RIVERSIDE'S
KNOWLEDGE PATH

INVENTIONS FROM NATURE
GRADES 1-7

Gather inspiration from the environment and become a nature inventor! Design and build your invention using critical and innovative thinking skills.

WHAT YOU'LL LEARN:

- Learn about the use of natural designs.
- Practice critical thinking skills and look to nature for solutions

CURRICULUM OUTCOMES:

- Provides opportunities to work with natural materials, express ideas about the environment, and respond visually to authentic design problems.
- Students will appreciate the impact that design has and how designs from nature can help build something useful.

MATERIALS:

- Nature journal
- Pencil (optional)
- Coloured pencils (optional)

This is an individual outdoor activity, it can be done in outdoor spaces of the school, home, backyard, or nearby parks/trails

WHAT TO DO:

1. Humans have always been inspired by nature and from this inspiration many have designed outstanding and valuable inventions. Researchers studied the flight of birds with the idea to fly like them and travel long distances. In Great Britain, Stringfellow had built a small unmanned glider in 1848. After some time, it was the gliding flight of albatross, a sea bird, which inspired the inventors/researchers in 1856 to design a glider. Later on, in 1903, the Wright Brothers were propelled to create the first-ever powered airplane, Kitty Hawk.

Today, we see aircrafts of all kinds up in the sky flying and appearing like birds with advanced technologies.

2. Take a walk to the Riverside's Knowledge Path.
3. Find something of interest from nature.
4. Encourage students to envision that they are future innovators and can replicate the design of natural things like a log, tree to create something new, what it would be and how it would be used or designed. Students may want to think of a problem first and then look in nature for an answer to design and develop a solution.
5. Include the description and sketch of your invention and its use.
6. Students could do same in their nature journals.

ASSESSMENT:

- Learners to be evaluated on their critical thinking skills to produce ideas to design a product.
- Writing skills can be assessed based on their age. The educator can assess students with their uniqueness when coming with the idea.

EXTENSIONS:

- This activity can be extended by encouraging the students to put their ideas and thoughts into practice and create a sample product they envisioned and check their usage (if doable).
- Students can brainstorm what materials are required to build their invention, how much they need and how much will it cost.

CREDIT/REFERENCES:

This activity has been modified from the Stony Brook-Millstone Watershed Association nature journaling activity developed by Elizabeth Thompson

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SAMPLE NATURAL INVENTION SHEET

SKETCH/DRAW YOUR NATURAL OBJECT	WHAT DOES YOUR NATURAL OBJECT LOOK LIKE?
SKETCH/DRAW YOUR NATURE INVENTION	DESCRIBE YOUR NATURE INVENTION