

KS3: Years 7-9

Home Education Practice Pack

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21 original worksheets for Years 7-9

Every prompt and passage is original. Choose a page that matches the learner's current confidence.

Use pencil and paper; encourage children to explain their thinking. A separate adult answer and guidance booklet is included.

M01 Integers and order of operations

KS3 Maths | Show each stage.

Name: _____ Date: _____

1. $-7 + 12 =$

2. $18 - 25 =$

3. $-6 \times 4 =$

4. $3 + 4 \times 5 =$

5. $(3 + 4) \times 5 =$

Challenge - Calculate: $-8 + 3 \times 6$.

M02 Fractions, decimals and percentages

KS3 Maths | Convert accurately.

Name: _____ Date: _____

1. Write $\frac{3}{4}$ as a decimal.

2. Write 0.35 as a percentage.

3. Find 15% of 80.

4. Simplify $\frac{18}{24}$.

5. $\frac{2}{5} + \frac{1}{10} =$

Challenge - A £60 jacket is reduced by 20%. Find the sale price.

M03 Ratio and proportion

KS3 Maths | Keep ratios equivalent.

Name: _____ Date: _____

1. Simplify 12:18.

2. Share £40 in the ratio 1:3.

3. If 3 pens cost £4.50, how much do 5 pens cost at the same rate?

4. A recipe uses 200 g flour for 8 cakes. How much for 12 cakes?

Challenge - A map scale is 1 cm : 5 km. What distance does 7.4 cm represent?

M04 Algebra: simplify and substitute

KS3 Maths | Use algebra rules.

Name: _____ Date: _____

1. Simplify: $3x + 5x$.

2. Simplify: $7a - 2a + 4$.

3. If $x = 4$, find $3x - 2$.

4. If $a = -3$, find $2a + 7$.

5. Expand: $4(n + 3)$.

Challenge - Simplify: $5p + 2 - 3p + 9$.

M05 Equations

KS3 Maths | Balance both sides.

Name: _____ Date: _____

1. $x + 7 = 19$

2. $3y = 27$

3. $2a + 5 = 17$

4. $5m - 8 = 22$

5. $4(n - 2) = 20$

Challenge - Solve: $3x + 4 = 2x + 15$.

M06 Sequences

KS3 Maths | Find the rule.

Name: _____ Date: _____

1. Next three terms: 4, 7, 10, __, __, __.

2. Find the n th term: 5, 8, 11, 14, ...

3. Find the 10th term of 2, 5, 8, ...

4. Is 41 in the sequence $3n + 2$?

Challenge - Find the n th term of 20, 17, 14, 11, ...

M07 Angles and polygons

KS3 Maths | Give reasons.

Name: _____ Date: _____

1. Angles on a straight line add to ____.

2. Angles around a point add to ____.

3. Find the third angle of a triangle with 52 and 71 degrees.

4. Each exterior angle of a regular hexagon is ____.

5. Sum of interior angles of a quadrilateral?

Challenge - A regular polygon has exterior angle 45 degrees. How many sides?

M08 Area, volume and Pythagoras

KS3 Maths | Use correct units.

Name: _____ Date: _____

1. Area of a triangle: base 12 cm, height 7 cm.

2. Volume of cuboid: 4 cm x 3 cm x 8 cm.

3. A right triangle has legs 6 cm and 8 cm. Hypotenuse?

4. Circumference of a circle with radius 5 cm, to 1 d.p.

Challenge - A 13 cm hypotenuse and 5 cm side make a right triangle. Find the other side.

M09 Coordinates and gradients

KS3 Maths | Plot mentally where possible.

Name: _____ Date: _____

1. Translate (2, -1) by (+3, +4).

2. Reflect (-4, 2) in the y-axis.

3. Gradient from (1, 2) to (5, 10).

4. Is $y = 3x + 1$ linear?

Challenge - Find y when $x = -2$ in $y = 4x - 3$.

M10 Statistics and probability

KS3 Maths | State methods.

Name: _____ Date: _____

1. Mean of 6, 8, 9, 12, 15.

2. Median of 3, 5, 5, 8, 11.

3. Range of 14, 9, 20, 17.

4. Probability of rolling an even number on a fair die.

5. Probability of two heads with two fair coins.

Challenge - A bag has 3 red and 7 blue counters. Probability of not red?

M11 Financial maths

KS3 Maths | Apply percentages and rates.

Name: _____ Date: _____

1. Simple interest on £200 at 5% for one year.

2. A phone plan is £12/month for 18 months. Total?

3. Increase £80 by 15%.

4. A salary of £24,000 increases by 3%. New salary?

Challenge - Compare: £30 upfront + £8 for 6 months, versus £11 for 6 months. Which is cheaper?

E01 Vocabulary and connotation

KS3 English | Choose precise language.

Name: _____ Date: _____

1. Give a positive connotation for *thin*.

2. Give a negative connotation for *thin*.

3. Replace *went* with a precise verb: The crowd went through the gate.

4. Explain the effect of *lurched* in "The bus lurched forward."

Challenge - Write one sentence where word choice creates tension.

E02 Clauses and sentence craft

KS3 English | Build control.

Name: _____ Date: _____

1. Identify the subordinate clause: "Although it rained, we continued."

2. Write a relative clause about a lighthouse.

3. Change to passive: "The council repaired the bridge."

4. Add a semicolon: "The sun set; the road grew dark."

Challenge - Write a sentence using a colon to introduce an explanation or list.

E03 Punctuation and accuracy

KS3 English | Edit carefully.

Name: _____ Date: _____

1. Correct: its a long journey isnt it

2. Correct: the equipment compass map torch was ready.

3. Correct: maria said i cant see the path

4. Correct: the weather changed suddenly however the team continued.

Challenge - Write two checks for sentence-level editing.

E04 Reading: City roofs

KS3 English | Read the original extract.

From the roof, Amina watched the city switch itself on. Windows flickered gold; trains stitched bright lines through the dusk. Below, people streamed from offices, each carrying a private weather of thoughts. Amina had come upstairs to escape the noise, yet the wide view made her feel connected to every street.

Name: _____ Date: _____

1. What time of day is suggested? Give evidence.

2. What does "trains stitched bright lines" suggest?

3. Explain "private weather of thoughts".

4. How does Amina feel at the end?

Challenge - Find one language technique and explain its effect.

E05 Reading: Plastic choices

KS3 English | Read the original non-fiction passage.

Single-use plastic is convenient because it is cheap, light and durable. Those strengths become problems when an item used for minutes remains in the environment for decades. Reducing waste is not only about refusing plastic: it also means designing products that can be reused, repaired or recycled well. Small choices matter most when they become shared habits.

Name: _____ Date: _____

1. Give one reason single-use plastic is convenient.

2. Why can durability become a problem?

3. What three design ideas are named?

4. Explain the final sentence in your own words.

Challenge - Write a factual headline for the passage.

E06 Poetry analysis

KS3 English | Analyse the original lines.

*The moon was a coin in a torn black purse;
the river kept its silver secret.*

Name: _____ Date: _____

1. Name the technique in "moon was a coin".

2. What colour imagery is used?

3. What does "kept its silver secret" personify?

4. Suggest one mood created by the lines.

Challenge - Write two original lines about night using personification.

E07 Persuasive writing

KS3 English | Plan an argument.

Name: _____ Date: _____

1. Choose a clear issue for a school campaign.

2. Write a rhetorical question about it.

3. Give one statistic you could research.

4. Write one counterargument.

5. Write a rebuttal.

Challenge - Write a persuasive 4-sentence opening.

E08 Narrative writing

KS3 English | Plan a tense opening.

Name: _____ Date: _____

1. Describe the setting using two senses.

2. What does the protagonist want?

3. What obstacle appears?

4. Write a sentence of foreshadowing.

Challenge - Write a 100-word opening scene.

E09 Comparing viewpoints

KS3 English | Compare two short views.

Name: _____ Date: _____

1. View A: "Uniform creates focus." View B: "Uniform limits identity." What is the disagreement?

2. Give one phrase that supports View A.

3. Give one phrase that supports View B.

4. Write a balanced concluding sentence.

Challenge - Which view is more convincing? Give two reasons.

E10 Formal and informal register

KS3 English | Select suitable style.

Name: _____ Date: _____

1. Make formal: "Can you send me the stuff soon?"

2. Make informal: "I would be grateful for your response."

3. Which suits a job application: "Dear Sir/Madam" or "Hi mate"?

4. Write a formal email subject for asking about work experience.

Challenge - Write a 4-sentence formal request email.
