Types of Musical Instruments

There are basically two ways of classifying musical instruments. In basic music classes students are still taught that the four types are woodwind, brass, string and percussion. This is the orchestral classification of instruments and is useful in the setting of traditional Western, Classical and Art Music. However, many students are now making instruments that do not fall into one of these classes. Instruments made in other parts of the world and used in different types of music need to be classified differently. It would be preferable, in those cases, to use the following types that are based on how the sound is produced rather than the placement in a classical orchestral setting. The types that may be used by students are more specific, inclusive and accurate. The four types are chordophones, aerophones, membranophones, and idiophones. A description for each of these follows.

Chordophones A vibrating string or strings make the sound of these instruments. This type can be subdivided according to the relationship between the strings and the resonator. A resonator is usually a surrounding structure that is able to pick up the original vibration and vibrate sympathetically with it, causing an amplification of the original sound and modifying them is such a way as to make them more musical. The subdivisions of the chordophones depend on not only the resonator but also on how the string is played. Below are the subdivisions of chordophone.

1. **zithers**
   - strings are stretched across, over, or inside a resonator (or between two resonators), which may be a hollow tube or gourd, a board, or a hollow container.
   - strings may be struck or plucked
   - examples are piano, hammer dulcimer, harpsichord, or Appalachian dulcimer.
2. **lutes**
   - strings are stretched over a resonator and up a neck
   - strings may be plucked or bowed.
   - examples are violin, fiddle, guitar or banjo
3. **lyres**
   - strings leave the resonator at right angels to an edge and run to a cross bar that is held away from the resonator at a slant.
   - example is the classical Greek lute
4. **harps**
   - strings leave the resonator at a slant and move up a neck to be connected to the resonator.
   - examples are the orchestral harp and the Irish harp.
5. **musical bows**
   - the string(s) are stretched from one end of a wooden bow to the other
   - the string(s) may be plucked or bowed with a second, small bow.

Aerophones In this type of instrument, vibrating air produces the sound. Aerophones are subdivided according to what causes the air to begin to vibrate. Below are examples of the subdivisions.

1. **whistles**
   - air is blown into the tube at a sharp edge in the instrument
   - examples are recorders and police whistles.
2. **blowholes**
   - air is blown across the sharp edge at the blowhole, which may be either at the end or on the side of the tube.
   - examples are panpipes or flutes.
3. **reeds**
   - the vibration is started by a single, or double reeds that are part of the mouthpiece or by a free reed instrument where the reed is mounted within the instrument

- examples are saxophone, oboe, bagpipes, and harmonica

4. **cup mouthpiece**
   - the lips of the player vibrate against the mouthpiece causing a sympathetic vibration in the air inside the instrument.
   - examples are bugle and conch shell
5. **organs**
   - air is pumped over the sharp edge of a tube by a mechanism powered by the performer in some way.
   - example is the pump organ

Membranophones In a membranophone the sound is made by the vibration of a stretched membrane or skin across some sort of resonator. They are subdivided by the shape of that resonating body. The five subdivisions are listed below.

1. **tubular drums**
   - these can further be divided into cylindrical, conical, barrel, long, waisted, goblet and footed according to the shape.
2. **kettledrums** (vessel drums)
   - all of these have rounded bottoms
3. **frame drums**
   - the membrane is stretched over a frame making a wide shallow instrument
4. **friction drums**
   - while the resonator may have many shapes the sound is produced by running a stick through a hole in the membrane rather than by beating it.
5. **mirlitons**
   - the membrane vibrates when air is blown across it.

Idiophones The idiophone itself will vibrate and is the main source of the musical sound. They are subdivided according to what you do to make them vibrate.

1. **percussion**
   - they are hit with sticks, beaters, or clappers
   - examples are bells, steel drums.
2. **shaken**
   - they are shaken
   - examples are maracas, eggs, jingle bells.
3. **concussion**
   - they are played by classing two of them together
   - examples are castanets, claves and spoons.
4. **friction**
   - sound is produced by rubbing this instrument
   - examples are wine glasses and a glass armonica.
5. **scraped**
   - sound is produced by scraping a stick across a set of notches or corrugations
   - examples are guiros and washboards.
6. **stamping**
   - the instrument is stamped on the ground, floor, or some hard surface
   - examples are tap shoes.
7. **plucked**
   - these idiophones have a thin tongue of metal or bamboo that vibrates when plucked
   - examples are Jew's harp, mbira, or a thumb piano.