Name _____ ID # _____

Date _____ Class Period _____

Families of Instruments Facts

General Facts

1. Any object that **vibrates** makes a sound. Musical instruments are **simple machines** that vibrate very fast and make sounds.

2. An object that produces vibrations is a **sound source**. Not all objects vibrate on their own. They need help to begin vibrating. When an object is used to start vibration of another, that second object is the **sound generator**.

3. Musical instruments have both a **sound source** and a **sound generator** to make beautiful music.

4. These simple machines called musical instruments are made of different kinds of **materials**. They also come in many **shapes** and **sizes**.

5. The **material** used to construct an instrument and its **shape** affect the tone quality it produces: Loud, quiet, harsh, mellow, muted, or bright.

6. The **size** of the instrument affects the range of sound pitches it makes:
    a. The **bigger** the instrument, the **lower** the pitch of the sound
    b. The **smaller** the instrument, the **higher** pitch of the sound

7. All instruments are **grouped** into families.

8. **People** in a **family** belong together because they **share similar traits**. Among other things, they may share the same bloodline, culture, or physical traits.

9. Musical **instruments** in a **family** belong together because they share similar traits, too. They may sound similar, have a similar shape, or may be constructed out of the same material to one another.

10. There are **six** (6) **families** of instruments:
    The **Woodwind** Family
    The **Brass** Family
    The **Percussion** Family
    The **Keyboard** Family
    The **String** Family
    The **Voice** Family

Name _____ ID # _____

Date _____ Class Period _____

Families of Instruments Notes and Facts

The Woodwind Family

1. **Woodwind instruments** are made (or were once **made) of wood** or use a piece of wood to produce a sound. To play a woodwind instrument, the musician blows air into the instrument.

2. The **sound source** in a woodwind instrument is the **vibrating body of the instrument**. The **sound generator** in a woodwind instrument is the **vibrating air passing through the instrument.** The reed or lip plate causes the air to begin to vibrate.

3. Woodwind instruments belong to two (2) groups:
   a. the **flute group** (the shape of a flute is a long and skinny tube)
   b. the **reed group** (a reed is a type of wood)

4. The most popular instruments in the **flute group** are the **recorder**, the **flute**, and the **piccolo**. Other instruments in the flute group are the panpipes, the fife, the ocarina, and the flageolet.

5. The **sound generator** for a **flute group** instrument is **the shape of the opening** where the air enters the instrument. It cuts the air stream and sets it in motion.

6. **Reeds** help certain woodwind instruments produce a sound. They vibrate as air passes by them. There are two (2) kinds of reeds:
   a. the **single reed** (a piece of wood, attached to a mouthpiece, that covers a whole)
   b. the **double reed** (two pieces of wood held together with string and inserted into the instrument)

7. The **single reed instruments** are the **clarinet** and the **saxophone**. There are multiple versions of clarinets and saxophones that vary in shape and size.

8. The most popular **double reed instruments** are the **oboe** and the **bassoon**. Other double reed instruments are the English horn and the contrabassoon.

Name _____ ID # _____

Date _____ Class Period _____

Families of Instruments Notes and Facts

The Brass Family

1. **Brass instruments** are **long metal tubes** that are folded or coiled up (like a snake) so they are easier to carry. To play a brass instrument, the musician blows air into the instrument.

2. The **sound source** in a brass instrument is the **vibrating body of the instrument**. The **sound generator** is the **vibrating air passing through the instrument.**

3. Brass instruments have no parts that help the musician's air to vibrate. Brass musicians "buzz" their lips to blow vibrating air into the instrument.

4. The Brass family instruments, arranged from smallest to largest, are the **trumpet**, the **French horn**, the **trombone**, the **baritone horn/ euphonium**, and the **tuba**.

5. All **Brass instruments** have **three (3) things in common**:
    a. a **mouthpiece** (where the air enters the instrument)
    b. **tubing** (where the air vibrates and makes a sound)
    c. a **bell** (where the air exits the instrument)

6. There are three (3) ways to change the pitch of a Brass instrument:
    a. with **lip pressure**
    b. with **valves**
    c. with a **slide**

7. The Brass instruments with **valves** are the **trumpet**, the **French horn**, the **euphonium/ baritone horn**, and the **tuba**.

8. The **French horn** is the only Brass instrument that is **played with the right hand inside the bell**. Also, the **French horn** player uses their **left hand to press the valves**. All other Brass instrument players press the valves with their right hand.

9. The **only** Brass instrument with a **slide** is the **trombone**. The musician literally slides the "slide" to the desired position to change the pitch of the instrument.

10. The **tuba** is the only Brass instrument that MUST be played sitting down. The "marching" tuba is a **Sousaphone.** It sounds just like a tuba but wraps around the body of the musician.

Name _____ ID # _____

Date _____ Class Period _____

Families of Instruments Notes and Facts

The Percussion Family

1. The **Percussion** family is the **largest** and **oldest** of all the families of instruments. Archeologists have found ancient cave paintings of early humans playing percussion instruments.

2. **Percussion instruments** can be played in three (3) different ways:
    a. **struck** with a hand, stick, or mallet
    b. **shaken**
    c. **rubbed** together or **scraped** with an object

3. There are three (3) sections in the Percussion family:
    a. **Drum** section (a membrane stretched across an open hole)
    b. **Mallet** section (keys arranged in a keyboard pattern that are struck)
    c. **Auxiliary** section (any other kind of percussion instrument)

4. There are so many different percussion instruments! The **sound source** in Percussion instruments will vary from one to the other. Always search for the **part of the instrument is which is vibrating**. That will be the sound source.

5. There are two (2) kinds of percussion instruments:
    a. **pitched percussion** instruments (can play **many** different pitches)
    b. **non-pitched percussion** instruments (can only play **one** pitch)

6. Some poopular **pitched percussion** instruments are the **xylophone**, the **marimba**, the **temple blocks**, the **glockenspiel** or **orchestra bells**, the **mark tree (wind chimes),** the **chimes**, and the **timpani drums**.

7. Some popular **non-pitched percussion** instruments are the **snare, tenor, and bass drums**, the **timbales**, the **cymbals**, the **conga drum**, the **bongos**, and most of the small **auxiliary percussion instruments**.

Name _____ ID # _____

Date _____ Class Period _____

Families of Instruments Notes and Facts

The Voice Family

1. The **Voice** family is the **first family of instruments** that people use to create music. It is also the only instrument that is found **in the human body**. People have two (2) kinds of voices: a **speaking** voice and a **singing** voice.

2. The **sound source** in the human voice are the **vibrating vocal cords** located within the larynx (voice box). The **sound generator** is the **air passing through the vocal cords** when the person exhales (breathes out).

3. A person's voice is generated from parts of the **respiratory and digestive systems** in the human body and the **air** in the atmosphere.
    a. The **body parts** that produce the human voice are the **nose**, the **jaw**, the **mouth**, the **tongue**, the **palate**, the **larynx** (voice box), the **vocal cords**, the **trachea** (wind pipe), the **lungs**, and the **diaphragm**.
    b. The gases that make up **Air** are mainly 78% **nitrogen** and 21% **oxygen**. The remaining 3% of air is **carbon dioxide**, **neon**, and **hydrogen**.

4. When a person **inhales**, air passes through the **nose/mouth** and the **relaxed (open) vocal cords** within the **larynx**, down the **trachea**, and into the **lungs**. Once air reaches the lungs, **oxygen** separates from other air gases and moves into the blood stream. The other gases are sent out of the body as the person **exhales**.

5. The human voice is activated when a person **exhales**. The brain signals the vocal cords to contract (come together). As air comes up the **trachea** and **larynx**, it meets the **closed vocal cords** and pushes against them to escape. Air seeps through the closed vocal cords and they begin to vibrate and make sound.

6. The **size and thickness** of vocal cords determines their **pitch**. Thicker and bigger vocal cords sound low. Thinner and smaller vocal cords sound high. Human **voice parts** are arranged from high to low pitch in this order:
    a. Child voice: **Part 1**, **Part 2**, and **Cambiata** (voice of a pubescent male)
    b. Adult voice: **Soprano**, **Mezzo-Soprano**, **Alto**, **Tenor**, **Baritone**, and **Bass**

7. A person's **vocal range** is the gap between the lowest and highest vocal sound they can produce. A person's **tessitura** are the pitches near the middle of their vocal range where they produce the most beautiful vocal sound and can sing or speak comfortably.