



Rattle, Tap, Thump – The Alabama 4-H Rhythm Club Kit

Sounds can be high or low. That is their ***pitch***. A BIG truck horn might have a deep, low pitch that says “Hey! Get out of my way!” A little car may have a high, squeaky pitch that says: “Eek! Don’t run over me!”

Think of all the different sounds you hear every day. What are some sounds that have a high pitch that maybe hurts your ears? What are some sounds with a big, low pitch?

Do the Activity:

Strike the light blue c note of your Glockenspiel – then strike the dark blue note of your Glockenspiel. You may need to do it a couple of times. Ask youth, “What is the difference between the two sounds?”

Define pitch – how high or deep a note sounds.

Tell youth one thing that determines the pitch of a percussion instrument is the amount of air or space within the instrument.

Strike the small Tom Tom Drum. Be sure to strike it as you hold it. Do not strike it when it is sitting on a table – it affects the sound. Now, Strike the Tom Boy from your club kit.

Ask youth, “Which instrument has the higher pitch and which has the lower pitch?”

Ask youth, “Which instrument has more space.”

Ask youth, “Based on what you see and hear, what is the affect of air space on pitch?”

Pitch: how high or low a note is.

Pitch Perfect

Life Skill:

Problem solving-determining what factors affect pitch

Educational Standard:

NS.K-4.1 & NS.5-8.1 Observation and analysis

Success Indicator:

Youth will learn to organize and evaluate.

Time: 30 minutes

Suggested Group Size:

Classroom or less

Supplies:

Club kit instruments: Glockenspiel, Tom Tom Drum, Tom Boy

More to Do (An additional 30 minutes)

Three water glasses per group
A striker from your club kit

Procedure

Using instruments from your club kit, have youth play each instrument, one at a time, and arrange them in a line from high to low pitch. They could put the instruments that have multiple pitches at one end of the line.

Talking it Over

Does the size of the instrument seem to affect its pitch/frequency? Its loudness?

Does the shape of the instrument seem to affect its pitch/frequency? Its loudness?

Does the instrument's material seem to affect its pitch/frequency? Its loudness?

Can you tell what effects the thickness of an instrument has on its sound?

What seems to affect how long a sound lasts?

What instruments make the sounds that you like best? If you were in a band, which do you think would be the most fun to play? Why?

Which of these effects do you think you can explain in terms of waves and the vibrations the objects must be making?

Generalize to Your Life

Why is it important to be able to judge and organize things that are similar to one another? How can judging and sorting out things help you make decisions?

If you were going to make an important decision in your life – what career to take or where to live – what information would you need to judge and organize?

Apply What You Have Learned

How are your friends different from one another? Does each have unique things about them? Do they each bring some different value to your life – like the different instruments bring value to the band?

Background Information:

Pitch is how high or deep a note sounds. Not all percussion instruments have the ability to produce a variety of pitches. Those that are “pitched” have a variety of surfaces or the ability to alter the striking surface. Pitch changes based on the materials used in instrument construction.

More to do:

Water Glass Music

[Note: this activity can be easily done using the xylophone instead. If using the xylophone, have the youth determine why the size of the metal plate determines changes in pitch]

Have the youth fill three glasses with different levels of water and tap on them with a striker. Allow the youth to discover what happens when water is added or taken away. When water is added, the pitch goes up, and when water is taken away the pitch goes down.

Using trial and error, find the water levels that produce notes to simple three-note songs like “Mary Had a Little Lamb.”

Process What’s Important

What happened when you changed the amount of water in your container?
How does the pitch of the sound change as you add water?
Why does pitch change when you add water to your container?

Generalize to Your Life

How will experimenting with different solutions help you in life?
How can being able to try different things help you make decisions?

Apply What You Have Learned

Why do people do experiments?
What jobs would require a person to do experiments?