Lab activity 3 Solid bones?

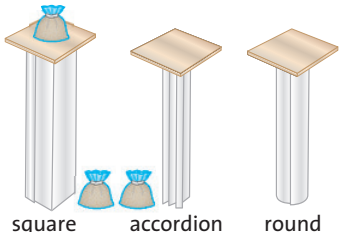
Research question

Which shape offers more sturdiness to bones: flat, round or square?

Workplan

Materials

- three sheets of paper (A4)
- glue(stick)
- plastic bags of sand (from 100 g to 2 kg)
- three sturdy pieces of cardboard of 10 x 10 cm



square accordion round

Method

1. Fold a square tube out of a sheet (lengthwise) with sides of approximately 4 cm. Glue a border of 1 cm.
2. Make longitudinal folds (like in an accordion) out of another sheet.
3. Roll a round tube out of the third sheet having a diameter of about 4 cm. Again, glue a border of around 1 cm.
4. Put the models upright and place the pieces of cardboard on top of them (see picture).
5. Carefully place bags of sand in the middle of a piece of cardboard. Start with the lowest weight and add one at the time. Continue until the model drops and falls over.
6. Fill in the weight at Result.
7. Place bags of sand on top of the other models as well. Again, fill in the weight where the model drops.

Result

1

a You can put _____ g on the square tube before it drops.

b You can put _____ g on the 'accordion' before it drops.

c You can put _____ g on the round tube before it drops.

Conclusion

2 Write a conclusion. Complete the sentence.

The most solid model is _____

3 Re-read the topic about the functions of the skeleton and complete the sentences.

a Long bones in your body mostly offer _____

b Flat bones in your body mostly offer _____

4 Take another look at **figure 6** in your textbook.
Bone cells have a specific way of growing. How does that influence the solidity of bones?

_____

_____