

Water Xylophone Experiment

Year 1 – Sound & Silence · Josie Education Program

(Ages 1–2 · Theme: Voice of Water)

Purpose

To help Josie explore **pitch, vibration, and cause and effect** by observing how water changes sound.

This hands-on activity blends science, art, and music—perfect for curiosity and fine-motor play.

Materials

- 6 identical **glass jars or cups** (clear preferred)
 - **Water**
 - **Spoon** or small wooden stick for tapping
 - Optional: **food coloring** (a different color for each jar)
 - Towel or tray for catching spills
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Setup

1. **Line up the jars** on a table or tray.

2. Fill each with a different amount of water—start with one nearly full and one nearly empty, with others in between.
 3. (Optional) Add a few drops of food coloring—one color per jar—to visualize the differences.
 4. Place the jars in a well-lit area where Josie can see reflections and ripples.
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Experiment Steps

1. Gently tap each jar with the spoon.

Listen together—what do you notice?

2. Compare the sounds:
 - Which jar makes the *highest* sound?
 - Which jar makes the *lowest* sound?
 3. Encourage Josie to sort the jars by sound: high to low.
 4. Try making a short “song” by tapping in order.
 5. Optional: record the sounds and watch the ripples in slow motion.
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Science Connection

Sound is made by **vibrations**.

When the glass vibrates, the water inside changes how fast the sound waves move:

- More water → slower vibration → lower pitch
 - Less water → faster vibration → higher pitch
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Art & Math Extensions

- Create a “Rainbow Song”—each color = one note.
 - Count how many taps it takes to make a rhythm.
 - Paint what the music “looked like” with brush strokes or colors that match the sounds.
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Reflection Prompts

- “Which color made the highest sound?”
- “Did you see the water move when we tapped it?”
- “What did the music remind you of?”

Write one short observation in your **Weekly Learning Log**.

Learning Domains

Domain	Skill Developed
Science	Sound vibration, experimentation
Math	Sequencing, comparing amounts
Music	Pitch, rhythm, repetition

Art	Color association, pattern
Language	Descriptive vocabulary (“high,” “low,” “soft,” “loud”)
Empathy / SEL	Patience, focus, emotional expression through sound

Parent Notes

- Always supervise closely—use plastic cups if needed.
- Encourage gentle tapping to protect ears and glass.
- Let her pour and refill jars; this builds coordination and independence.
- Photograph setup + Josie’s smile for your portfolio.