

## *How the Saxophone Works?*

Vibrations are created as the stream of air hits the tip of the reed. The frequency of the vibration is determined by the distance the air must travel before escaping from the saxophone. Tone holes are carefully positioned on the body of the instrument to create the best intonation possible for each note. However, no saxophone is perfectly in-tune, and consequently some notes must be “lipped” into tune. As each key is depressed, its pad (round felt covered with soft leather) stops the airflow through that tone hole. As the distance the air must travel increases, the tone gets lower.

### **Tuning**

The saxophone is tuned by adjusting its length. The mouthpiece can be moved in or out on the cork, changing the length the air must travel. As the mouthpiece is pulled out, the pitch gets lower. Pushing the mouthpiece in raises the pitch.

### **Key**

Alto saxophones are in the key of Eb. This means that a C played on the alto sax is the same as an Eb on a piano or other C instrument. As a result a saxophonist and an accompanist on a piano or other C instrument cannot play from the same sheet of music. The saxophonist's music must be transposed down three half steps.

The tenor and soprano saxes are in the key of Bb, and the baritone sax is in the key of Eb. Their music must likewise be transposed in order to play with a piano or other instrument in a different key.