OVERVIEW

Module 2: **Life in Space: Imagine, Explore, Discover!**

OVERVIEW	This play-based astrobiology unit immerses students in hands-on, interactive experiences to explore the conditions for life in space. Through role-playing and creative storytelling, students will investigate the planets, then design their own planet and alien life forms that might live on that planet.
LESSON 1: EXPLORING OUR SOLAR SYSTEM	Students will learn about the planets in our solar system, understand the concept of orbits, and begin to connect the names of the planets with their features. Through hands-on activities, students will explore the solar system by creating their own model of a planet and learning how they move around the Sun. **Duration: 60-90 minutes.**
LESSON 2: BEYOND OUR SOLAR SYSTEM	Students will explore the necessary conditions for life by comparing Earth to other planets. They will design their own planet, based on what they have learned. **Duration: 45-70 minutes.**
LESSON 3: SPACE BUDDIES: CREATING LIFE ON NEW PLANETS!	Students will apply their knowledge of what life needs by designing an alien that could survive on a planet outside our solar system. They will explore how organisms might look different based on their planet's environment. **Duration: 45-60 minutes.**

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SUCCESS CRITERIA	• Students can identify the basic needs of plants (soil, water, air) • Students can name conditions that make a planet habitable (a good place to live: air, water, temperature, good weather), and what makes Earth a good place for living things. • Students can explain that astrobiologists search for life beyond Earth. • Students can describe some of the planets of the solar system and how they move in space.
MATERIALS	• Solar System Model • Solar System books • Craft materials for designing a planet (clay or styrofoam, markers and/or paint) • Clay or playdough • Plush Sun, picture of the Sun, or ball to represent the Sun. • Ball or plush to represent the Sun • PowerPoint: Imagining Life on Other Worlds

This module was created by Angela Cisneros, a kindergarten educator at Pueblo Elementary in Tucson, AZ, in collaboration with the Arizona Astrobiology Center. It is supported and distributed by the University of Arizona's Astrobiology Center with funding from the Marshall Foundation, Tucson, AZ. For more information, contact Lauren James at laurenjames@arizona.edu. Lesson kits are available for checkout from the Arizona Astrobiology Center - https://astrobiology.arizona.edu/