# **Open and Closed Figures**

#### **Understanding Notes**

- A figure is a shape made by drawing lines.
- Figures can be open or closed.
- An open figure does not start and end at the same point.
- A closed figure starts and ends at the same point and forms a complete boundary.
- Closed figures can be colored inside but open figures cannot.
- Closed figures can have straight lines, curved lines, or both.



## Example: (Easy – Identifying open figure)

- If a line starts at point A and goes to point B without joining back to A
- It is not fully joined

Answer = Open figure

#### Example: (Easy – Identifying closed figure)

- If a shape starts at point P and ends again at point P forming a triangle
- It is fully joined

Answer = Closed figure

#### **Example: (Moderate – Drawing open and closed figures)**

- Draw a shape with three lines that do not meet completely
- It is an open figure
- Draw a shape with four lines that meet and form a square
- It is a closed figure

#### Example: (Moderate – Real–life identification)

A curved line drawn like a smile is open

A circle is closed because it goes round and ends at the starting point
Answer = Smile is open, circle is closed

## Example: (Moderate – Classify given figures)

- Given shapes:
- a triangle, a letter 'C', and a square
- Triangle and square are closed figures
- Letter 'C' is an open figure

### **Summary Points**

- Open figures do not connect back to the starting point
- Closed figures connect back and make a full shape
- Only closed figures can be colored or filled
- Shapes like triangle, square, and circle are closed
- Shapes with gaps or openings are open figures