Music keeps us going when we want a little pep in our step. Music provides the soundtrack to times with friends and family. Music even has a place in our classrooms. Perhaps you let students listen to music during labs or let them create a playlist on Spotify specifically for your class. Regardless of when and how you listen to music, some songs work better than others to catch the science spirit!

Songs can be used to hook students into a lesson, provide explanations in a new way, engage the senses (visual and auditory), introduce humor, expose students to a new topic, reinforce information they have already learned, and/or provide a template to write their own songs as an assessment. To give you that musical spark to enhance your class, I present here a playlist of songs from the band They Might Be Giants that could be used to teach across various units and disciplines. With that, let the playlist begin!

“Put It to the Test” helps kick off the start of any science class.
At the beginning of the school year, teachers start with laying the foundation of what doing science looks like. This often involves an activity or lab where students engage in scientific processes. “Put It to the Test” offers a great introduction to the science and engineering practices of Planning and Carrying Out Investigations and Engaging in Argument from Evidence (NGSS Lead States 2013).

“Roy G. Biv” gives a reboot to the waves unit.
Is it time for waves unit 2.0? Make waves groovy again with this colorful ode to the visible spectrum. Dare I say a “light” exposure to light. Elicit what students know about light with this song, then launch into more detail about electromagnetic radiation and the effects of various frequencies (HS-PS4-3, HS-PS4-4).

“Speed and Velocity” pumps you up for your mechanics unit.
The refrain of “motion, direction, acceleration” has a good beat to help explain the foundational concepts of physics. Students develop an understanding of scalar and vector as they dance around to this tune; demonstrating their own teenage interpretation of Newton’s Second Law (HS-PS2-1). Bolster your own knowledge with Hewitt’s (2019) Focus on Physics, “Quickly Teaching Speed, Velocity, and Acceleration—Part 1.”

“Meet the Elements” for a colorful overview of the Periodic Table.
A catchy song with a comical animation to enhance learning about the trends in the periodic table (HS-PS1-1, HS-PS1-2). Ask students to see how many elements and molecules they can identify in the song! See Haroldson’s (2019) article for more ideas on how to teach this critical component of any chemistry class.

“Solid, Liquid, Gas” gets you into a state for the thermodynamics unit.
Refresh and review students’ understanding of particles in motion at the molecular level with this song (MS-PS1-4). Listen to the song while watching the music video to propel students into an investigation about thermal energy transfer and the second law of thermodynamics (HS-PS3-4).

“What Is a Shooting Star?” gives accurate meaning to cosmic bodies.
This song helps clarify misconceptions with the nomenclature around shooting star and explains that it really is a meteor before becoming a meteorite. Spend time leading a discussion about social language versus the academic language of science to describe phenomena. Then progress into a lesson on the motion of orbiting objects from moons to satellites (HS-ESS1-4).

“Photosynthesis” gives rhythm to any light to chemical energy conversion.
Looking to spice up photosynthesis? Engage students in the process of light energy transforming into chemical energy with this song before students construct their own model of photosynthesis (HS-LS1-5). Use these lyrics to springboard into Maeng and Gonczi’s (2019) computer simulation activity to address misconceptions around plant energy transformations.

“Cells” offers a lyrical twist to learning about the double helix.
Share your love of cells and the DNA strand found therein. After a DNA investigation using collaborative argumentation with Chowning et al.’s (2019) new twist on the strawberry extraction, listen to “Cells” and ask students to apply their knowledge in this song. Push students to identify and connect the DNA processes and terminology in the lyrics to the lab and other activities (HS-LS1-1, HS-LS1-4).
“I Am a Paleontologist” highlights career options in the evolution unit.

It is always a great idea to incorporate STEM careers into our curriculum. When studying the evidence for evolution discuss the work of a paleontologist and the ways they use the fossil record to understand the history of life on Earth (HS-LS4-1) through song. Help students to see that there are people continuing to discover more about how life evolved and the common ancestry among species. Pair “I Am a Paleontologist” with Vangelova’s (2019) Career of the Month article interviewing paleontologist Dr. Emily Lindsey to round out the career exploration.

Regardless of whether you use these songs to elicit understanding, engage students, or elaborate on a concept, they provide inspiration to enhance an existing learning segment and offer a catchy tune to learn more about science, either separately or together as playlist. Plus they provide motivation for students to write their own songs to demonstrate their learning. So turn up the volume and get your groove on while you get your science on!

REFERENCES

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