Slanted Shapes, Easy Areas!

Area of triangles and parallelograms

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Today we will...

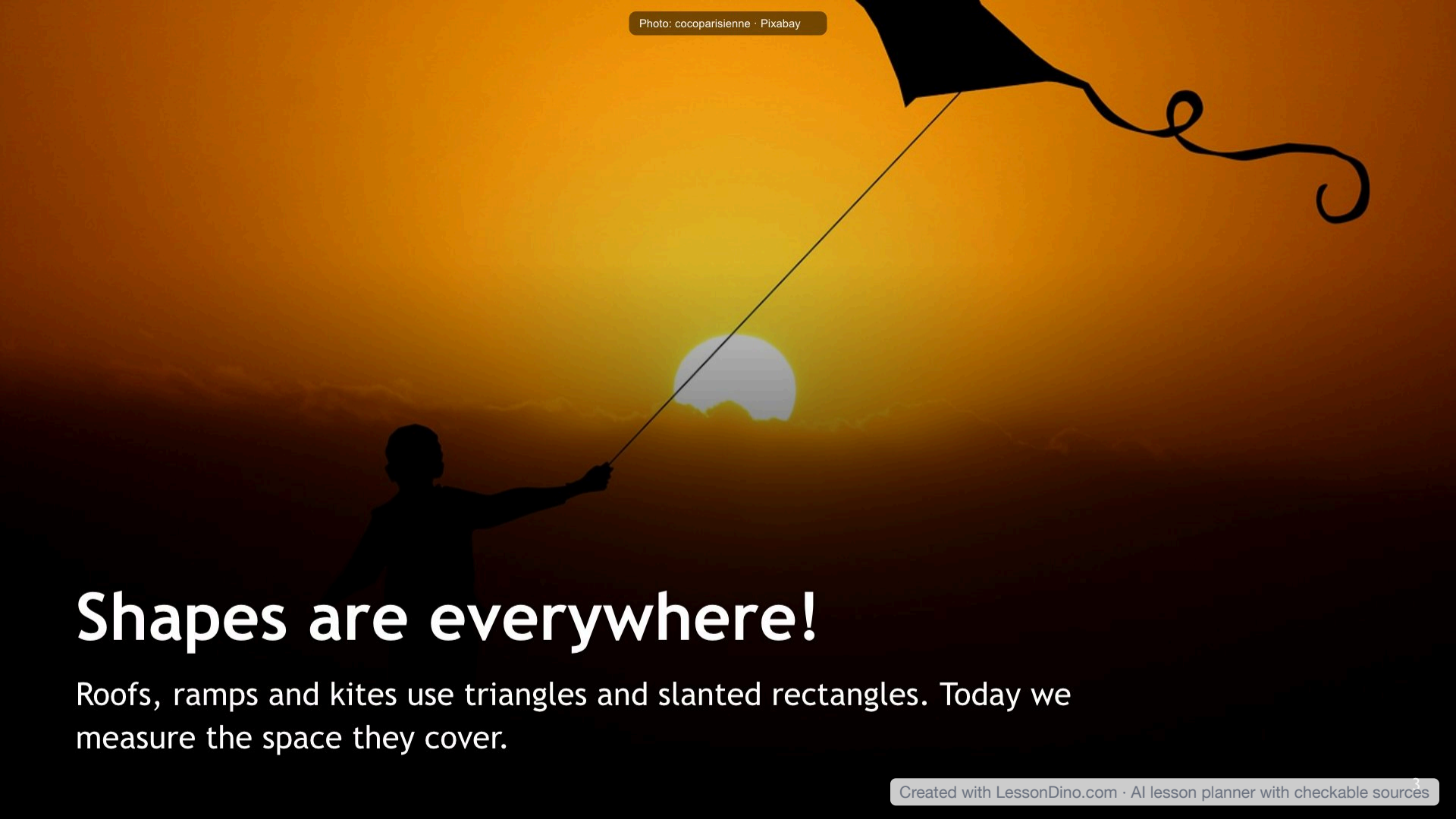
WE ARE LEARNING TO

- Relate rectangles to parallelograms and triangles
- Calculate area using base and perpendicular height
- Solve area problems and give cm^2

SUCCESS LOOKS LIKE

- ✓ I can use base x height for parallelograms
- ✓ I can use half x base x height for triangles
- ✓ I can spot the right height line

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Shapes are everywhere!

Roofs, ramps and kites use triangles and slanted rectangles. Today we measure the space they cover.

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Parallelogram vs triangle

Parallelogram

- Area = base x height
- Cut and slide to make rectangle
- Height goes straight up, not slanting

Triangle

- Area = half x base x height
- Half of its matching parallelogram
- Height meets base at right angle

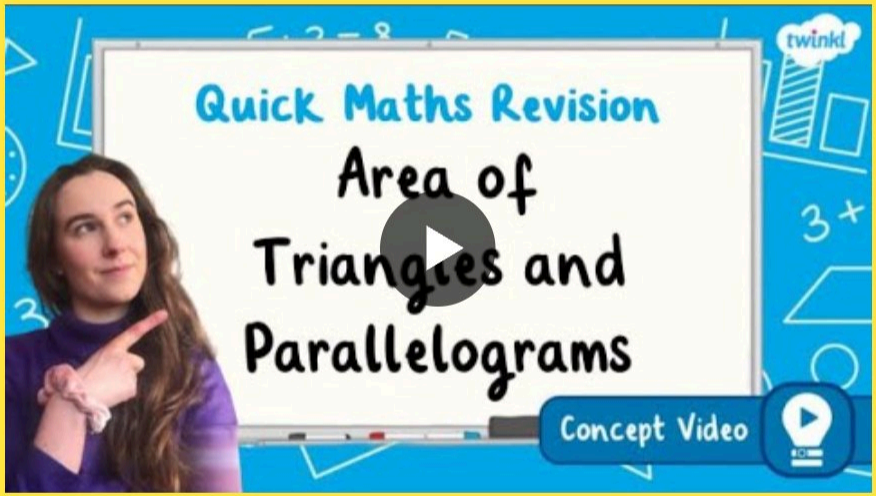
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Think, pair, share

A parallelogram leans over with a slanted side line and a dashed line from the top meeting the base with a square corner mark. Which line is the true height, and why?

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Watch: from rectangle to slanted shape



▶ 0:00 – 4:30

- Watch how cutting shows base x height
- Spot the right-angle mark for height

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Words we need



Base

The bottom side we start measuring from.



Height

Straight line up from base, makes a square corner.



Dissection

Cutting a shape up to show area stays same.

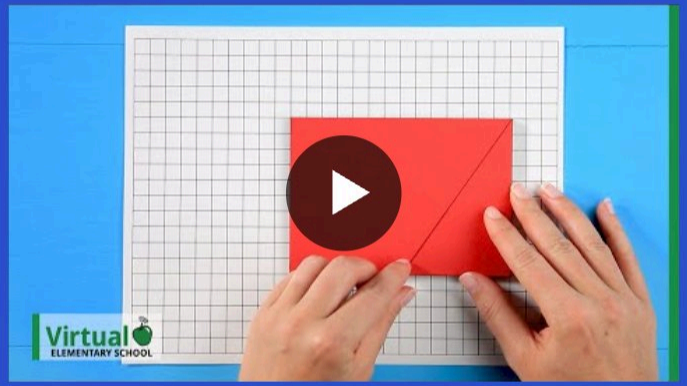


Perpendicular

Meeting at a right angle, like wall and floor.

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Watch: halving to make triangles



▶ 0:00 – 2:16

- Watch two triangles make one parallelogram
- Listen for when to divide by two

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Your task

In pairs, find the areas of six shapes on squared paper.

1. Pick base, check height makes right angle
2. Calculate: base x height, halve for triangles
3. Cut one shape to prove rectangle link

15 min

In pairs

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DID YOU KNOW?

A triangle is always half its matching parallelogram with the same base and height.

With the same base and same height, halve the area every time.



Photo: Efraimstochter · Pixabay

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Exit ticket

1. One rule I can now use is...

2. One area I worked out was... cm^2

3. One question I still have is...

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