

TEACHER RESOURCE

COMPLETE LESSON BUNDLE

Ready-to-teach lessons across subjects

PRESENTED BY
Presenter Name

MODULES
4

EDITION
2026



LESSONS IN THIS PACK

01 Fractions Made Easy

02 Healthy Food Habits

03 Light and Shadows

04 Trigonometry Basics



Image

FRACTIONS MADE EASY

01

KEY IDEA

Parts of a whole, equivalent fractions and comparing

Lesson 1 • Fractions Made Easy

LEARNING OBJECTIVES

- Understand a fraction as part of a whole
- Find equivalent fractions
- Compare fractions
- Use fractions in everyday problems

YOU ALREADY KNOW

How to divide a shape into equal parts.

WHAT IS A FRACTION?



Diagram / picture

A fraction shows equal parts of a whole.

The bottom number (denominator) tells how many equal parts the whole is cut into. The top number (numerator) tells how many parts we take.

KEY TERMS

1

Numerator

The number of parts we take.

2

Denominator

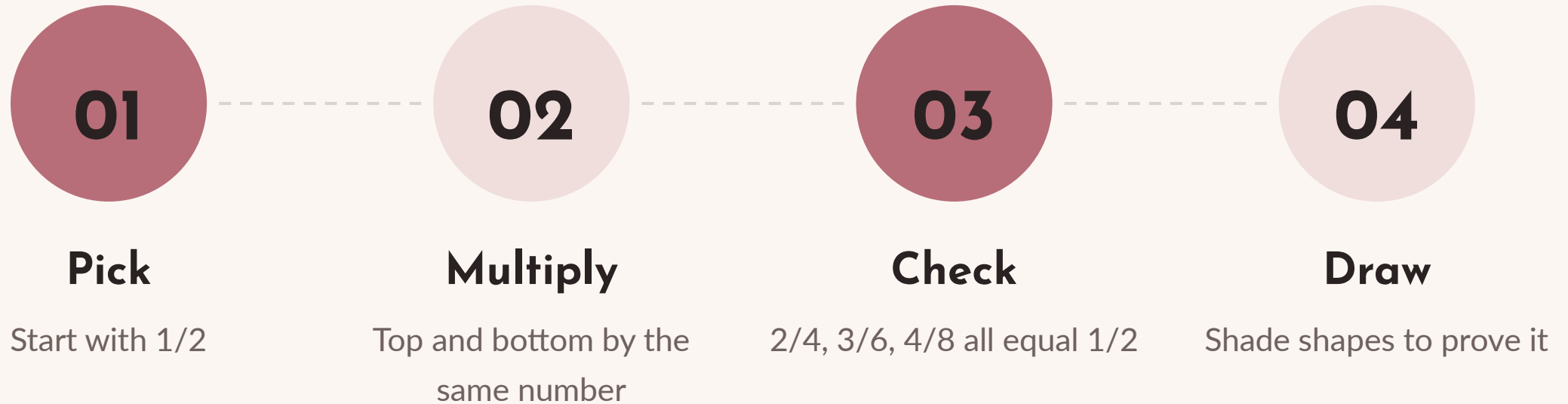
The number of equal parts in the whole.

3

Equivalent

Different fractions with the same value.

FINDING EQUIVALENT FRACTIONS



COMPARING WITH ONE HALF

Fraction	Picture	Compared with $\frac{1}{2}$
$\frac{1}{4}$	One of four parts	Smaller
$\frac{3}{4}$	Three of four parts	Bigger
$\frac{2}{4}$	Two of four parts	Equal

Draw each fraction to check.

DID YOU KNOW?

$\frac{1}{2}$

the most common fraction
in recipes

100

hundredths make one
whole

4,000

years of fractions in history

REAL-LIFE EXAMPLES



Image 1

Sharing food

Pizza, rotis and fruit



Image 2

Time

Half an hour, quarter past



Image 3

Money

50 paise is half a rupee

PROPER VS IMPROPER

Proper

- ✓ Numerator smaller
- ✓ Less than one whole
- ✓ e.g. $\frac{3}{5}$

Improper

- Numerator bigger
- More than one whole
- e.g. $\frac{7}{4}$

CHECK YOUR UNDERSTANDING

- Which is bigger: $\frac{3}{8}$ or $\frac{5}{8}$?
- Write two fractions equal to $\frac{1}{3}$
- What fraction of an hour is 15 minutes?
- Shade $\frac{2}{5}$ of a rectangle

ACTIVITY TIME

1

Fraction strips

Cut strips into halves, quarters and eighths.

2

Pizza maths

Share paper pizzas fairly.

3

Fraction hunt

Find fractions around the classroom.

HOMEWORK

- Exercise 4.2, questions 1–6
- Find three fractions at home and draw them
- Make a fraction wall chart

HEALTHY FOOD HABITS

02

KEY IDEA

Balanced diet, nutrients and smart choices

Lesson 2 • Healthy Food Habits

LEARNING OBJECTIVES

- Name the food groups
- Know why we need a balanced diet
- Choose healthy snacks
- Practise good eating habits

YOU ALREADY KNOW

**We need food to
grow and play.**

A BALANCED PLATE

A balanced diet has the right amount of every food group.

Grains give energy, dal and milk help us grow, fruits and vegetables keep us healthy, and water helps everything work.



Diagram / picture

KEY TERMS

1

Carbohydrates

Energy foods like rice and roti.

2

Proteins

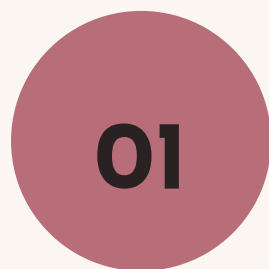
Body-building foods like dal and eggs.

3

Vitamins

Protective foods like fruits.

BUILD A HEALTHY PLATE



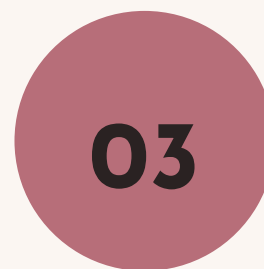
Half

Fruits and vegetables



Quarter

Rice, roti or millets



Quarter

Dal, paneer or eggs



Side

Curd and water

LESSON 2

FOOD GROUPS

Group	Gives us	Examples
Energy	Power to play	Rice, roti
Body-building	Growth	Dal, milk
Protective	Good health	Fruits, greens

Draw one food for each group.

DID YOU KNOW?

8

glasses of water a day

5

colours of food daily

60%

of our body is water

REAL-LIFE EXAMPLES



Image 1

Lunch box

Roti, sabzi and fruit



Image 2

Snacks

Chana instead of chips



Image 3

Festivals

Sweets in small bites

HEALTHY OR JUNK?

Healthy

- ✓ Fruit, sprouts, curd
- ✓ Energy that lasts
- ✓ Helps you grow

Junk

- Chips, soda, candy
- Quick energy, then tired
- Bad for teeth

CHECK YOUR UNDERSTANDING

- Name two energy foods
- Why do we need water?
- Pick the healthy snack: chips or banana?
- What colours did you eat today?

ACTIVITY TIME

1

Plate art

Make a paper balanced plate.

2

Food sort

Sort pictures into groups.

3

Taste test

Try a new fruit together.

HOMEWORK

- Draw your dinner plate
- Keep a one-week food chart
- Ask family for a healthy recipe

LIGHT AND SHADOWS

03

KEY IDEA

How light travels and why shadows form

Lesson 3 • Light and Shadows

LEARNING OBJECTIVES

- Explain that light travels in straight lines
- Classify transparent, translucent and opaque materials
- Explain how shadows form
- Describe a pinhole camera

YOU ALREADY KNOW

Light comes from sources like the sun and bulbs.

LIGHT TRAVELS IN STRAIGHT LINES



Diagram / picture

Light moves in straight lines called rays.

When an opaque object blocks light, a dark area forms behind it — a shadow. Its size depends on the distances between the light, the object and the screen.

KEY TERMS

1

Transparent

Lets almost all light through,
e.g. glass.

2

Translucent

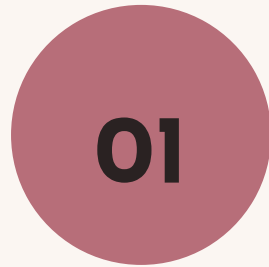
Lets some light through, e.g.
butter paper.

3

Opaque

Blocks light completely, e.g.
wood.

MAKE A PINHOLE CAMERA



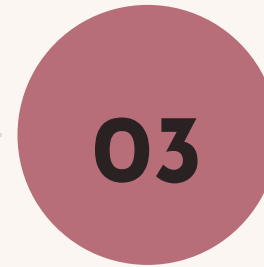
Box

Take a small closed box



Pinhole

Make a tiny hole on one side



Screen

Fix tracing paper opposite



Observe

See an upside-down image

MATERIALS AND LIGHT

Material	Type	Shadow
Glass	Transparent	Very faint
Oiled paper	Translucent	Light
Cardboard	Opaque	Dark

Test your own materials with a torch.

DID YOU KNOW?

3 lakh km

light travels each second

8 min

for sunlight to reach Earth

Upside down

pinhole camera images

REAL-LIFE EXAMPLES



Image 1

Sundials

Shadows tell the time



Image 2

Shadow puppets

Light and hands tell stories



Image 3

Eclipses

The Moon's shadow on Earth

SHADOW VS MIRROR IMAGE

Shadow

- ✓ Always dark
- ✓ No colour or detail
- ✓ Light is blocked

Mirror image

- Colour and detail
- Light is reflected
- Same way up

CHECK YOUR UNDERSTANDING

- Why do shadows form?
- Name one translucent material
- When is your shadow shortest?
- Why is a pinhole image upside down?

ACTIVITY TIME

1

Shadow tracing

Trace a friend's shadow at three times of day.

2

Material test

Sort objects with a torch.

3

Pinhole camera

Build one in groups.

HOMEWORK

- Draw how a shadow forms
- List five opaque objects at home
- Write about an eclipse

TRIGONOMETRY BASICS

04

KEY IDEA

Sine, cosine and tangent in right triangles

Lesson 4 • Trigonometry Basics

LEARNING OBJECTIVES

- Name the sides of a right triangle
- Define sin, cos and tan
- Recall standard angle values
- Solve height and distance problems

YOU ALREADY KNOW

**Pythagoras theorem
and similar
triangles.**

RATIOS IN A RIGHT TRIANGLE

**Trigonometric ratios
compare the sides of a
right triangle.**

For an angle θ : $\sin \theta = \text{opposite/hypotenuse}$, $\cos \theta = \text{adjacent/hypotenuse}$, $\tan \theta = \text{opposite/adjacent}$.
The ratios are the same for every triangle with that angle.



Diagram / picture

KEY TERMS

1

Hypotenuse

The longest side, opposite the right angle.

2

Opposite

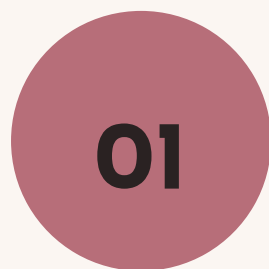
The side facing angle θ .

3

Adjacent

The side next to θ .

SOLVING A HEIGHT PROBLEM



Draw

Sketch the triangle



Label

Mark θ and the known side



Choose

sin, cos or tan



Solve

Rearrange and calculate

STANDARD VALUES

Angle	sin	cos	tan
30°	$1/2$	$\sqrt{3}/2$	$1/\sqrt{3}$
45°	$1/\sqrt{2}$	$1/\sqrt{2}$	1
60°	$\sqrt{3}/2$	$1/2$	$\sqrt{3}$

Learn these with the hand trick.

DID YOU KNOW?

2,000+

years of trigonometry

SOH-CAH-TOA

the classic memory aid

GPS

uses trigonometry

REAL-LIFE EXAMPLES



Image 1

Architecture

Roofs and ramps



Image 2

Navigation

Ships and aircraft



Image 3

Surveying

Heights of buildings

SIN VS COS

$\sin \theta$

- ✓ Opposite / hypotenuse
- ✓ Rises from 0° to 90°
- ✓ $\sin 90^\circ = 1$

$\cos \theta$

- Adjacent / hypotenuse
- Falls from 0° to 90°
- $\cos 0^\circ = 1$

CHECK YOUR UNDERSTANDING

- Write $\sin \theta$ in terms of sides
- Find $\tan 45^\circ$
- If $\sin \theta = 1/2$, find θ
- A ladder makes 60° with the ground; find the height it reaches

ACTIVITY TIME

1

Clinometer

Make one from a protractor and a straw.

2

Measure the school

Find the flagpole height.

3

Value bingo

Bingo with standard values.

HOMEWORK

- Exercise 8.1, questions 1–5
- Prove $\sin^2\theta + \cos^2\theta = 1$
- Estimate the height of a building near home

THANK YOU

Questions and discussion.

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