



THE CHALLENGE:

Sticks and stones may break your bones but are great to use when building! Creating with nature dates back to many centuries ago. Stonehenge and pyramids are stone construction mysteries that have yet to be solved. Have you ever created anything using what was around you in Nature?

Your challenge is to get inspired by nature! Get outside, make observations, gather natural materials and see what will inspire you! Check out these explorations to get started!

Remember to share your creations with us on social media!

~ Cross-Curricular Team ~
Dream. Explore. Discover.



Explorations

Exploration 1

Nature in Motion! Stop Motion is a special type of animation that uses real objects, instead of drawings or computer images, to tell a story.

Task: Think about a scene from your favorite movie or book, then gather and use natural materials to create a stop motion video!

Watch this video for inspiration



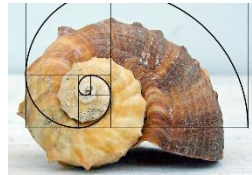
Visit this site for easy instructions



Exploration 2

Math in Nature?

Look closely at the pictures below.

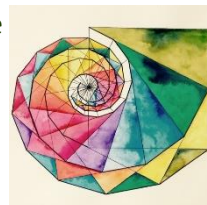


Did you know that each example has a Mathematical pattern created by nature called the 'Fibonacci Sequence'?

The sequence begins like this:
0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, ...

Can you recognize and continue the pattern? This pattern is also often used in Art and Architecture to create pleasing designs.

Task: Use [these](#) templates to create your own art piece based on nature and Fibonacci's Sequence.



Search '[Fibonacci Art](#)' for inspiration!

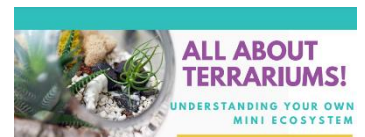
Exploration 3

Bring the outdoors inside!



A terrarium is a collection of plants in a contained ecosystem where you can watch many natural processes take place such as the Food Web, Energy Flow and the Water Cycle.

Task: Build your own terrarium to observe nature's wonders from the comfort of your classroom! Take a walk outside to see what you can gather locally. Check out this info and video from Brilliant Labs for some tips and tricks!



Build Challenge

Rube Goldberg Machines in Nature!

Rube Goldberg was a cartoonist and inventor who liked to create overly complex machines to complete a simple task using a series of chain reactions.

Task: Watch this Rube Goldberg machine in action, get inspired, then create your own machine outdoors using natural objects such as rocks, sticks, hills, etc.





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Explorations – Possible Outcomes & Extensions

Exploration 1

MSTE

GCO 1 - Students will understand technological operations and concepts (SCOs - 1.1, 1.3, 1.4)

GCO 2 - Students will practice critical thinking and problem solving skills (SCOs - 2.1, 2.3)

LITERACY

Writing and Representing

SCOs - 8.3, 9.1, 9.2, 9.3, 10.3

Exploration 2

NUMERACY

Gr 6: (PR1, PR2, PR3)

Gr 7: (PR1, PR2, PR4)

Gr 8: (PR2, N4, N5)

VISUAL ARTS

Elements of Art and Principles of Design, Visual Awareness, Responding to Art

Exploration 3

SCIENCE

Skills

Initiate & Plan, Perform & Record, Analyze & Interpret

Knowledge

Gr 6: (300-15, 300-19, 302-12)

Gr 7: (306-3, 304-2, 306-1, 306-2, 304-3, 310-2a, 310-3, 311-3, 307-1, 307-2)

Gr 8: (311-11, 304-5)

STSE

109-1, 111-6

See extension 'Teachable Moments' from Brilliant Labs: ['The World, a Giant Terrarium!'](#)

Build Challenge

NB Global Competencies

Critical Thinking & Problem-Solving, Innovation, Creativity & Entrepreneurship, Collaboration

SCIENCE

Skills: Initiate & Plan, Perform & Record, Analyze & Interpret

Additional Resources & Extensions

[NB Global Competencies](#)

[Brilliant Labs Spring Learning Resources](#)

Science East [Inquiry-based Learning](#)

Smarter Science [Step into Inquiry](#)

Chris Wood [dailySTEM](#)

Mark Rober [NASA/Apple Engineer/Youtuber](#)