Wrapping Paper Math

SD-B141 / STRATEGISTS · AGES 10–12

Compute the area needed to wrap a box and test with real paper.

YOU NEED: A box, a ruler, paper, tape

ANALYZE	Measure your box: length, width and height. Write the three numbers.
CHOOSE	The paper needed is the area of all six faces: 2(lw + lh + wh). Compute it.
TEST	Cut paper to your estimate and wrap the box. Was there too much or too little?
REFLECT	Why might you need extra? What would you change next time?

MY BOX

	Value
Length	
Width	
Height	
Area 2(lw+lh+wh)	

Check

I needed

I used

Difference

What I would change

Next time I will

Wrapping Paper Math

SD-B141 / GROWN-UP GUIDE · STRATEGISTS

A little help beside the learner. Read this page first; keep the answers here.

LEARNING GOAL
Practice measuring, using a formula and checking against reality.

BEFORE YOU BEGIN
You need: A box, a ruler, paper, tape. Grown-up handles scissors if needed.

HOW TO GUIDE
For example, a 20 by 15 by 10 cm box has area 2(300 + 200 + 150) = 1,300 square cm. Real wrapping needs extra for overlap and folds. Let your child measure and decide how much to add.

WHY IT MATTERS
Applying a formula to a real object shows what math predicts and what it leaves out, such as overlaps.

LOOK FOR THIS REASONING
Look for correct measures, a computed area, a comparison with what was needed and a reason for the gap.

IF THEY GET STUCK
Ask: how many faces does a box have? Which ones are the same size? Add up all of them.

MAKE IT GENTLER
Wrap just one face and count.

ADD A LITTLE STRETCH
Try a box that is not a rectangle, like a cylinder.

A USEFUL STOPPING POINT
Wrap a real gift and use your estimate.