

FUELING THE STEAM ENGINE WITH MUSIC

Kindermusik[®] LET IT BEGIN WITH



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1/2

WHAT IS STEM/STEAM?

- **STEM (Science, Technology, Engineering, Math)** is considered the foundation of our economy. There is a growing desire to reinforce STEM skills in even the youngest learners.
- **STEM + Arts = STEAM.**
Research suggests that students who receive arts education perform BETTER in STEM disciplines than those who do not, especially in areas of science and math.

WHY MUSIC?

- Of all the arts, it's the most accessible to the youngest learners.
- It shares common principles with other STEAM disciplines: **Critical Thinking, Abstract Thinking, Time, Measurement, Space, and Patterns.**



CRITICAL THINKING through Instrument Play

- Allow children to explore, discover, and tinker to find instrument-play ideas (individual play).
- Talk about and imitate what children are doing (supported play).
- Ask children "What if" and open-ended questions (guided play).
- Play instruments to music, using children's ideas.

BENEFITS: problem-solving, exploration, discovery, integration of language and actions, creativity.

ABSTRACT THINKING through Listening

- Show children a visual and identify it.
- Play a sound that matches the visual.
- Identify and describe the sound.
- Ask the children to vocally imitate the sound.

BENEFITS: focused attention, inhibitory control, sound discrimination, one-to-one correspondence.

ABSTRACT THINKING through Audiation

- Start a beat; continue it while everyone sings/says a well-known song/rhyme.
- Repeat, but this time with just you singing/speaking. Before singing the last word of each line, stop and give children time to fill in the word.

BENEFITS: working memory, memory retrieval, focused listening, inhibitory control.

Visit kindermusik.com/schools or call 1.800.628.5687 for more information.



TIME through Steady Beat

- Put the beat on the child: gently tap different body parts.
- Move child to the beat: exercise legs and arms—up/down, in/out.
- Hold child: rock forward/backward, side to side; in lap—bounce up/down, side to side.

BENEFITS: early reading skills, language acquisition, gross- and fine-motor skills.

MEASUREMENT through Rhythm

- Select a nursery rhyme. Sway to the beat.
- Say and tap the words of the rhyme on the child's body.
- Repeatedly tap a simple rhythm (ostinato) while singing or listening to music.

BENEFITS: early reading skills, language acquisition, inhibitory control, math concepts.

SPACE through Movement

- Give children a variety experiences with space—self-space, body extensions (props such as scarves, balls, hoops), moving with or around others, moving in space with limitations as well as in open space.
- Include movement concepts: direction, level, pathway.

BENEFITS: vocabulary acquisition, gross-and fine-motor skills, spatial awareness, math concepts.

PATTERNS

- Point out patterns in music.
- Attach movements/instrument play to patterns (one section clapping, next section stomping).

BENEFITS: math concepts, pre-literacy, predictability, one-to-one correspondence.

