STEM@CGI
SCIENCE - TECHNOLOGY - ENGINEERING - MATHEMATICS

LEARNING LINKS FOUNDATION

NITI Aayog | ATAL INNOVATION MISSION

STEM from Home

Area and Perimeter

You have the freedom to re-design your room. You can have your favourite wallpaper pattern, the carpets and curtains of your choice. You can decide the size of your study table the size of your bed. If you plan and order everything accurately without wasting any area or ordering excess materials, then you can also make space for your Gaming Corner.

How will you design your room?

The very moment when you buy a table cloth for your table or buy a sheet to cover your notebook or you draw a big drawing covering whole part of sheet for a project, which mathematical concept are you considering?

Have you ever pondered which mathematical concept do you use when buying a lace to put around the handkerchief or putting a tape or border around the edges of your project?

Click here to know the concept.

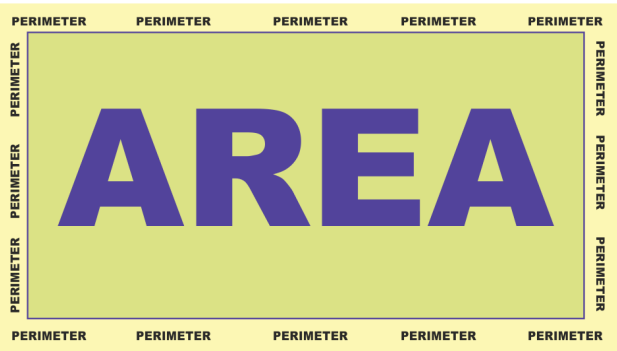
Main Activity: **Area Builder**

Introduction

In this activity you will investigate the mathematical science of Area and Perimeter.

You will use simulations to create your own shape and then find its area and perimeter.

- Area is defined as the amount of space an object or shape takes up.
- Perimeter is defined as the distance around an object or shape.
- Unit square is a square with a length of one unit on each side.
- To find the area and perimeter of a shape we should know the length and breadth of the shape.



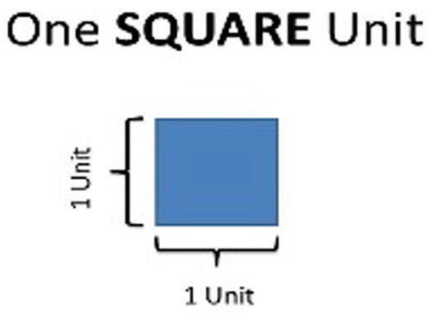
What Do You Need

A desktop /laptop / iPad with an internet connection

What You Will Learn

How to use simulations to find the area and perimeter of different shapes.

Click here to start learning.



Bonus Activities

Activity 1: Fun Zones With Homophones

Introduction

Homophones are words pronounced alike but are different in meaning or origin or spelling. For example, ‘be’ and ‘bee’ or ‘meet’ and ‘meat’ or ‘wait’ and ‘weight’. Can you think of a few homophones yourself? You must be wondering how homophones are related to area and perimeter.

What You Will Learn:

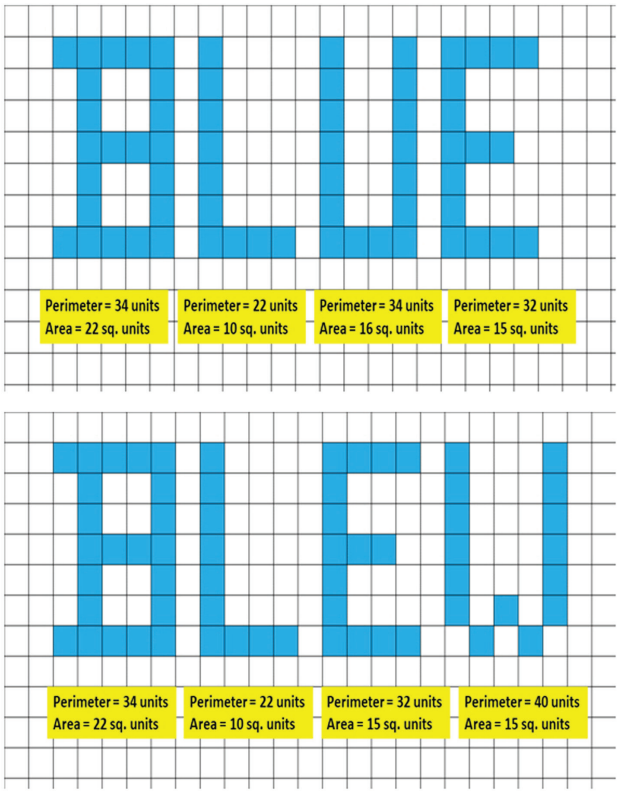
In this bonus activity, you will be finding and writing any set of homophones on a graph or any square lined paper. Thereafter, you will be finding the area and perimeter of your homophones. (Refer the images shown)

What Do You Need:

- Square -lined paper/graph paper
- Black sketch pen or marker
- Crayons

Refer here for writing alphabets (of your homophones) on a square grid.

You may create a presentation of the same in google slides.



Try It

You may also try writing palindrome numbers in square grids and record their areas and perimeter.

What do you think about their total perimeter and areas? Are their perimeters same or different? What about their areas? Can you guess the reason behind your answer?

Challenge Activity: We are Different, But the Same

Introduction

Do you know that figures can have same area but different perimeters or same perimeters but different areas? Click here for example.

What You Will Learn

In this Challenge activity, you will be exploring and creating figures having same areas but different perimeters. You will be finding a set pattern in the figures having same areas but minimum perimeters.

What Do You Need

- A desktop /laptop / iPad with an internet connection

Refer here for the activity to get started.