# Circular Geoboard (Product ID: LAB -001)



# or **4** years and above

Contains twelve equally spaced pegs circular geoboard and a user manual

#### Color Scheme, Shape, and Quantity:

A circular white base with twelve primary color pegs

### Dimensions:

7.5" diameter x 0.75"

#### Materials:

Wooden base with plastic pegs

# Things required for activities:

Rubber Bands of assorted colors (not provided in the set)

#### Uses for learning and intellectual development :

- Concept of angles
- Types of angle
- Angle estimation
- Concept of analogue clock
- Concept of circle and its parts (arc, radius, diameter, chord, sector, segment, semi-circle etc.)
- Concept of tangent and secant
- Finding ratios and patterns between different intersecting chords in a circle
- How circle is related to polygons

- Estimating value of PI. The method Archimedes used to estimate PI
- Finding area and circumference of circle
- Properties of cyclic quadrilateral
- Thales theorem patterns of angles in a triangle within a semi-circle
- Theorems of angles discovery patterns in angles subtended by chord at center and at other half
- Fraction whole and part of angles and areas within a circle Angle and polygon puzzles

#### Safety & Quality:

This tool is safe to use. It is light-weight and has no sharp edges. No harmful substances have been used in making it. It is safe for children of recommended age.

#### Environment:

We are conscious of impact of our activities on nature. The objective behind making re-usable tools with local materials is to minimize its impact on environment for a sustainable living of human and nonhuman species.

#### Support:

For any feedback, suggestion, query or complaint, please contact.

Email: hr@elements-learning.com

### Circle Properties & Theorems

- What are various parts of circle called?
- What is relationship between various parts of circle?
- How do polygons within a circle behave?
- How can you discover Thales Theorem (angle at semicircle)?
- How different chords are related?
- What pattern do you find in angle subtended by same chord on center, and on circumference



# **Discovering Pl**

- What is ratio between circumference and diameter?
- How Archimedes discovered PI, by making regular polygons inside and outside a circle?
- What is difficulty in measuring exact value of PI?
- When diameter or radius is known, how can we compute of estimate circumference or vice

### versa?



# **Visualizing Angles**

- What right angles have a specific measure of 90 degrees?
- What is right, straight or reflex angle?
- What is supplementary of complementary angle?



## **Telling Direction**

- How can we explain concept of four directions?
- How do we describe a direction of a path, when it neither in straight line nor at right angle from previous path?
- What is clockwise and anticlockwise direction?
- What is concept of bearing, how it is used in real life?
- How a magnetic compass direction is read?



**NOTE**: These are sample activities to start learning Maths fun with this tool. Many interesting ideas on Maths-learning activities are given in booklets (to be separately purchased). The content of booklet are research based, designed for accelerated learning)