

Mission Statement:

**“Hooghan
Haz’**

áągi, K’é Biníkáágóne’, Ólt



**Vision Statement: Empowering our community through
family-based education**

STREAM Vision

Diné K’ehgo Nitsáhákees dóó Óhoo’aah Hiináago Na’nitin

(Making thoughts and learning come alive, using Dine teachings)

LSCS 1978-2022



Short History of LSCS

Little Singer Community School

Curriculum and Instruction Overview

Planning Consideration and Guidance

Processes Informed by. . .

Cognia Accreditation 2023 Parent and Student Engagement Perceptions	Bureau of Indian Education (BIE) Common Core Standards Next Generation Science Standards School Improvement Process Native Star	Dine Department of Education Dine Standards DSAP Character Education	LSCS Board	LSCS Leadership Team FACE Protocols School Improvement Visitations (PdH) STEM School Focus NAU Center for Science and Teaching
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Assessment Plan and Professional Development Plan

Assessment Plan	Surveys Student Parent Staff and Community	Professional Development Plan STREAM, Literacy and Mathematics, Technology	SMART Goals Content and Process	Data Overview and Delivery
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Recommendations and Future Steps

Unpacking standards for Reading and	Knowledge Packages Mathematics	Completion of School library Systems	Eleot (2.0)	STREAM Week (May)
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Path Forward...

May 23 - 27, 2022 Professional Development

How Do We Deliver Dine/English Literacy Development

Across STREAM Program

Monday	Tuesday	Wednesday	Thursday	Friday
Butcher 2 Sheep at 7:00 a.m.				
Breakfast: 8:00 - 9:00 a.m. Blue Corn meal mush, coffee, tea	Breakfast: 8:00 - 9:00 a.m. Cut fruits and cold cereal coffee, and tea	Breakfast: 8:00 - 9:00 a.m. Cream of wheat, bagel w/ cream cheese, coffee, tea	Breakfast: 8:00 - 9:00 a.m. Oatmeal with fruits, coffee tea	Breakfast: 8:00 - 9:00 a.m. Cut fruits and cold, cereal, tea coffee
R. Nelson, W. Becenti and Brent Chase Navajo Nation Standards Name parts of sheep Process of how each part is fixed.	Trainers: T. Tomas and Tyrone Thompson Topic: Gardening and tie in writing Topic: Next Generation Standards by Kenric K.	Dr. Boloz Topic: Reading and Writing Engineering/ DEP Alison Earnhardt	E. Shirley, M. Williams and Varian Begaye Humanities - Long Walk and Treaty of 1868 Wisdom of Trauma	Vickie Tomas Student Journals Laminating, cutting and ordering materials for next year.
Navajo Nation Standards, reading/writing in each STREAM content area will continue throughout the week				
Lunch: 12:00 - 1:00 p.m. Fresh mutton stew with Tortilla/frybread Blood sausage Intestine and liver Coffee and Tea Dessert: Jello with fruits	Lunch: 12:00 - 1:00 p.m. Menudo and frybread Coffee and Tea Dessert: Jello	Lunch: 12:00 - 1:00 p.m. Roast mutton, ribs with chili and tortilla Coffee and Tea Potato salad	Lunch: 12:00 - 1:00 p.m. Dumpling Mutton stew with tortilla/frybread Coffee and Tea Dessert: Fruit salad	Lunch: 12:00 - 1:00 p.m. Retirement Meal for the 2 teachers Steamed corn with backbone Tortilla/frybread Dessert: Cake
Filming documentations	ISTE Standards/ Technology Media Arts	Engineering /DEP Alison Earnhardt Art Walk and display	Math with Dr. Fowler	

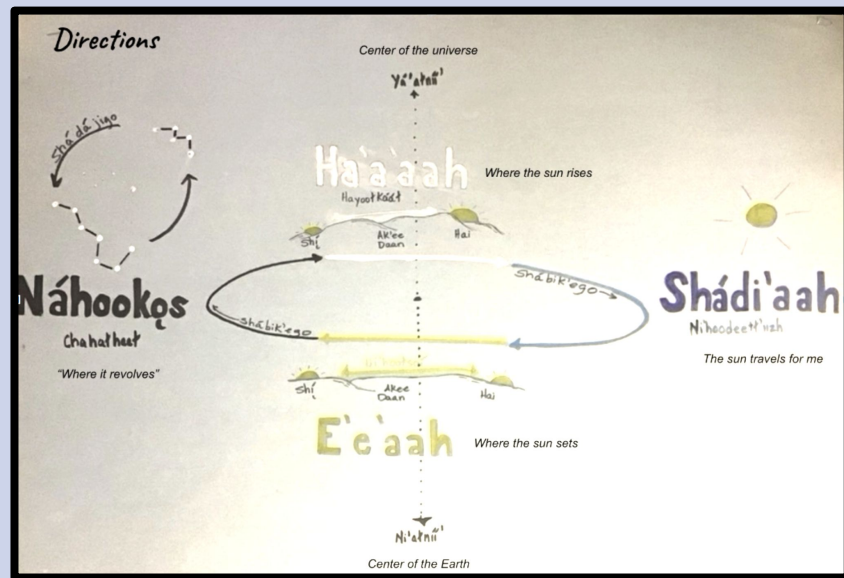
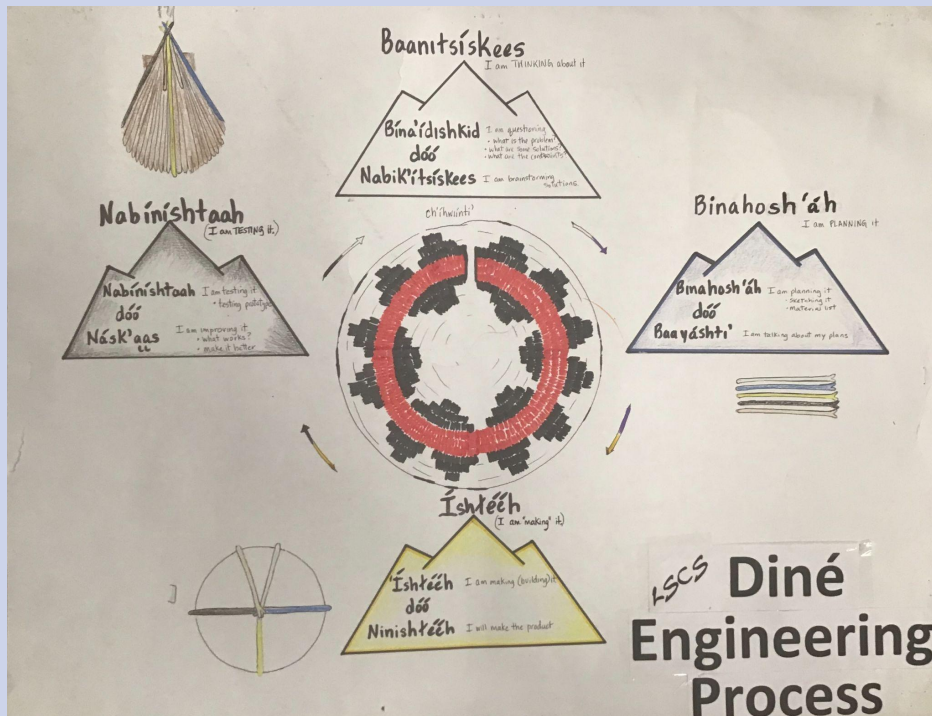
Diné Bizaad dóó Bina'nitin

NNS PK3 DCS PO1 “K'é shintsékees a'tée dooleel”
(recognize ways to express relationships)

Expressing life skills

<https://drive.google.com/drive/u/0/my-drive>

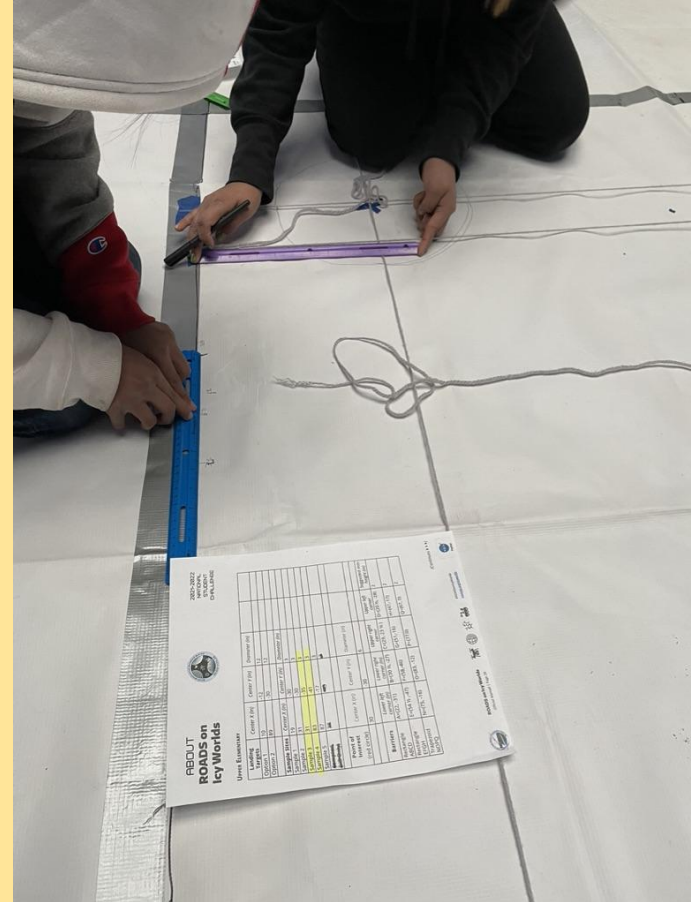
Diné K'ehgo Nitsáhákees



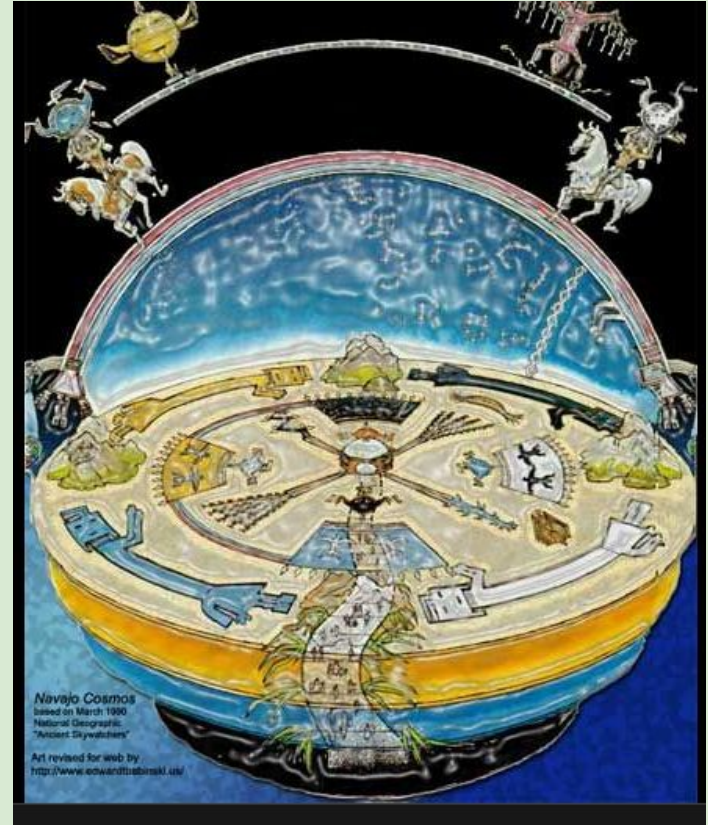
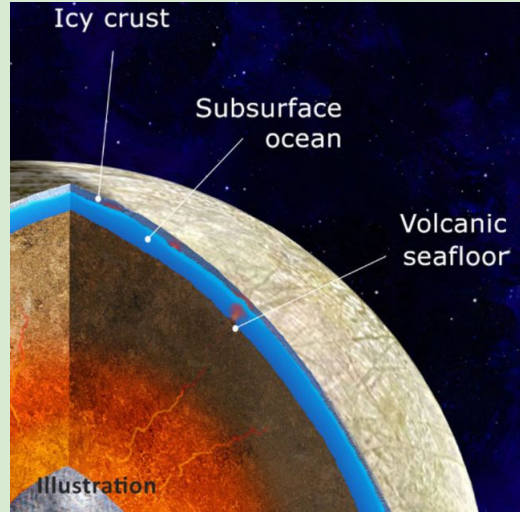
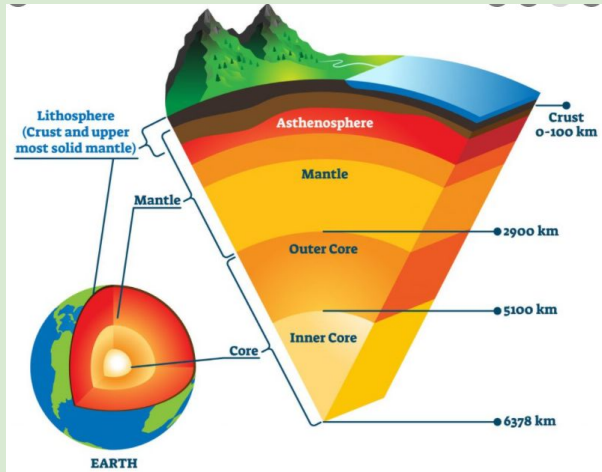
*Nabízhnítáah

Diné Robotics - NAU

Map development **Keyah naalkah**



MO-03: Inside Europa model Many forces and processes, in the past and the present, form and change planets and moons. Make a model of Europa to explain its interior and how what's happening inside influences what happens to the surface.



Diné History C1 PO3 I will explain the Diné historical timeline. (We went through 4 "worlds", Each of these places had different land formations and and different living beings.)

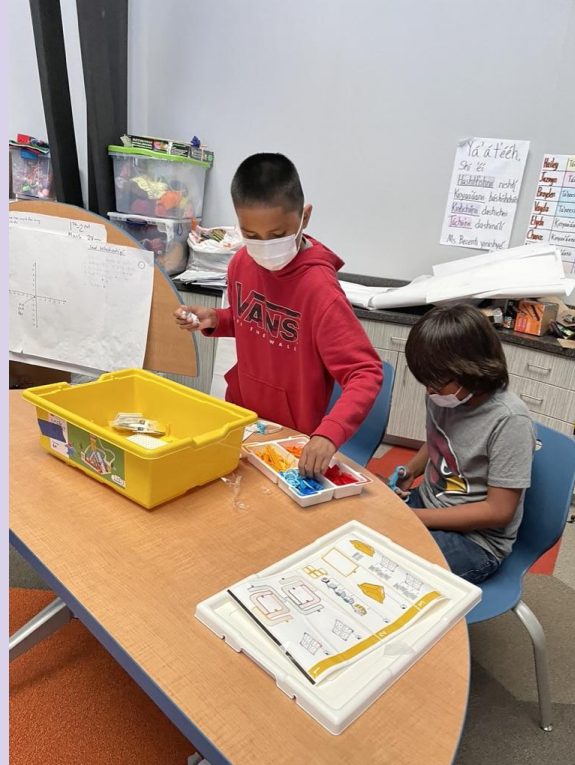
Diné Culture C2 PO2 I will express appropriate kinship terms. ("Mother" Earth, "Father" Sky)

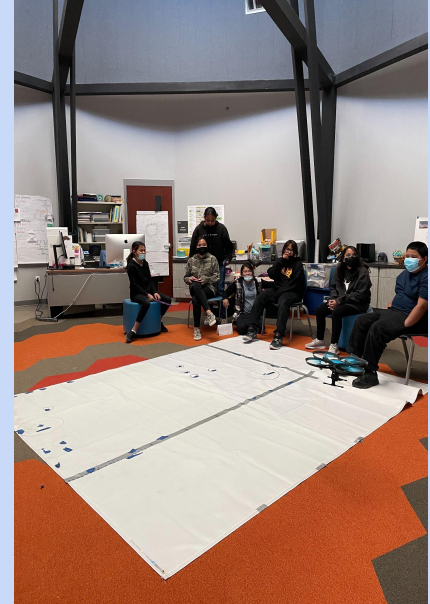
PO3 I will listen to and retell stories related to elements of nature (How important are the 4 elements of life?)

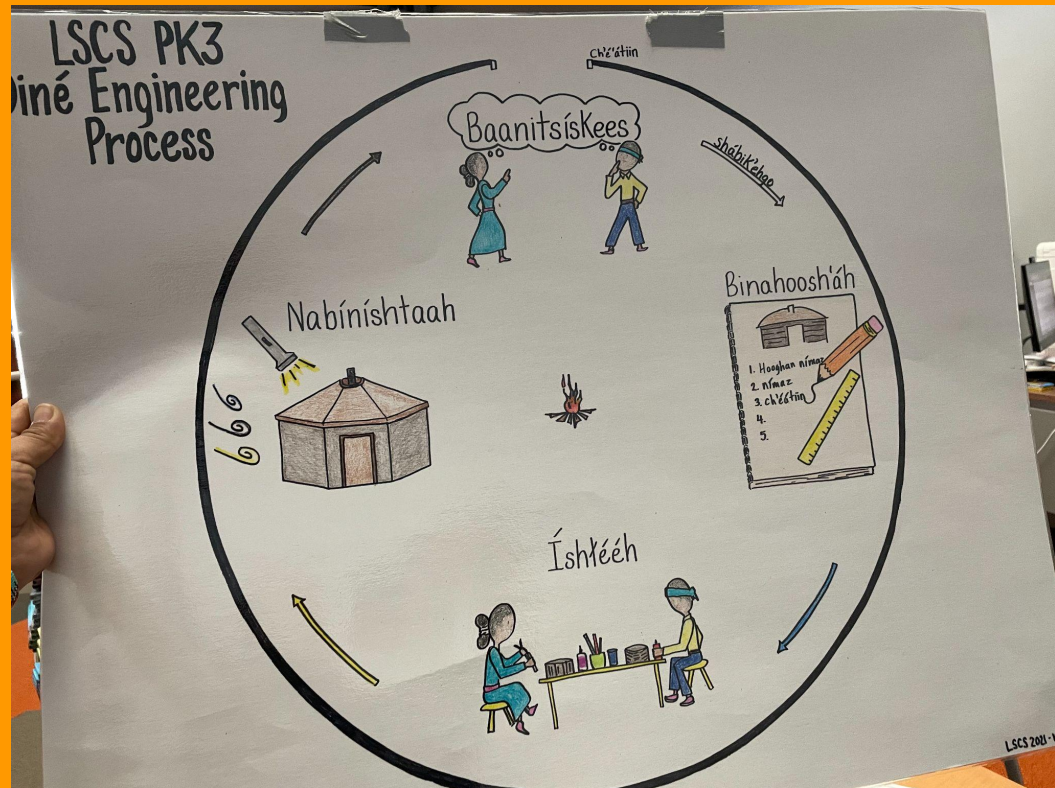
**western vs. Diné*

Robots

Saad bóhoo'aah -bijee,
bitsiigha, bijaad, etc







ii'ni' - 1st Thunder



T'ohchin



Cornfields



di'ye'hi' - tell when to start planting

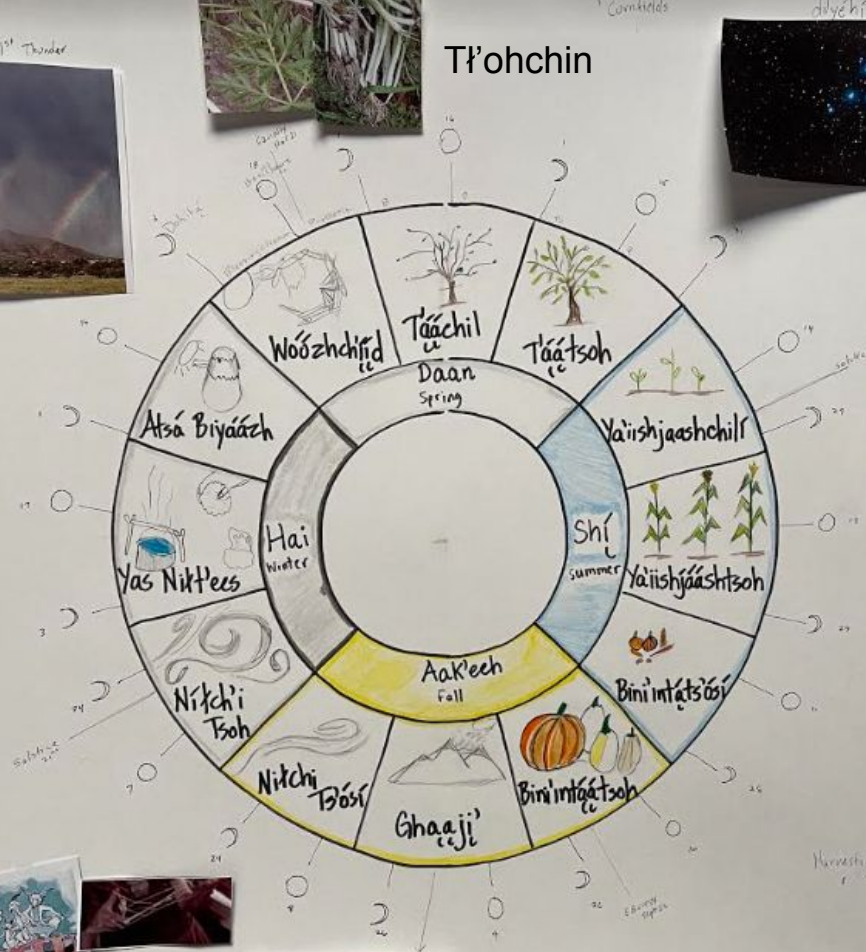
k'idilyé



Shijigo Ceremony

Shijigo nahaghá

Haigo nahaghá



T'lehona'ei
naaghahigi

STREAM
within our
Early
Childhood
Program

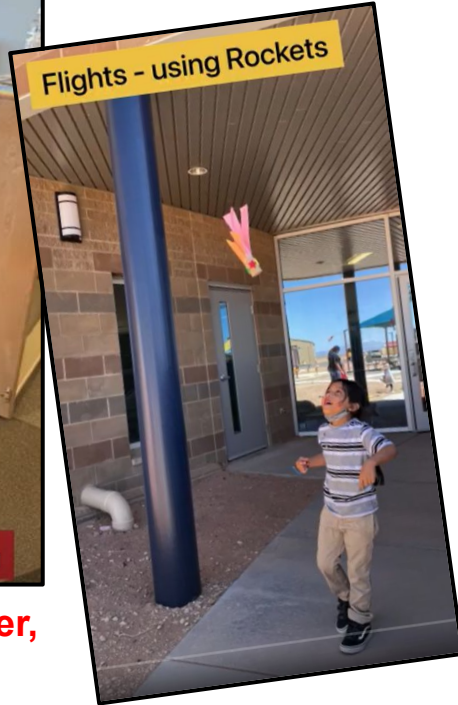


Lowell Observatory

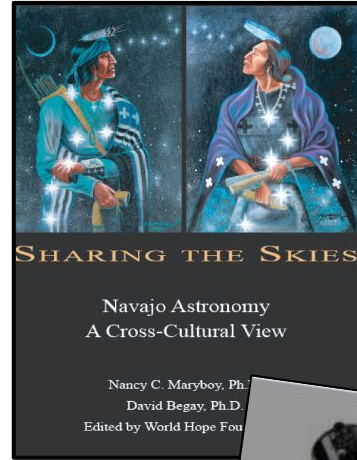


Gravity - Moon vs Earth

Pre-Kindergarten teacher,
Ms. Rosebelle Nelson,
leading the way!:-)



Flights - using Rockets



Astronomy
Nights at
LSCS!:-)



24-inch Clark Refractor Telescope



Lowell Discovery Telescope

Mrs. Chatter
4th Grade Class

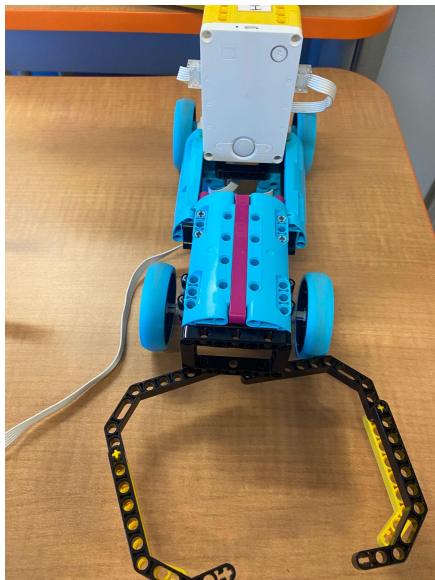
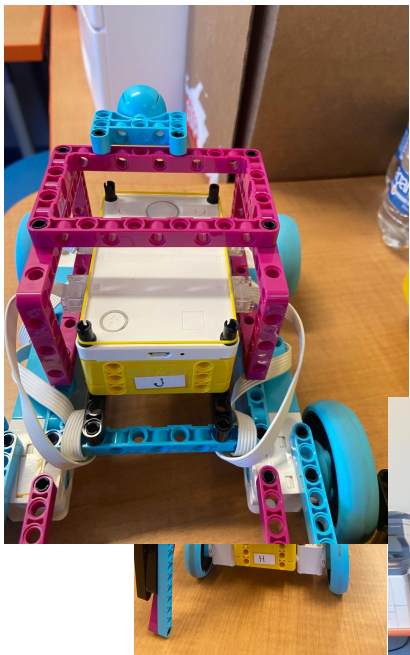
**LEGO Robotics
with Tufts University**

LEGO Robotics helps students focus' on hands-on activities to promote skills in language arts, mathematics, social and emotional learning through science and engineering.

Each day, the students participate in team building activities and LEGO buffet style. The 4th grade students have an opportunity with hands-on activities, as well as receiving daily challenges aligned to the standards. The daily challenges help students with developing skills and knowledge to complete their project and design their project requirement movements.

Benefits of LEGO Robotics

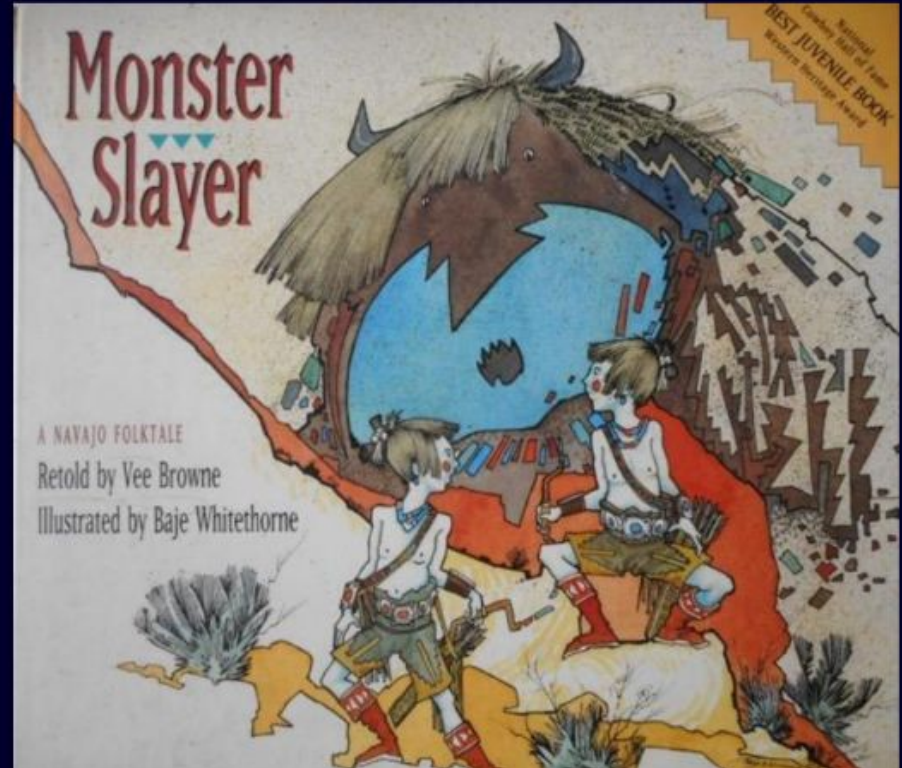
- **Encourage Creative Thinking-** By applying scientific concepts in the real world setting. Students can brainstorm solutions, use their imagination to design models, and see their creative work come to life.
- **Build teamwork skills-** Students work together to bring their concepts to life. This encourages students to voice their opinions, ask others for input and utilize their strengths.
- **Enhance problem-solving skills-** We encourage students to apply creative thinking skills when something isn't working, such as by thinking outside the box and learning how to program the models they're building. They learn to recognize and solve problems.





1 Nitsáhákees: Establishing K'é

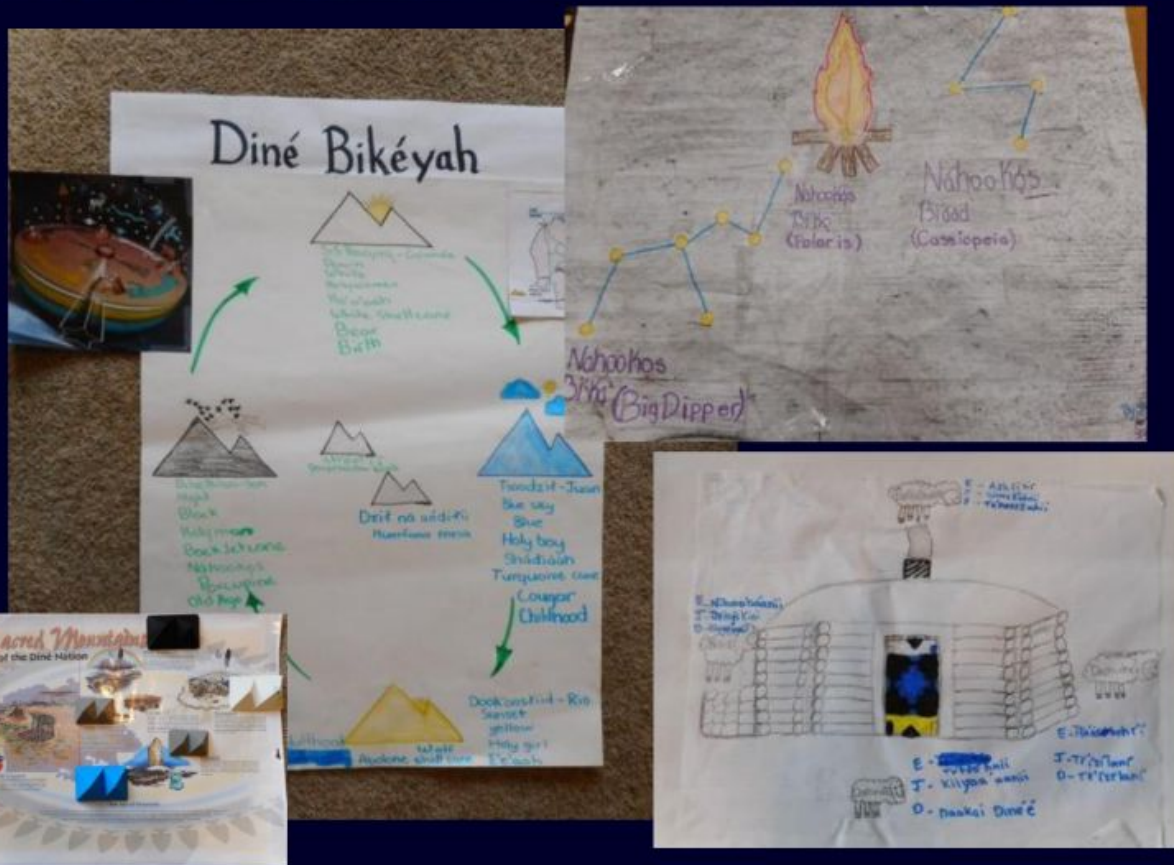
- Students learn about who they are through the clanship system
 - Learn about their 4 basic clans
 - How they are related to other clans
 - Relationship to non-natives
 - Relationship to the Natural elements
 - Home, Fire, Water, Earth, Sky, etc.
- This establishes a sense of belonging and security
 - Oral stories about the origins of Dine
 - Language comes from Nature and animals
 - Language is who we are
 - Getting rid of “monsters” of today and continuance of protecting & nurturing
 - Construction of Home (Tachee, alchi’adeez’ah,



1 Nitsáhákees:

**What are some
culturally-responsive, instructional strategies
that help our indigenous students seek and
develop awareness?**

1 Nitsáhákees: Architecture Informs Consciousness



Questions by our students:

How do the four mountains shape who we are?

How do the four directions relate to k'e?

Driving Question:

How does where and when we live, shape who we are?

1 Nitsáhákees:

Teachings of the Tacheeh



Rediscovering the Respect
of the **4 elements**
in honor of the seasons
(*Equinoxes, Solstices*)

Male and Female roles

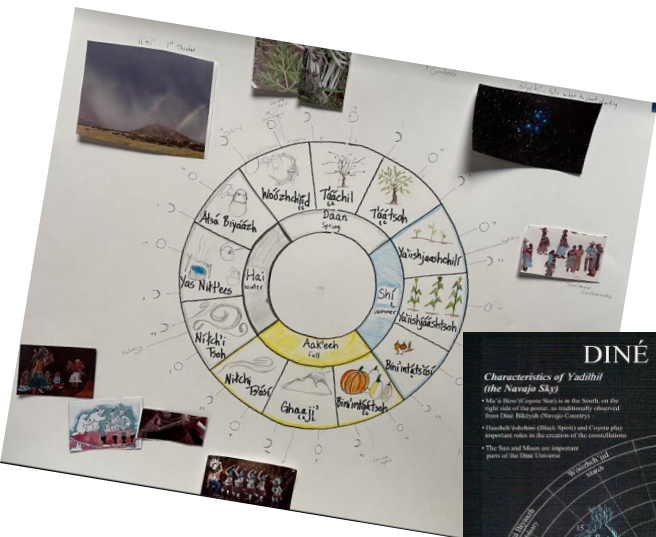
Four elements: ***Nahasdzaan,***
Yadilhil, To, Nilchi

Language Acquisition using
song and dance



Use of Holistic Approach
to reach all students

2021-2022 SY



2 Nahat'á



The Ethics of Native Science:

Providing Service to All Our Relations

- Caring for the Earth,
- Caring for the People,
- Sharing with Respect
for All Our Relations.

2 Nahat'á

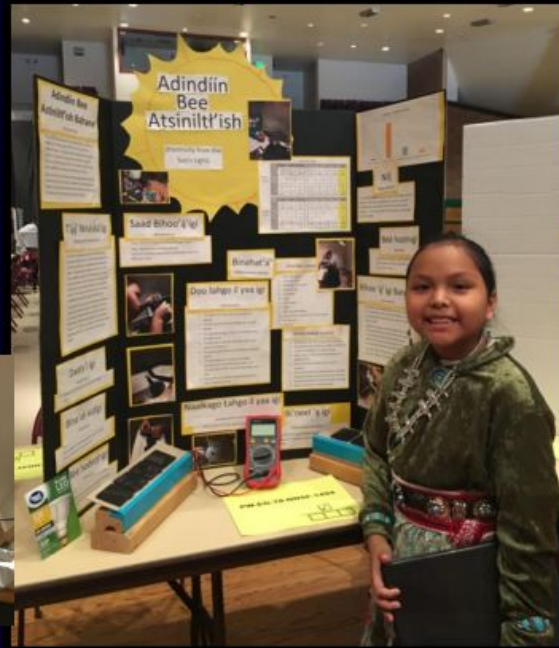
7 Principles of Indigenous Permaculture



1. To understand natural patterns, to know that all things are interconnected.
2. Understanding energy flow & cycles.
3. Conscious use of natural resources
4. Establish micro-climates informed by natural habitats which promote favorable environments for life.
5. Create diversity for beneficial, symbiotic relationship amongst plants, animals, and fungi.
6. Develop a cooperative existence with others and the natural world.
7. To learn from and utilize natural designs, patterns & rhythms.

3 liná

Native science & the EDP have been applied to photovoltaics, and can have implications for living on Mars.



3 liná

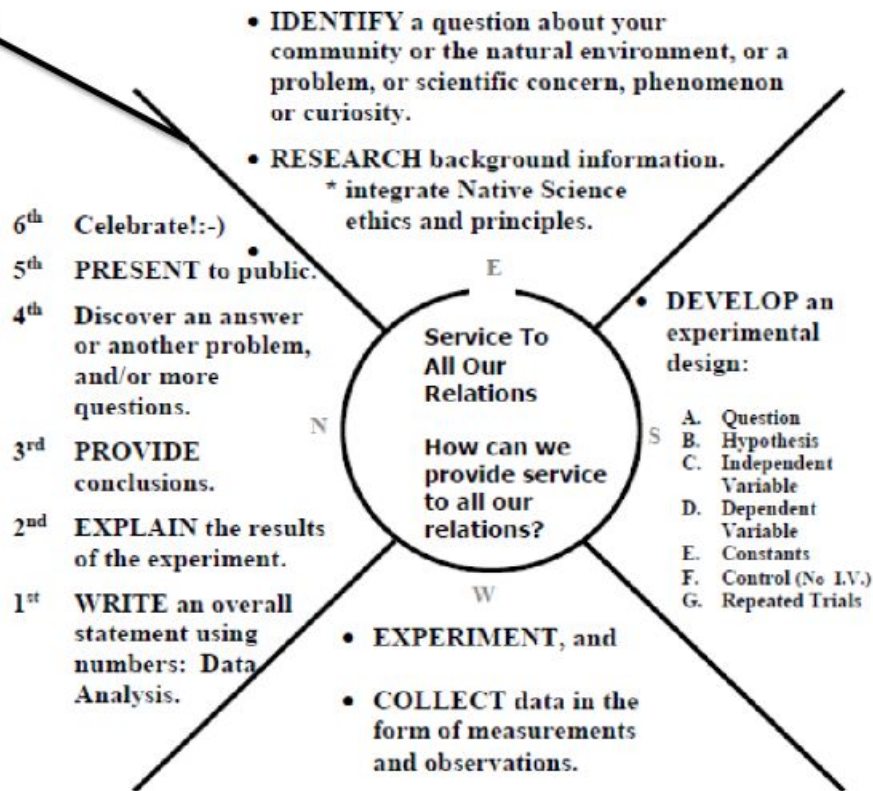


When investigating, planning, creating, and testing during EDP, the Scientific Process of Inquiry may be applied.

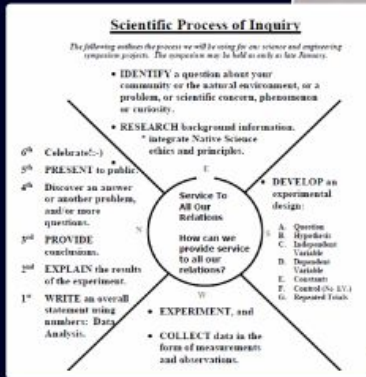
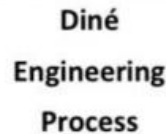
Why does process-based learning work?

Scientific Process of Inquiry

The following outlines the process we will be using for our science and engineering symposium projects. The symposium may be held as early as late January.

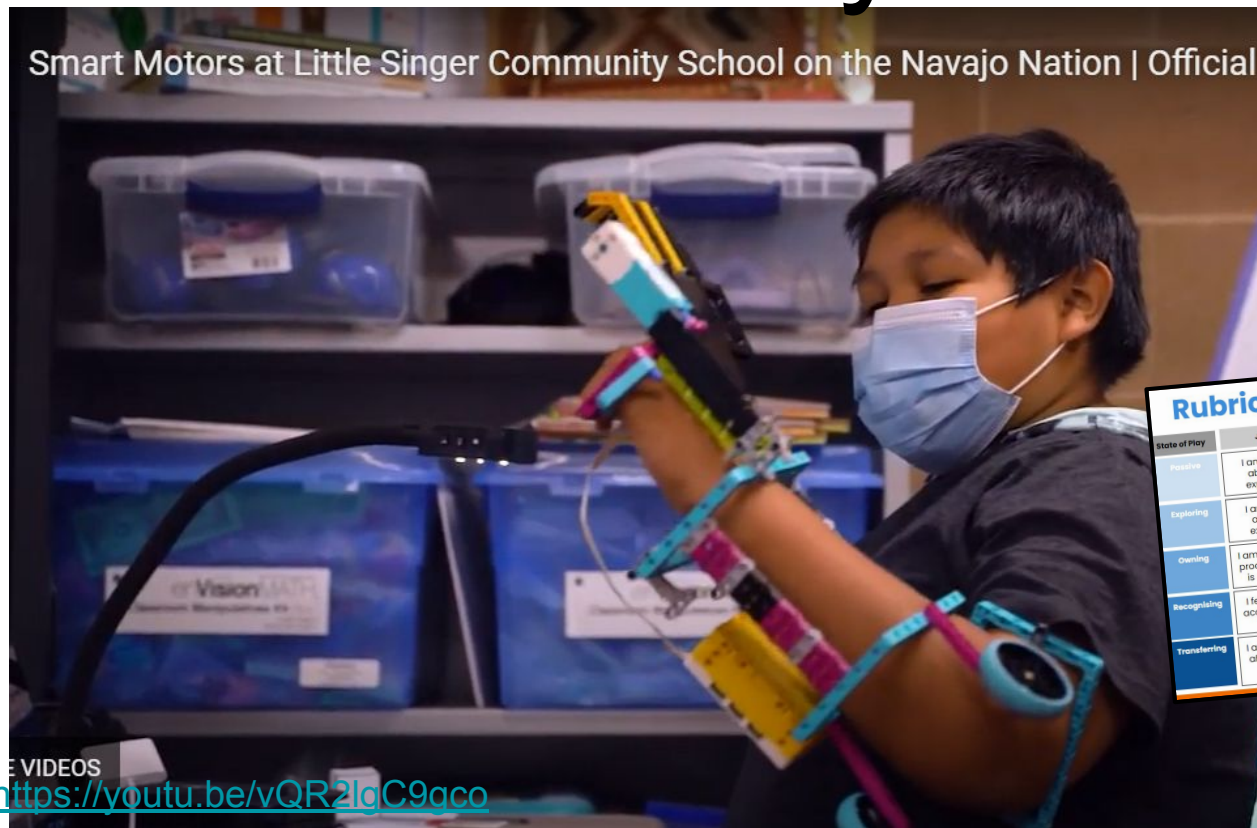


Applying EDP to Create a Greywater Filtration Systems for B3 on Mars



Tufts University Tech & Play

Smart Motors at Little Singer Community School on the Navajo Nation | Official



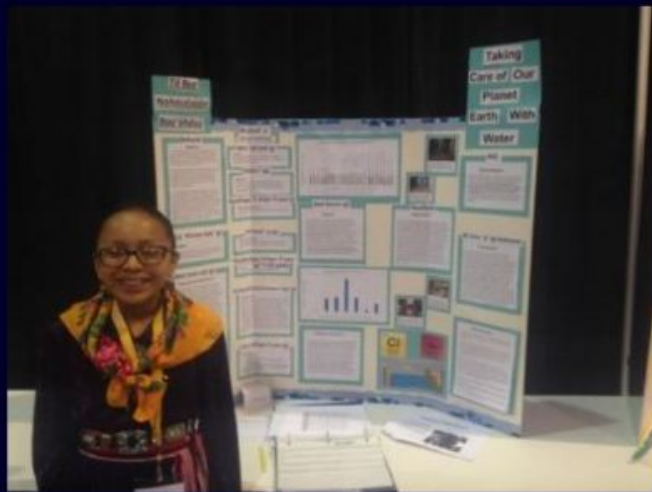
Rubric					
State of Play	Joyful	Actively Engaging	Iterative	Meaningful	Socially Interactive
Positive	I am neutral about the experience	I am following the play or direction of others	I do not know how to respond to the experience	I am doing this because I have to	I am alone or in a group not by choice
Exploring	I am curious about the experience	I am interested in the environment and materials	I interact with the experience	I attend to the experience	I am aware of others
Owning	I am enjoying the process, even if it is challenging	I am focused on the experience	I adjust my approach	I am developing my understanding	I play with others or let others approach me
Recognizing	I feel a sense of accomplishment	I am invested	I am deliberate about the changes I make	I show how the experience is relevant to me	I play with others collaboratively
Transferring	I am enthusiastic about trying this again	I have tried this again after the experience	I seek out and explore new projects	I recall the experience and use it to understand new things	I cooperate with others to isolate new play experiences

Pedagogy of Play taking root!:-)

VIDEOS
<https://youtu.be/vQR2lgC9qco>

4 Sihasin Science & Engineering Fairs

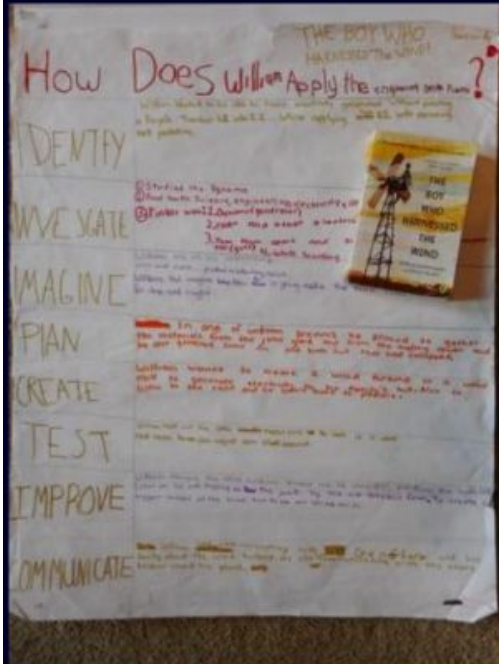
- Students each earned 1st Place at our Navajo Nation SEF
- Competitive at the Arizona State SEF by earning placement
- Applied Native science ethics and principles
- Researched renewable energy (hydrogen fuel cells) & water filtration, & wrote information in Navajo and English.



4 Sihasin

Renewable Energy Creating Wind Turbines

EDP & application of scientific inquiry:



Independent Variables:

1. Blade pitch
2. Number of turbine blades
3. Surface area of blades
4. Blade design using Biomimicry
5. Gear ratios

4 Sihasin

Community presentations at our place of local governance

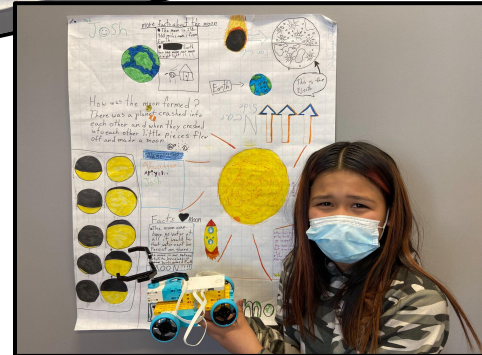
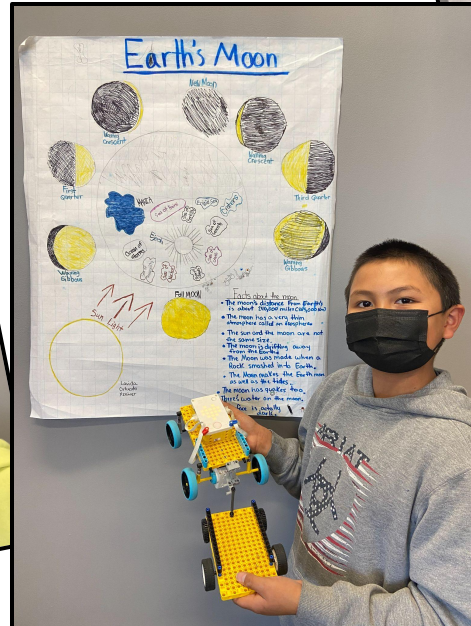
- Students and elders presentation to elders, parents/guardians, community about self care, care of others , community, and nature.



Speak truth to power.

Indigenous Education Institute Makerplace Speaker Series

<http://indigenouseducation.org/>



Makerplace
pedagogy integrated
across STREAM
content.

4 Sihasin 3D printing provides opportunities:

1. Learn and apply EDP & Scientific Inquiry
1. Develop entrepreneurial skills
1. Address indigenous community needs
1. Prepare youth for their personal futures.



STREAM Program Assessment Plan 2022-2023

English Language Arts

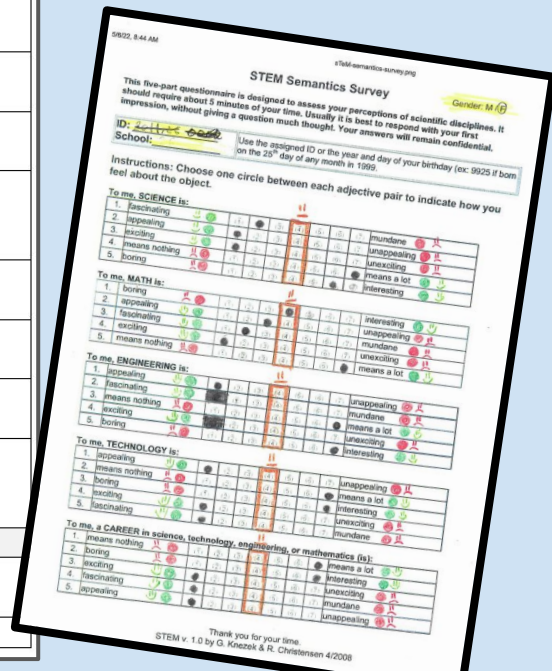
Assessment Name	Grade Levels Covered	Purpose	Time
San Diego Quick	K-6	Quick Gauge of Reading Ability; Word Recognition out of Context	At enrollment
<i>Renaissance Reading</i> Star Early Literacy Assessment	k-2	Foundation Skills	BOY, MOY, EOY
<i>Renaissance Reading</i> Star Reading Test	1-6	Vocabulary and Comprehension	BOY, MOY and EOY
<i>Reading Plus</i> Insight Assessment	3-6	Silent Reading fluency. Comprehension, Vocabulary, and Motivation for Reading	BOY, MOY and EOY
English Language/Literacy PARCC (Pearson)	3-6	English Language Arts	EOY
<i>Units of Study: Writing Pathways</i> On-Demand Assessments	K-6	Narrative, Informational, and Opinion	Beginning and End of Units

Special Assessments

Assessment Name	Grade Levels Covered	Purpose	Time
WIDA: World Cass Instructional Design Assessment	K-6	English Language Proficiency	MOY
DLPA: Dine Language Proficiency Assessment	K and 4 th grades	Navajo language Proficiency Measure	MOY

STREAM Program Assessment Plan 2022-2023

Assessment Name	Grade Levels Covered	Purpose	Time
Elementary School Student Survey	3-6 students	Perceptions	EOY
Elementary Engagement Survey	3-6 students	Perception	EOY
Climate and Culture Elementary School Survey	3-6 students	Perception	EOY
Climate and Culture Staff Survey	Administrators and Support Staff	Perception	EOY
Climate and Culture Teacher Survey	Teachers and Instructional Assistants	Perception	EOY
Educator Survey	Administrators, teachers, and Instructional Assistants	Perception	EOY
Family Engagement Survey	Board Members, Parents/Guardians	Perception	EOY
Climate and Culture Parent Survey	Parents/Guardians	Perception	EOY
ELEOT	k-6 Students	Instructional Data Perceptions	MOY
Other Surveys			
Assessment Name	Grade Levels Covered	Purpose	Time
LSCS Parent Feedback Survey	Parents/Guardians	Perception and Demographic Data	BOY and EOY
STEM Semantics Survey	3-6 students	Perception	EOY



STREAM Program Assessment Plan 2022-2023

STEM Assessments

Assessment Name	Grade Levels Covered	Purpose	Time
Mathematics PARCC	3-6	Mathematics Skills	EOY
Renaissance Mathematics	k-6	Mathematics Skills	BOY, MOY, and EOY
Pearson Science Assessment (Cognia)	5th	Science Competencies	EOY

Student STEM CFA Assessments

How is K'e present in our Solar System?

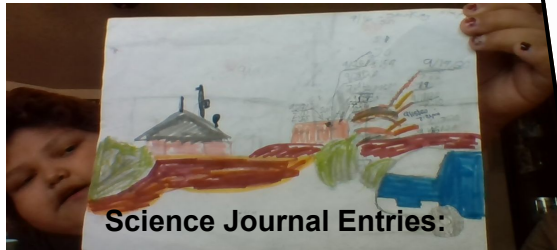
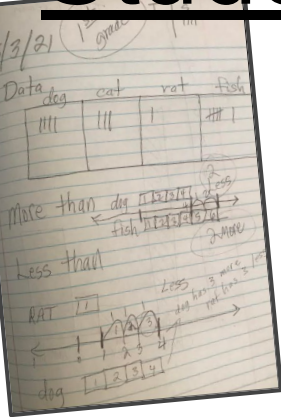
K'e is about relationships with people, animals, Sun, and many more.

1. This picture shows a satellite beside Mercury and getting some information to study different stuff on Mercury and around Mercury.
2. Astronauts must work together while being on the ISS or traveling somewhere in the Universe because if they don't, something may go as not planned.
3. Scientists work together because if they didn't they would not be able to have finish robots, space crafts, and many more.
4. Another way K'e is with the Solar System is that the planets and Sun have a relationship because the sun gives off heat and that's what other planets will need.
5. Lastly NASA has K'e because if NASA workers did not work together there would be no such thing as NASA and many more buildings around the World.



Journal prompts interweave Navajo Nation culture and language standards with NGSS.

Math Journal Entries:
Vocabulary and strategies
Match those on the
Anchor Charts.



Science Journal Entries:

Ex. Plotting sunsets along
western horizon line.

Engineering & Physics Notebook

Little Singer Summer Enrichment 2021
Week 2: Smart Farms!

Name:

Engineering & Physics notebooks
demonstrate application of STEM
processes to everyday life in
our own backyards!:-)

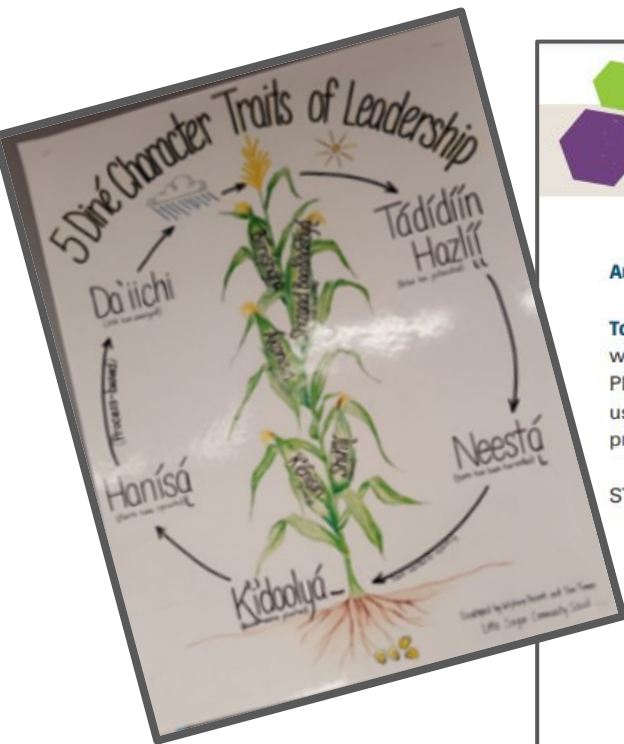


April 2022

Teacher Eleot Data (28 indicators)

ELEOT (2.0) Seven Environments	LSCS	Norm Group
Supportive Learning Environment	3.20	3.05
Active Learning Environment	3.00	2.95
Equitable Learning Environment	3.00	2.68
Well-Managed Learning Environment	2.81	3.11
Digital Learning Environment	2.71	1.88
High Expectations Environment	2.51	2.81
Progress Monitoring & Feedback Environment	2.30	2.76
Total AVG:		2.79

Look Fors & Walk Throughs



STEM Walk-Through Observation Tool



Audience: K-12 Administrators and Instructional Coaches

Tool Overview: This qualitative tool provides guidance for quick feedback to an instructor during an observation when STEM activities are being implemented in the classroom. "Look-fors" are aligned with the Instructional Planning Guide located on the TEA STEM Webpage. This tool is an informal formative assessment that can be used for individualized coaching and feedback, as well as STEM program documentation and assessment of program goals/outcomes as it relates to STEM teaching and learning.

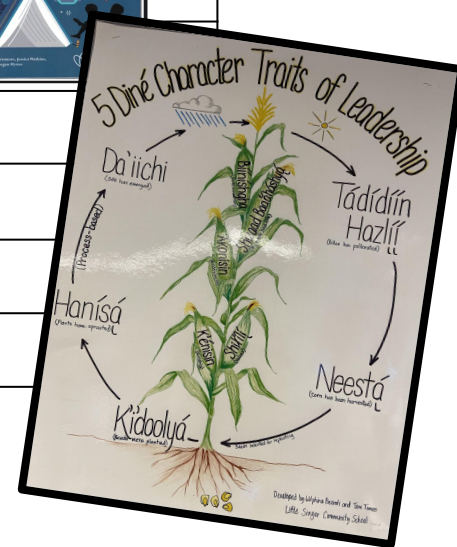
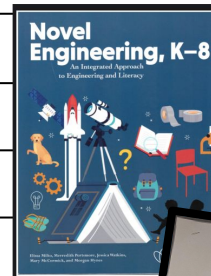
STEM Curricular Implementation "Look Fors":

- Student-centered, active learning
- Collaborative learning
- 5E model of instruction (See definitions below)
- Engineering Design Process
- TEKS alignment of disciplinary content within STEM activities
- Integration of disciplinary content and skills
- STEM fluency skill-building
- Teacher and student use of STEM content and vocabulary
- Authentic connections to the real-world
- Differentiated instruction/learning opportunities

Professional Development

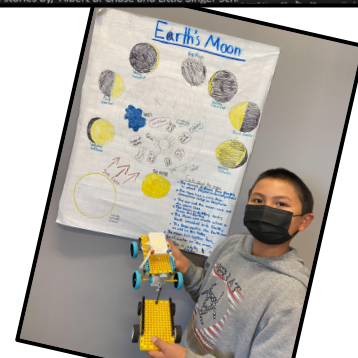
2022-2023 SY

1	STREAM Focus Team	NAU CSTL
2	ELA Reading	Dr. Sigmund Boloz
3	Mathematics	Associates for Educational Success
4	STEM Engineering, Coding, Robotics, Media Arts, etc.	Alison Earnhart
5	Website Training	Connect Suite/Administrative and Tech Team
6	Technology Support Professional Development	JFR Tech
7.	5 Dine' Character Traits of Leadership	Mrs. Etta Shirley & Mr. Varian Begaye
8.	Self Awareness & Healing Wisdom of Trauma	Varian Begaye



STEM Events with Sister Schools

Hatxaałii Yázhí Bi Óltxa' Hosting
Our Mongolian sister school February 24, 2022



KARMA PEBL & LSCS:

May Update

Something you learned this month:

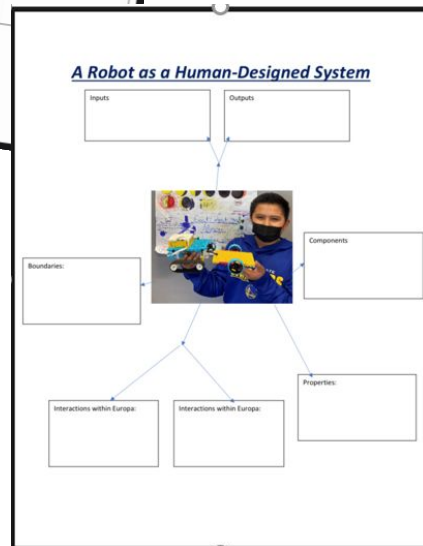
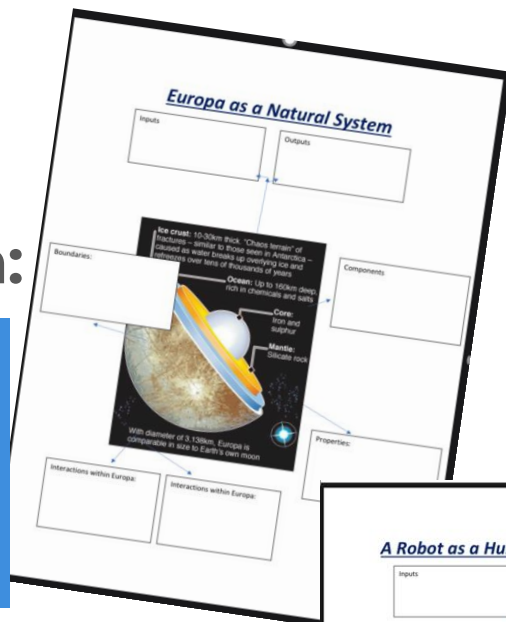
When we study natural systems it can inform how we build human-designed systems. Our students have been learning about five features of a system: Inputs/Outputs, Interactions, Components, Boundaries, and Properties.

This instructional strategy can lead to Biomimicry.

Something else you want to learn:

What are some ways our children here at Little Singer Community School, from within a rural Navajo community, learn from and share with your students?

We would also like for our students to learn how to work with Raspberry Pi and Arduino starter kits. Our school has the kits, just need the training!:-)



Teach for Nepal: May Update

Something you learned this month:

Some of the materials from makerspace were taken to the regular classroom for students to teach them about open and closed circuits. Learning can be equally fun to students even with just the glimpse of the makerspace.

Something else you want to learn:

Ideas for mobile makerspace and its feasibility



Rwanda: May 2022 Update

Something you learned this month:

I learned to identify different characteristics of Play and the state of Play through to my makerspace students. I observed them when they are doing activities and I recognize the state and characteristics of Play of each student.

Something else you want to learn:

I would like to learn more how to use Arduino, Raspberry Pi and Robotics. In our makerspace we need New Lego Education Spike Prime of 2019 kit.



Karkhana, India: May 2022 Update

Something you learned this month:

Almost all the teachers mentioned that PEBL classes have changed their relationship with their students. Rabina ma'am, a government school principal and PEBL teacher, saw this change a lot. Her students taking PEBL sessions are very comfortable approaching her, interacting, and asking questions whereas the rest of the students still see her as an authority.

Something else you want to learn:

How to be observant of the students' activities, classroom stories, and insights? Any tips, Ideas, Suggestions?



Mission Statement:

**“Hooghan
Haz’**

áągi, K’é Biníkáágóne’, Ólt



**Vision Statement: Empowering our community through
family-based education**

STREAM Vision

Diné K’ehgo Nitsáhákees dóó Óhoo’aah Hiináago Na’nitin

(Teaching making Thoughts and Learning Alive)