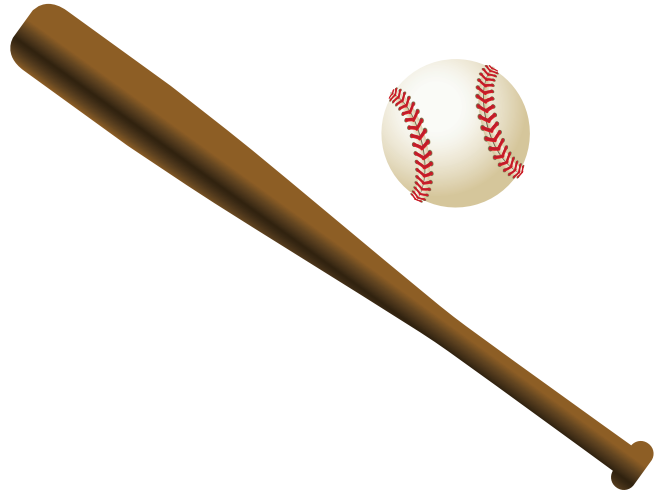


Batter Up!

Get ready for opening day by exploring the science behind the “sweet spot” on a bat.

Collect

- Wooden bat
- Aluminum bat
- Hammer
- Colorful tape
- Ruler (optional)



Feel the good vibrations

1. Hold the wooden bat just below the knob, so that the thicker part of the bat is hanging toward the floor. Let it hang loosely by holding it using only your thumb and pointer finger.
2. Using your other hand, gently hit the very end of the bat with the hammer. Can you feel the vibration in the hand that is holding the bat?
3. Keep tapping the hammer against the bat, approximately every inch or so, until you get to the handle. If you hit any spots that don't produce a vibration, mark them with a small piece of colorful tape.
4. Repeat the procedure with the aluminum bat.

Compare the bats

5. Did the vibrations feel the same in both bats?
6. Compare where the tape marks are. Are they in the same place on both bats? If you have a ruler, measure how far the marks are from the end of the bat.

What's happening?

When the hammer hit the bat, you could feel the vibration as it traveled up the bat and into your hand. However, there are certain spots on the bat called “nodes” where you should have felt little or no vibration. These spots may have even sounded different when you hit them. Players try to hit the ball at this spot because if the bat vibrates, some of the energy of the swing is absorbed by the bat. If the ball hits the sweet spot, the bat doesn't vibrate, allowing more energy from the swing to be transferred to the ball. All of that transferred energy allows the ball to travel further!