EXPLORE SCIENCE
Earth & Space

NISE
NATIONAL INFORMAL
STEM EDUCATION
NETWORK

Exhibition

Activities

Professional Development

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Experience Earth and space *phenomena* and explore scientific discoveries.

Use the scientific *process* and reflect on science as a way of knowing.

Participate in the scientific community and identify as a science learner.

Exploring the Universe: Ice Orbs

- Adapted existing activity with strong inquiry
- Refocused hands-on elements and inquiry questions to reflect science on ocean worlds
- Great connections to NASA missions, beautiful JPL images & poster, and the search for life
- Addressed possible misconceptions

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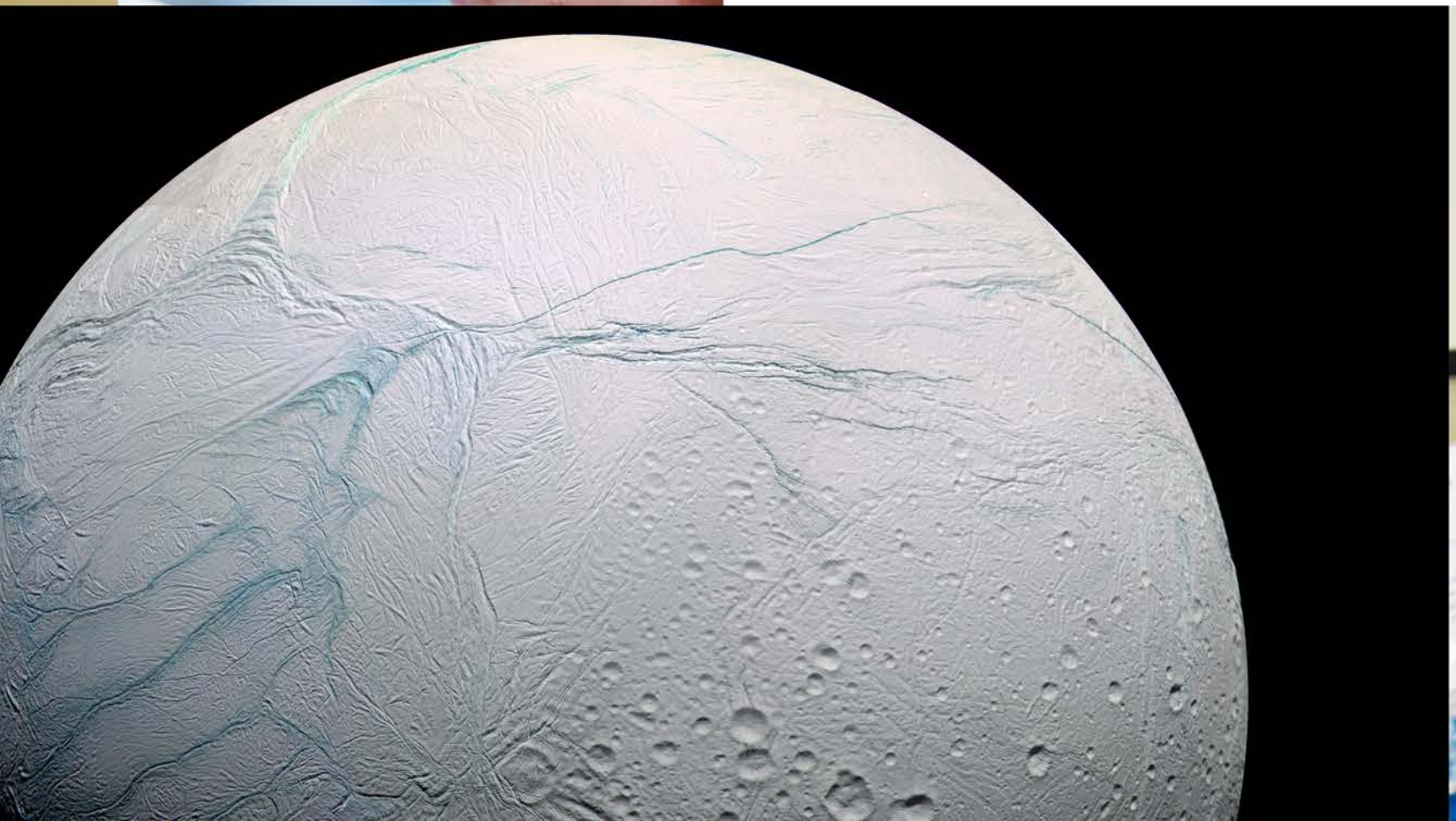

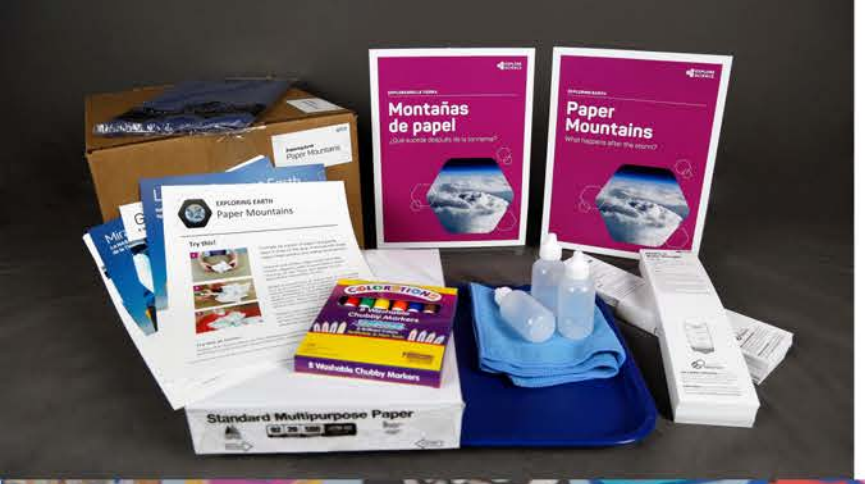

Exploring Earth: Paper Mountains

- Great connections to NASA's efforts to collect data on the changing Earth from looking down
- STEAM components increase use and engagement
- Conversation starter for the impact of humans on Earth systems and how values influence our choices
- Citizen science take home activity

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Exploring the Universe: Nebula Spin Art

- Building on creativity to make observations about forces
- Great connections to beautiful space images of nebula from Hubble and Webb
- Fun activity for families, easy to use and lots of motivation to repeat

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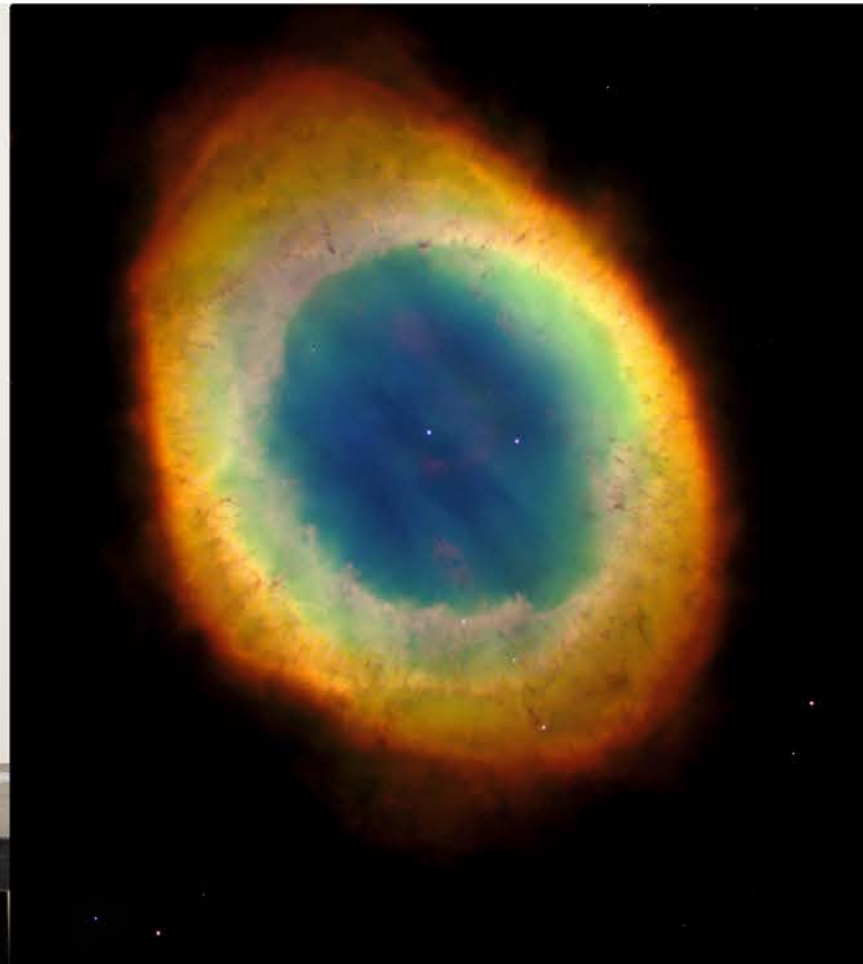

New PD for 2022 Earth & Space Learning and Content Frameworks

- Describes the intended actions of learners engaged with project resources based on the research, discoveries, and missions from NASA's Science Mission Directorate.
- New product matrix to quickly locate aligned materials in the many toolkit boxes

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Earth & Space Product Matrix

The Earth & Space Product Matrix shows the alignment of NISE Network resources to the three principles of the Earth & Space Learning Framework as well as the six key science content ideas of the Earth & Space Content Framework, and includes the year each was added to the Explore Science: Earth & Space Toolkits. The hands-on activities are listed in order of toolkit subcategories: Exploring Earth, Exploring Science Practices, Exploring the Solar System, and Exploring the Universe, with the *Sun, Earth, Universe* exhibition listed at the bottom.

	PRINCIPLES			TOOLKIT YEAR				CONTENT AREA					
	PHENOMENA	PROCESS	PARTICIPATE	2017	2018	2019	2020	SUN	EARTH	PLANETS	UNIVERSE	SOCIETY	FORCES + ENERGY
EXPLORING EARTH													
Exploring Earth: Bear's Shadow*	x			x			x	x	x				
Exploring Earth: Investigating Clouds	x	x	x	x			x		x			x	
Exploring Earth: Land Cover	x	x	x			x			x			x	x
Exploring Earth: Paper Mountains	x	x	x		x				x			x	x
Exploring Earth: Rising Sea		x	x	x		x			x			x	
Exploring Earth: Temperature Mapping	x	x				x		x	x			x	x
EXPLORING SCIENCE PRACTICES													
Exploring Science Practices: Early Explorations*	x	x					x		x				
Exploring Science Practices: Measure Up*	x	x					x		x				
EXPLORING THE SOLAR SYSTEM													
Exploring the Solar System: Asteroid Mining	x	x	x				x			x		x	
Exploring the Solar System: Big Sun, Small Moon	x	x		x				x	x				
Exploring the Solar System: Craters	x	x			x		x		x	x			x
Exploring the Solar System: Design, Build, Test		x	x				x					x	x
Exploring the Solar System: Hide and Seek Moon*	x	x	x		x	x			x			x	
Exploring the Solar System: Magnetic Fields	x	x			x			x	x	x			x
Exploring the Solar System: Mars Rovers		x	x		x					x		x	
Exploring the Solar System: Mission to Space		x	x				x	x	x	x	x	x	
Exploring the Solar System: Moonquakes	x	x					x		x	x			x
Exploring the Solar System: Observe the Moon	x	x	x				x	x	x				
Exploring the Solar System: Observe the Sun	x	x	x			x		x	x				x
Exploring the Solar System: Pocket Solar System		x		x		x				x		x	
Exploring the Solar System: Solar Eclipse	x	x		x				x	x				
Exploring the Solar System: Stomp Rockets		x	x		x	x						x	x
Exploring the Solar System: Story Blocks*		x	x				x					x	
EXPLORING THE UNIVERSE													
Exploring the Universe: Exoplanet Transits	x	x			x					x	x	x	x
Exploring the Universe: Expanding Universe	x	x				x					x		x

New PD for 2022 Diversity, Equity, Accessibility, and Inclusion

- New booklet for engaging communities and incorporating DEAI practices into informal STEM projects
- Tools, practices, and project examples designed to support NISE Network partner efforts in making experiences more relevant and inclusive in order to promote a more equitable STEM future in local communities

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NISE NATIONAL INFORMAL STEM EDUCATION NETWORK

NISE Network Diversity, Equity, Accessibility, and Inclusion Booklet:

Tools for Engaging Communities and Incorporating DEAI Practices into Informal STEM Projects

Updated App for 2022
DIY Sun Science
bit.ly/sunsci

- The popular iPhone/iPad app (500K+ downloads) has been updated with two new activities about shadows on the Moon and auroras
- A new complete Spanish translation for language and has also been included

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Voyage through the Solar System

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Learn more and get all these resources at nisenet.org/space

Thank you!

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