**Activity 1.2.9 Tensile strength of plastic materials**

Materials:

Set of weights, different kinds of plastic, cotton, metal and wood

Procedure:

Before the experiment, formulate your hypotheses about tensile strength of plastic materials and natural substances. Look at the above-mentioned materials and discuss their firmness. Carry out the following experiment afterwards:

Hang different weights on a particular kind of plastic, cotton, metal and wood and note the length of their stretch. Write your findings into the table:

Findings:

1. Complete the table:

|  |  |
| --- | --- |
| **Plastic** | **WEIGHT** |
|   |   |   |
| PVC |  |  |   |
|
|
| Polyethylene |   |   |   |
|
|
| Polypropylene |   |   |   |
|
|
| Polystyrene |   |   |   |
|
|
| **Natural substances** | **WEIGHT** |
|   |   |   |
| Cotton |   |   |   |
|
|
| Metal |   |   |   |
|
|
| Wood |   |   |   |

2. Do all plastic materials have the same tensile strength? If no, compare the firmness and resistance of the above materials.

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**Homework:**

Look up on the Internet information about plastic materials with outstanding mechanical properties and read about their use in practice.

**Conclusion:**

Complete the table based on the acquired knowledge:

|  |  |  |
| --- | --- | --- |
| **Plastic** | **FOUND PROPERTIES** | **USE IN PRACTICE** |
|
| PVC |   |   |
|
|
| Polyethylene |   |   |
|
|
| Polypropylene |   |   |
|
|
| Polystyrene |   |   |
|
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