artsNOW
Integrated learning solutions

UNIT: STARS & PLANETS
SING THE SOLAR SYSTEM (Lesson 1 of 5)
Grade Band: 4
Content Focus: Music & Science



LEARNING DESCRIPTION

In this music lesson, students collaborate in groups to research stars and planets, translating their attributes into verses set to a steady beat. They'll creatively meld scientific facts with rhythmic lyricism, each verse contributing to a collective song about the cosmos. A unifying chorus will weave these verses together, highlighting the marvels of the universe. The lesson culminates in a class performance, showcasing a harmonious blend of astronomy knowledge and musical expression.

LEARNING TARGETS

Essential Questions	"I Can" Statements
How are the physical attributes of stars and planets similar and different? How can I use rhythm and music to describe attributes of stars and planets?	I can compose a verse that describes attributes of planets and stars in our solar system. I can speak rhythmically to a steady beat. I can perform body percussion to a steady beat.

GEORGIA STANDARDS

Curriculum Standards	Arts Standards
S4E1: Obtain, evaluate, and communicate information to compare and contrast the physical attributes of stars and planets.	ESGM4.CR.2 Compose and arrange music within specified guidelines. ESGM4.PR.2 Perform a varied repertoire of music on instruments, alone and with others.

KEY VOCABULARY

Content Vocabulary	Arts Vocabulary
• Orbit - The path an object takes in space • Planet - Large natural objects that orbit around a star • Star - A massive celestial body made of gas, held together with its own gravity • Attribute - A quality, characteristic, or feature of something or someone • Solar System - A group of celestial bodies, including a star and the bodies that are bound by its gravitational pull • (Composition) Gaseous - A planet composed of mostly gasses • (Composition) Rocky - A planet composed of mostly rocks	• Rhythm - Long and short sounds and silences • Steady beat - A consistent, steady pulse that occurs at regular intervals in a piece of music • Unpitched percussion - Percussion instruments that do not have a pitch • Verse - A verse is a section of a song where the melody stays the same but the lyrics usually change each time it's heard • Chorus - A section of a song that is repeated after each verse, usually featuring the main message or theme of the song

MATERIALS

- Rhythm sticks (can substitute something else like a pencil)
- *Optional: Various unpitched percussion instruments*
- Chorus for Song for projecting
- 3-2-1 organizer
- 13 Planets: The Latest View of the Solar System by David A. Aguilar
- NASA Solar System Exploration: Planets
- Learning target and chorus to song
- Georgia Science Teacher - 4th Grade Notes

INSTRUCTIONAL DESIGN

Opening/Activating Strategy
• Warm up by having students sit in a circle. Tell students that they should follow along with your movements.

- Begin by patting your legs with both hands to a steady beat. Have students follow along. Switch to a pat-clap-pat-clap pattern. Switch to a pat-clap-snap-pat-clap-snap pattern.
- While continuing the steady beat with body percussion, introduce yourself to the steady beat, “Hi, my name is _____”. Go around the circle of students having students introduce themselves to the steady beat.
- Then lead students in using body percussion to recite the following using a steady beat:
    - Mer-cury, Ve-nus, Earth and Mars / Planets in this sol-ar sys-tem of ours / Jup-i-ter, Sa-turn, Uranus, Nep-tune / Each is u-nique and round as a ba-lloon.
    - It can be displayed here.

Work Session

- Read aloud from 13 Planets: The Latest View of the Solar System by David A. Aguilar to review the different attributes of each of the planets and our sun that have been previously taught (size, color, planet surface, composition, etc.).
- Explain that today, students will create a song that describes the attributes of different planets in our solar system.
- Return to “Mer-cury, Ve-nus, Earth and Mars / Planets in this sol-ar sys-tem of ours / Jup-i-ter, Sa-turn, Uranus, Nep-tune / Each is u-nique and round as a ba-lloon” chanting it with accompanying body percussion to a steady beat.
- This will become the chorus of the class’s song. Explain that a chorus is a part of a song that is repeated after each verse. Practice the chorus as a group several times. This form of music is called rondo.
- Divide students into nine groups and assign each a different celestial object from our solar system.
- If needed, students can use the NASA Solar System Exploration website and the book 13 Planets: The Latest View of the Solar System by David A. Aguilar to research attributes of celestial objects in our solar system.
- In their groups, students will create a verse that describes attributes of their assigned planet. Their verse will follow a steady beat. Students can use unpitched percussion instruments if available or body percussion to create their beat for their verse.
- Students will share their compositions with the whole class performing the chorus between each verse.
- Record the song so it can be played back for students and shared with your community.

Closing/Reflection

- Students will complete a 3-2-1 graphic organizer to reflect on the lesson. This can also be completed in students’ STEAM journals.

ASSESSMENTS

Formative

- Teachers will assess student learning throughout the lesson by observing students’:
    - Ability to use body percussion and speak/chant to a steady beat
    - Collaboration with group members to create a verse that describes the attributes of their chosen star or planet

Summative

- Students will complete a 3-2-1 organizer at the end of the lesson: 3 things they learned, 2 things they have questions about, 1 thing they want their teacher to know.
- Students’ songs should demonstrate that they understand steady beat and the attributes of their star or planet.

DIFFERENTIATION

Accelerated:

- Students can create a verse to describe other celestial objects such as asteroids, comets, meteors, galaxies, moons, etc.
- Create a class video of the whole song to share with your learning community.

Remedial: Provide students with a word bank of possible attributes of planets.

ADDITIONAL RESOURCES

CREDITS

U.S. Department of Education- STEM + the Art of Integrated Learning
Ideas contributed by: SAIL Grant Teacher Leaders

**This integrated lesson provides differentiated ideas and activities for educators that are aligned to a sampling of standards. Standards referenced at the time of publishing may differ based on each state's adoption of new standards.*

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