

## MODULE OVERVIEW

### ABOUT THIS MODULE

Just as classroom teachers have a responsibility to promote physical activity and advocate for physical education programs, physical educators must also infuse STEM subject areas into our outcomes-based instructional schedule. OPEN's Next Gen Connections Modules are designed to incorporate STEM concepts using the Next Generation Science Standards to guide our planning and instruction. This module provides students with an introduction to space and our solar system while reinforcing movement concepts and developing motor skills.

For more information about space and our solar system, visit NASA for Educators: <https://www.nasa.gov/audience/foreducators/index.html>

### NATIONAL STANDARDS AND OUTCOMES FOCUS

- **SHAPE America Standard 1 [E1.K-2]** Performs locomotor skills (hopping, galloping, running, sliding, skipping) while maintaining balance (K); Hops, gallops, jogs, and slides using a mature pattern (1); Skips using a mature pattern (2).
- **Standard 2 [E1.K-2]** Differentiates between movement in personal (self-space) a general space (Ka); Moves in personal space to a rhythm (Kb); Moves in self-space and general space in response to designated rhythms (1); Combines locomotor skills in general space to rhythms (2).
- **Standard 4 [E4.K-2]** Shares equipment & space w/others (K); Works independently w/others in a variety of class environments (e.g., small & large groups) (1); Works independently with others in partner environments (2).
- **Next Generation Science Standard 1-ESS1-1:** Uses observations of the sun, moon, and stars to describe patterns that can be predicted. *The Universe and its Stars.* Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted (ESS1.A); *Earth and the Solar System.* Seasonal patterns of sunrise and sunset can be observed, described, and predicted (ESS1.B).

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PLANNING  
COMPLETE  
LESSONS

This mini-module is designed to be delivered in one complete class period. Everything is included for full participation and evaluation of student learning.

- Instant Activity: Rocket Launch *5–10 minutes*
- + Skill Activity: Sunlight, Moonlight, Stars *10–15 minutes*
- + Skill Activity: Changing Seasons *10–15 minutes*
- + Check for Understanding *5 minutes*

**Important:** Suggestions are what they say they are — *suggestions*. All OPEN materials are offered in MS Word format so that you can easily modify our suggestions to meet the needs of your students.

ASSESSMENT

Two types of assessment are provided as a part of this module. However, there are many different ways for teachers and students to assess and evaluate student learning and skill development.

**Final Discussion Questions:**

OPEN Connections activities are meant to offer skill-building physical activity as well as a context for discussing Next Generation Science concepts. Use the provided DOK discussion questions to debrief student understanding.

**Holistic Performance Rubric:**

The Holistic Performance Rubric can be used as both a formative and summative assessment within the module. Providing students with the rubric’s criteria at the start of the lesson will allow for discussion and formative evaluation throughout each activity.



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**CONNECTION NOTES:**

*(Use this space to make notes to enhance this module for your next implementation.)*