

2.4 INVESTIGATION: LEGO Construction

Background

Read 2.6C Making Strong Lego models

1. Brick wall

Aim

To find out what makes brick walls strong?

Equipment

Various size double LEGO bricks only.

Construction

Use double LEGO bricks to build a wall: 20cm long by 10cm high

Investigation

Test its strength.

To be strong materials are tested in various directions and motions:

1. Vertical – try pushing down on it resting some heavy books on it.
2. Horizontal – try stretching or pulling the ends of the wall apart.
3. Twisting – hold each end of the wall and twist.
4. Impact – drop the wall from waist height.

Results

Direction	Vertical	Horizontal	Twisting	Impact
Did it break?				

Conclusions

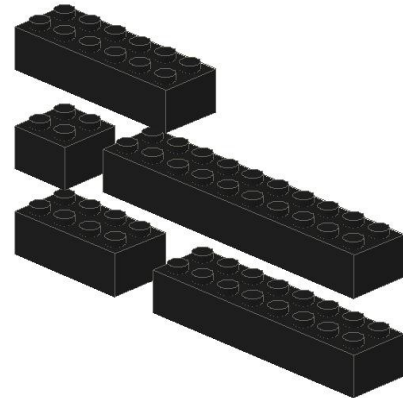
Which direction of strength was strongest?

Which direction of strength was weakest?

What did you do to improve its strength?

What pattern have you noticed they build bricks in a wall. Draw below?

Why does this make the wall strong?



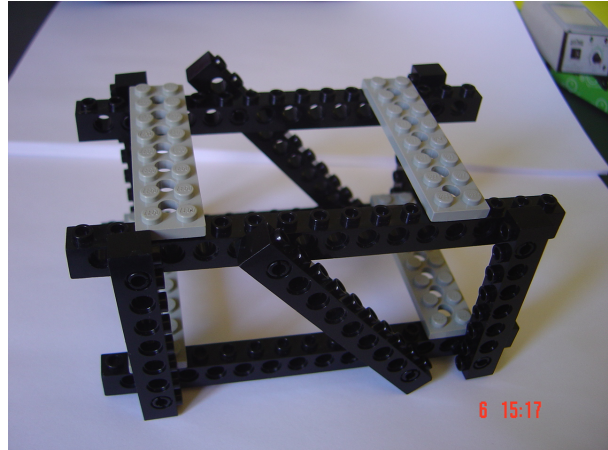
2. Frames

Aim

To build a strong bookstand to hold a book with just a few pieces of LEGO .

Equipment

Technic beams, pins and plates



Results

	beams	plates	pins
No of pieces used			

Conclusions

Was your bookstand strong enough?

Where were the weaknesses?

How did you make it strong and use less pieces?