The instruments of the orchestra

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to Angela Colbers

The wind instruments

At the back of the orchestra the wind instruments have found a place (play winds, 5 sec). Some wind instruments have been made of wood (show) and others are made of metal (show). Just like the string instruments the different wind instruments vary in size from very small (show piccolo) to big (show tuba or contrabassoon).

With string instruments, the vibrating string is the source of the sound, with wind instruments different ways are used to force the air to vibrate. At the flute mouthpiece (show flute) with the lips some airflow from breathing-out is directed towards a rather sharp edge causing some sound. With the so-called reed instruments (show reeds) a thin reed is forced to vibrate, and with the brass instruments a slight air flow between the lips causes vibration (show brass mouthpiece).

Then, *very important*, after the mouthpiece a piece of tube is mounted. And the air column inside that tube might vibrate as well, the so-called *resonance*. That only happens when the vibrations in the mouthpiece are at a pitch that is able to resonate in the specific length of air column. A much louder and more defined sound is then generated (play trumpet mouthpiece separately and mounted). That resonance happens at a *short* tube for *high pitch* (play piccolo) and at a *long* tube for *low pitch* (play tuba).

Oboe and English horn

The oboe is a double reed woodwind instrument (**show oboe**). For producing sound, two pieces of reed are bound together and air is blown through the tiny space that is left between these two reeds. The result is a very penetrating sound (**oboe blows mouthpiece**). The reed is made from cane and is very vulnerable; the smallest disruptions may result in a useless reed.

The resonator tube of the oboe is made of a tropical hardwood and like with the flutes; equipped with a series of holes and keys, allowing the fast performance of many different notes (oboe plays some scales). The sound of the oboe is very special and can range from a steady and cutting forte to a nasal and melancholic sound in the lower range of the instrument. Because of that solid sound of the oboe it is used to tune the whole orchestra at the beginning of a concert. The melancholic sound of the oboe is the proud characteristic of the bigger brother in the oboe family in particular; the English horn (show and play English horn). When a sad or pitiful melody has to be performed, the English horn is the favorite. He is quite a bit longer than the oboe and the mouthpiece has a slight bent for a more practical playing position.

(Now the oboes will play a short piece).



