

MARK CAIN'S WORLD OF PVC MUSIC

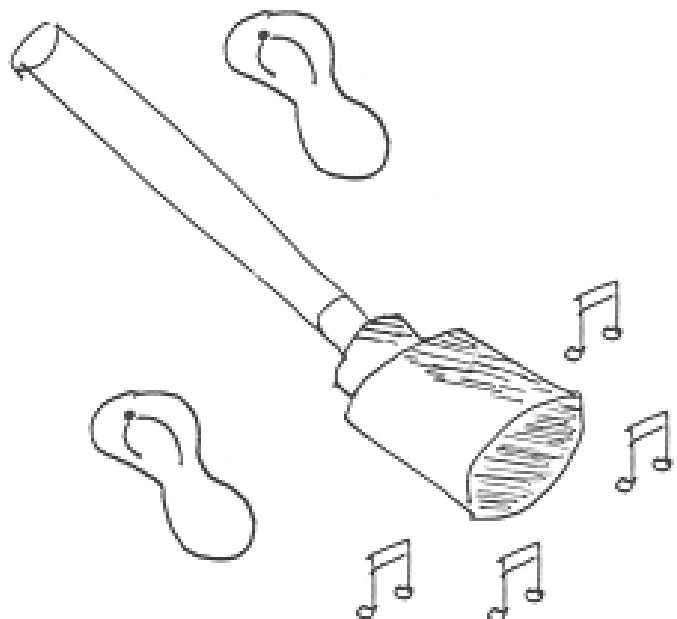
Many of the instruments which inhabit my "World of PVC Music" are made with PVC plastic pipe (as used by plumbers and electricians). PVC pipe or tubing is ideal for wind and percussion instruments because it is light, inexpensive and, most importantly, its internal shape is cylindrical. Many conventional instruments use essentially cylindrical tubing, for instance flutes, trumpets, whistles, clarinets and trombones - to name only a few. Another example closer to home is the didgeridoo of course. Similar instruments are featured in my "World of PVC Music". I have used a lot of imagination to explore unusual and interesting shapes and sounds, and some of the instruments are made from recycled materials (encouraging children to explore the use of found objects in music making).

Using the bicycle pump as a flute or a film canister as a fu-fu pipe or garden hose and funnel for a trumpet are examples of how common objects and materials can play an exciting role in music making. I like to think it helps to keep the bins of Australia a little emptier and the air rich with unusual sound waves.

The range of original instruments you will see in my "World of PVC Music" highlights the sheer joy of music making and illustrates some of the scientific principles involved. You might try making the instruments illustrated in this leaflet before I visit you - music belongs in the home (or back yard for those with sensitive ears). The more instruments the merrier when I visit you, as we transform ourselves into an "Orchestra of the Nomads" (cross-cultural music is a specialty of mine).

Some of the inhabitants of my "World of PVC Music" include:

- Thongophones
- Sewer-Sax's
- Monkey Drums
- Tube Drums
- Panflutes
- Fu-fu pipes
- Funnelodeons
- Whirlies
- Beaters & Shakers
- Talking Drums
- Berimbau
- PVC Tunable Didgeridoo
- Clari-chords
- A Prodigious Family of Flutes
- A Wondrous Welter of Woodwinds
- An Huge Hoard of Things to Hit

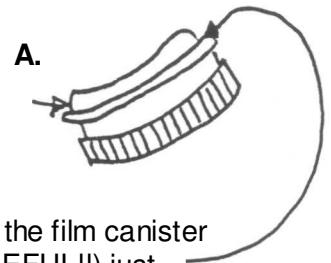
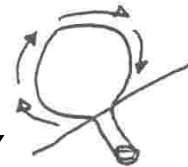


FU-FU PIPES

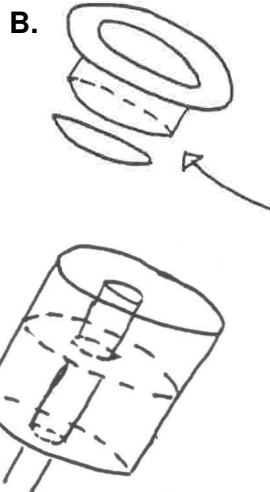
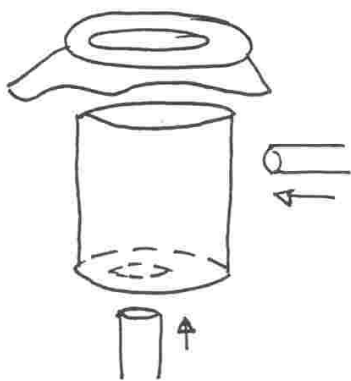
The Fu-Fu pipe has its origins in the hill villages and New Year festivities of Java. It is a balloon driven clarinet. Caution should be taken when playing it near people with good hearing or in small, enclosed spaces. It may be wise to invest in some ear plugs for reluctant listeners - this instrument makes a fearsome sound, and musicians should not be lulled by its inoffensive appearance and small size. It is said to be effective in driving demons and teachers away!

Materials:

- A 35 mm Fuji film canister
- A piece of stiff plastic tube – about 40mm long and roughly the same diameter as a drinking straw
- A piece of balloon (cut the neck off and then snip along the crease – you will get two “resonators”)
- A piece of poly-pipe or trickle hosing 150 – 200mm long (you could use 16mm electrical conduit) Make sure the ends are cut cleanly.

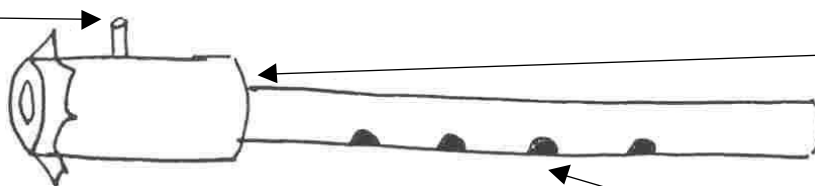


Instructions:



- cut the middle out of the top of the film canister with a Stanley Knife (BE CAREFUL!!) just above the second rim.
- Cut the very middle circle of the cap out, leaving the tube part intact.
- Drill a small hole in the side of the canister, near the open end, for the small tube (it needs to fit snugly).
- Drill a hole in the centre of the canister bottom, slightly smaller than the big tube to ensure an airtight fit.
- Stretch the piece of balloon over the top of the canister & put canister lid (Section A) on.

- Poke the small tube into the canister. **THIS IS WHERE YOU BLOW.**
- Poke the big tube into the canister (making it secure with the canister lid section B.) until it touches the balloon at the top.
- To adjust the sound, push the big tube against the balloon to differing degrees or stretch the balloon tighter against the canister rim.
- You can drill finger holes in the tube to allow you to play different notes like a recorder.

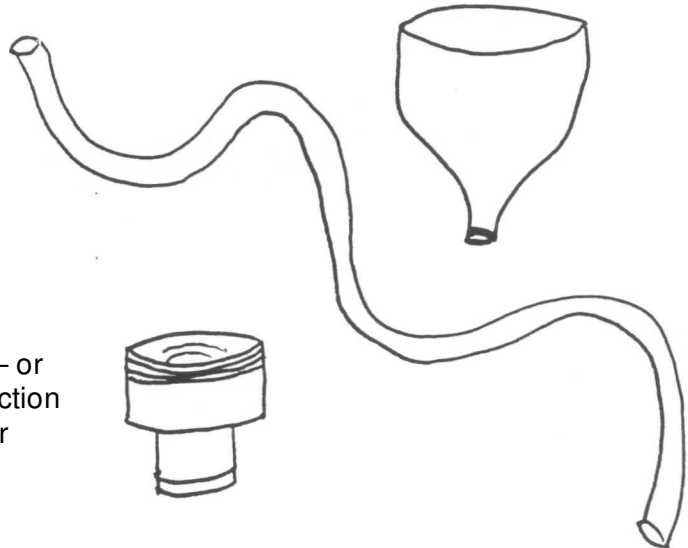


FUNNELODEON

A whirling Dervish of a trumpet – WATCH YOUR HEAD!

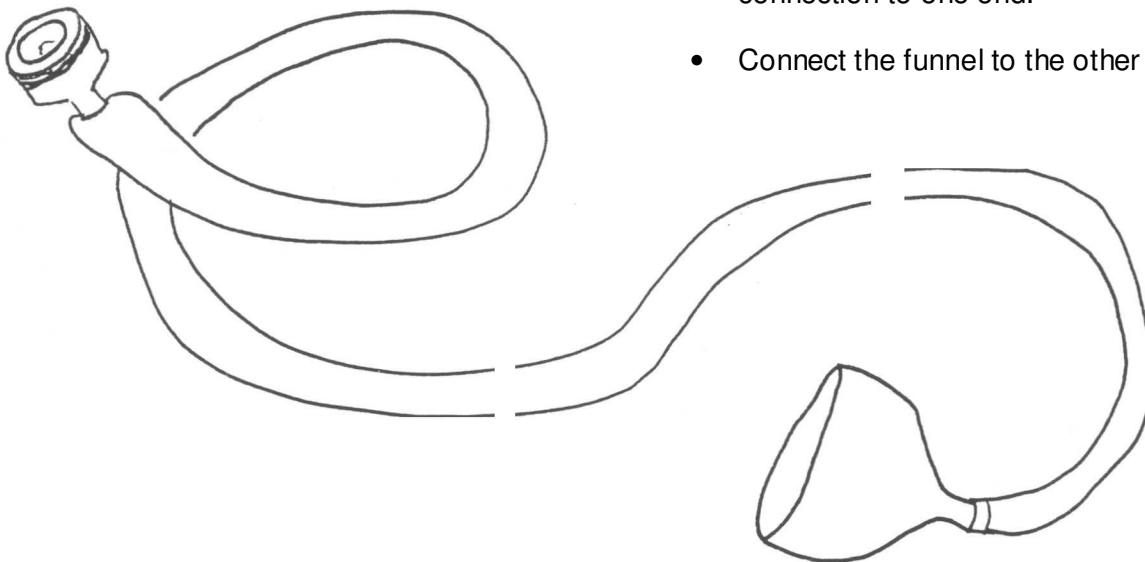
Materials:

- plastic garden hose or tube (nice and flexible) 2 – 10 feet long.
- A plastic funnel (preferably without a big handle – choose a good colour to go with the hose)
- A trumpet, trombone or tuba mouthpiece – or cheaper still, a plastic garden hose connection with an external thread (don't take Mum or Dad's!)



Instructions:

- Connect the mouthpiece or hose connection to one end.
- Connect the funnel to the other end.



- Blow a “Raspberry” into the mouthpiece!

Experiment with humming and, at the same time, whirling the funnel end above your head. MAKE SURE YOU ARE STANDING IN A CLEAR SPACE WITH NO PEOPLE OR CHINA ORNAMENTS CLOSE BY!

As you develop better lip control, your funnelodeon will give you exciting sound possibilities.

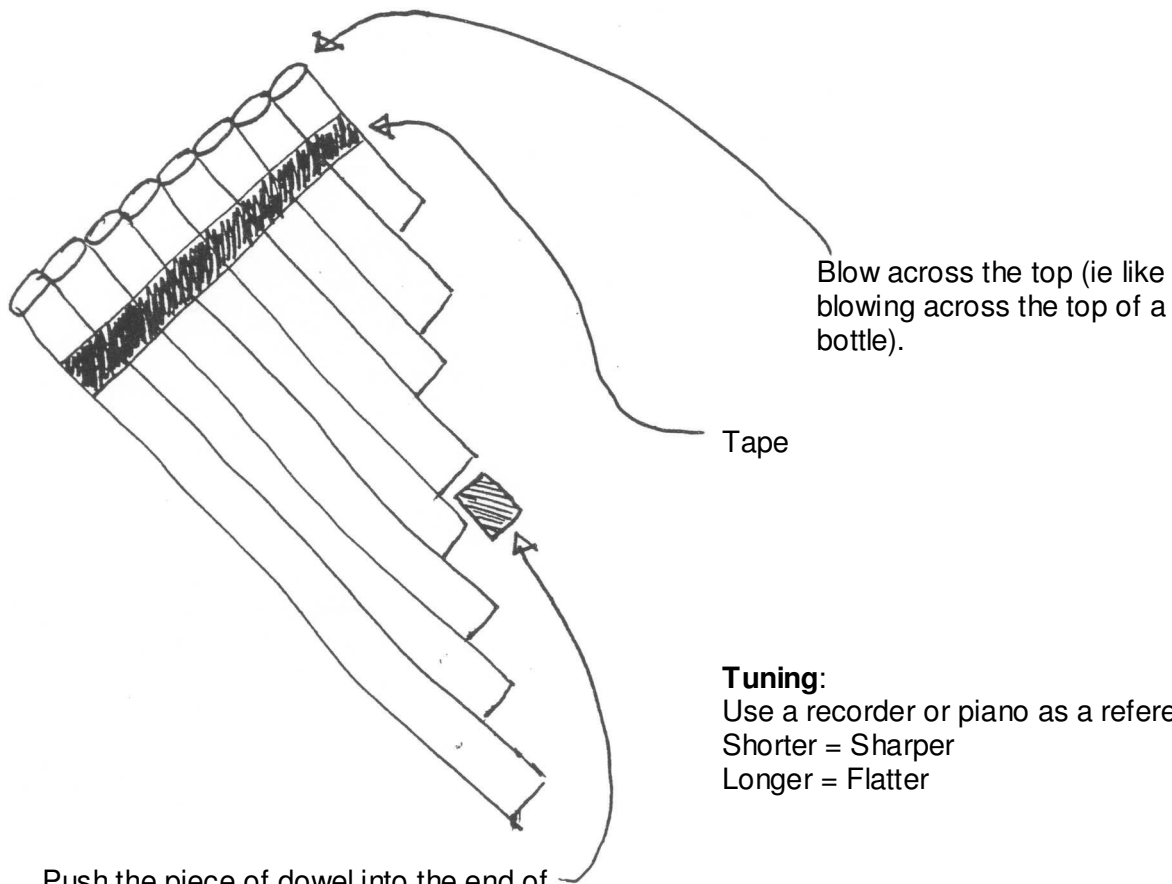
PANFLUTE or PANPIPE

Panpipes are traditionally played in Romania (called the Nai), various South American countries where they are called Zampona (eg Peru, Bolivia, Chile), the Solomon Islands and Papua New Guinea. Panpipes are beautiful and enduringly simple instruments (that little mischievous Greek God was known to pipe a tune on them...now what was his name?)

Typically panpipes are comprised of a set of tubes of decreasing length. Each tube is blocked at one end (the jagged one). A short piece of dowel, a furniture cap or even a piece of plasticine can be used to do this.

This set of panpipes is made using:

- Black trickle hose that you can cut with scissors (preferably not removed from the garden without permission - particularly if it is in operation at the time.)
- 8 pieces of tube that range in size from 6 – 15cm.
- Short sections of dowel.
- Masking or Gaffer tape (try to get some nice plastic tape in bright colours!)



Push the piece of dowel into the end of each tube. Make sure it is an airtight seal.

Tuning:

Use a recorder or piano as a reference.

Shorter = Sharper

Longer = Flatter

SHAKERS

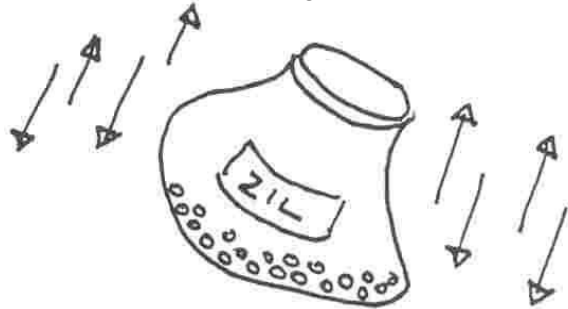
Shakers are the rhythm section of an orchestra or band, and as a percussion instrument the range of sounds they can make is only limited by your imagination in choosing the ingredients - this is a good instrument to make in the kitchen, though don't upset the cook!

Tin cans, empty household containers (such as jars, yoghurt tubs, drink cans and detergent or shampoo containers), empty milk cartons, lengths of hollow bamboo, dried gourds... all make suitable materials.

Two things determine the sound of the shaker:

The container (what it is made of and its size)

The contents.



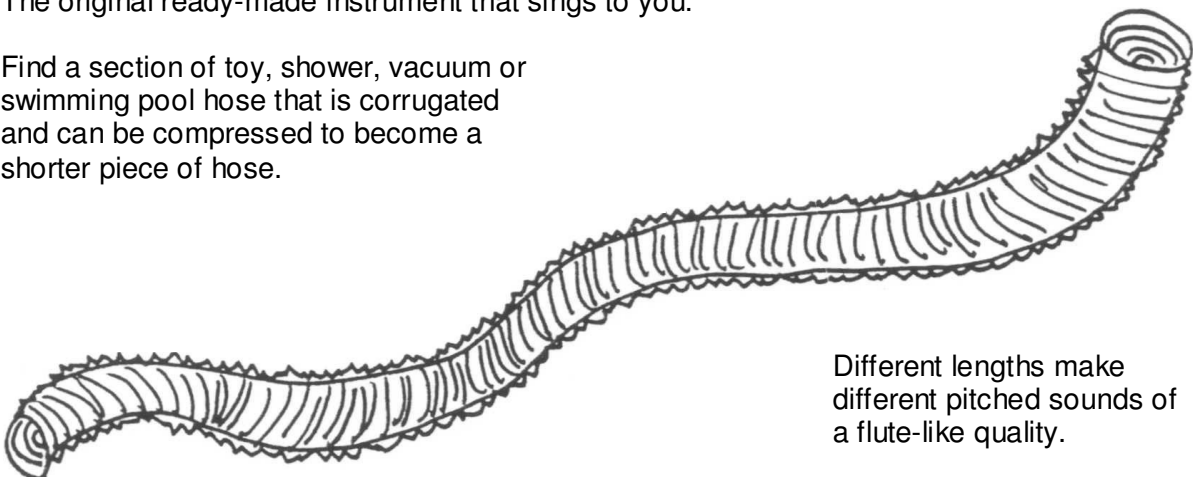
Try quarter filling (or less) a container of your choice with rice, beans, nuts, pebbles, sand, ball bearings, tacks, little marbles – they all make interesting and different noises (less seems to sound better). If your container doesn't have a lid, cover it with a disk of cardboard and seal firmly with glue or masking tape.

For PVC buffs like myself, a short section of 200mm SWV (sewerage waste and vent) pipe with 2 x 50mm SWY end caps is an excellent container for "things".

WHIRLIES

The original ready-made instrument that sings to you.

Find a section of toy, shower, vacuum or swimming pool hose that is corrugated and can be compressed to become a shorter piece of hose.



Different lengths make different pitched sounds of a flute-like quality.

When whirled above your head, whirlies change sound as you whirl them faster.

For the technically minded, whirlies play through an harmonic series of notes (itches). You can hear these as you whirl them faster and faster.