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GRADE 2 · TERM 2

Mathematics

Solid shapes around us

Lesson notes for learners · Competence-Based Curriculum

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Many things around us have the shape of a box, a ball or a tin. These are solid shapes. In this note you will find solid shapes, count their faces, corners and edges, and learn their names.

AFTER THESE NOTES YOU SHOULD BE ABLE TO

- Group solid shapes by what they have in common
- Say what a face, a corner and an edge are
- Name the cube, cuboid, sphere, cylinder and cone

KEY WORDS

Face	A flat or curved side of a solid shape.
Corner	A place where lines meet.
Edge	A line where two faces meet.
Solid shape	A shape you can pick up and hold, such as a box or a ball.

1 Group solid shapes

Look around your classroom and home. Collect boxes, tins, balls and bottles. Put them on a table. Ignore the colours. Look at the shapes only.

Sort them into groups. Some have flat faces, such as a box. Some have curved surfaces, such as a tin. Some have a pointed end. Some have corners. Some are round, such as a ball.

Tell your group why you put the shapes together. Then find things at home, at school and at the market that have the same shape.

2 Faces, corners and edges

Hold a box and a ball. Which one has corners. Point at the corners you can see. A corner is where two lines meet. Walk around your school and look for corners on a desk, a door, a window, a book and a box.

A face is a side of a solid shape. An edge is where two faces meet. Count the faces, corners and edges of a box. Then look at a ball and a tin. Does a tin have faces. Does it have corners. Does it have edges.

Look at the table to see what we find.

Object	Faces	Corners	Edges
Box	Many flat faces	Many corners	Many edges
Ball	One curved face	No corners	No edges
Tin	Two flat faces	No corners	Two edges

Figure 1. Faces, corners and edges

3 Names of solid shapes

Play the riddle game. Who am I. I have 6 faces that are rectangles. I have many corners and many edges. I am a cuboid. A brick, a book and a matchbox are like me.

I have 6 faces that are squares. I have many corners and many edges. I am a cube.

I have one curved face only. I have no corners. I roll easily. I am a sphere. A ball and an orange are like me.

I have two faces that are circles, one at the top and one at the bottom. I have one curved side that goes around. I am a cylinder. A tin and a drum are like me.

I have one flat face at the bottom, one curved side and one point at the top. I am a cone. You see me in an ice cream cone or the roof of a round house.

Shape	Things like it
Cuboid	Brick, book, matchbox
Cube	Box with square faces
Sphere	Ball, orange
Cylinder	Tin, drum
Cone	Ice cream cone, roof

Figure 2. Names of solid shapes

4 Make solid shapes

You can make solid shapes. Use clay, plasticine, straws or sticks. Join the sticks with clay to make a frame. Count the edges and corners.

You can also cut a net on paper, fold along the edges and glue the sides. Then ask: How many faces does my shape have. How many corners.

Share your work and tell the class what shape you made and how you made it.

TRY THIS

Find one solid shape at home that is like a box, one like a ball and one like a tin. Say how many corners each one has.

REMEMBER

- Solid shapes can be grouped by flat faces, curved surfaces, corners and points
- A corner is where two lines meet
- An edge is where two faces meet
- Cube, cuboid, sphere, cylinder and cone are solid shapes

? Check yourself

1. Which solid shape rolls easily and has no corners.
2. What do we call the place where two lines meet.
3. Name one thing that is shaped like a cylinder.
4. Name the solid shape with one flat face, one curved side and one point.
5. Bwalya finds a ball, a brick and a tin in the classroom. His teacher asks him about them. (a) Which one has no corners. (b) Which one has 6 rectangular faces. (c) Which one has two flat faces and a curved side.
6. Mwila makes a solid shape from clay. It has one curved face and no edges and no corners. She shows it to her friend, who asks her about it. (a) What is the shape. (b) Name a thing at home with the same shape. (c) Does it have flat faces.

ANSWERS

1. A sphere.
2. A corner.
3. A tin or a drum.
4. A cone.
5. (a) The ball. (b) The brick. (c) The tin.
6. (a) A sphere. (b) A ball or an orange. (c) No.

Written by 25Schools to follow the Grade 2 Mathematics syllabus of the Zambian competence-based curriculum. Free for learners to read, download and share. More notes and quizzes at 25schools.com.