

STEM from Home

Symmetry Hunt

Introduction:

Symmetry surrounds you. Look down at your body. Look at the common shapes that you regularly come across. Look at the buildings on your street. Look at an apple or a cat. Nature is full of symmetrical leaves, flowers, vegetables, variety of fruits and animals. Even we, the homo sapiens, have symmetrical bodies.

The property by which an object or shape is exactly similar in shape and size if it is divided into two equal halves is called reflection symmetry.

It brings a sense of melodious and beautiful proportion and balance with perfection.

In this STEM pack, you will study about different types of Symmetry and explore them in the food items using Sway presentation.



Main Activity: Symmetry Hunt

Introduction

In this activity, you will explore Symmetry in food items using SWAY

What You Will Need:

A computer with internet connection

What You Will Learn:

- How to use “Sway” and create a newsletter in sway.
- Prepare a presentation based on symmetry in food items.
- Use of spreadsheet for classification on the basis of types of symmetry.

[Click here for the activity details.](#)

Bonus Activities

Activity 1: Design A Symmetrical Bookmark

It is always fascinating to witness with the symmetrical patterns on the pillow covers, bed sheets, and on the clothes too. Let's design a symmetrical bookmark.

What You Will Need:

A computer with internet connection

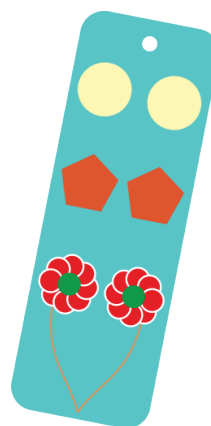
What You Will Learn:

How to use M S Word to form the symmetrical pattern

[Click here](#) to learn more

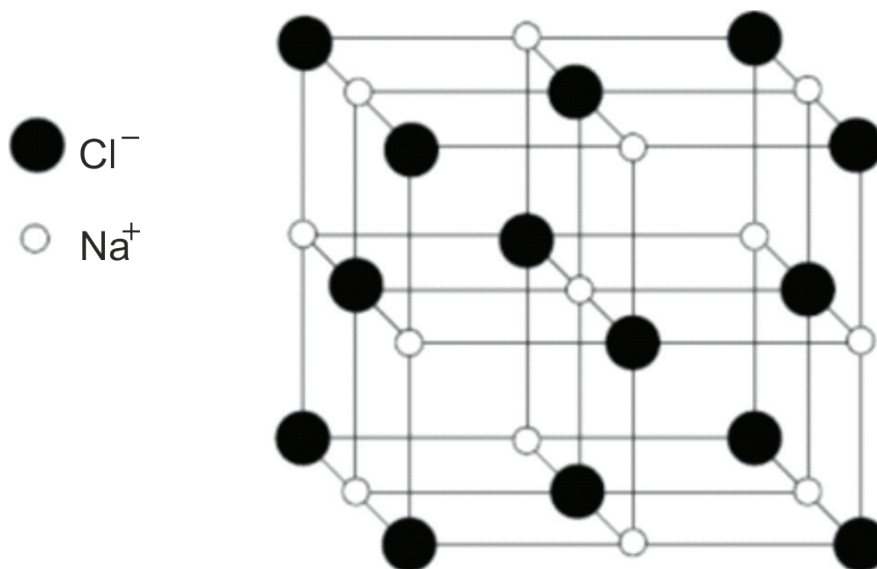
Procedure

- Design the symmetric pattern using [Character map](#) feature for example
- Be creative and innovative in your endeavor.
- Take a print out on an A4 size sheet and then, cut the bookmarks of dimensions 4 cm by 16 cm.
- Share your pic holding it on twitter and upload the tweet link in the newsletter of the main activity.



Challenge Activity: Crystal Morphology

Observe the crystal structure of NaCl, Sodium Chloride



Do you find symmetry in the crystals?

Well, yes. There are symmetrical crystals in mineralogy.

Have you heard of the term mineralogy?

Mineralogy is a **subject of geology specializing in** the scientific study of the chemistry, crystal structure, and physical (including optical) properties of minerals and mineralized artifacts.

So, What is Crystal Morphology? How is it linked with symmetry? [CLICK HERE TO KNOW MORE](#)

Procedure

1. Research the crystals having symmetry based on atomic structure i.e. crystal symmetry.
2. Go to [Free Isometric Grid Template for Illustrator CC - CLINE&CO DESIGN \(cline-company.com\)](https://www.cline-company.com) and download the isometric grid and plot the atomic structure of such crystals using MS Word and upload on Sway.
3. Why cube crystals and octahedron crystals have same symmetry?
4. Create a sway and label it as Crystal Morphology. The project must have an introduction, observations, analysis and conclusion.