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| **Measurement:** The process of finding out the size, length, or amount of something using standard units.  **Measuring using Body Parts**  Body parts such as hand spans, arm lengths, and foot lengths were commonly used for measurement in the past.  **For example:**   * **Handspan**: The distance from the tip of the thumb to the tip of the little finger when the hand is fully stretched. * **Arm Length**: The distance from the shoulder to the tip of the middle finger. * **Foot Length**: The length of a person's foot can also be used to measure things. * **Stride:** Farmers sometimes use their steps or strides to measure lengths for dividing their fields.   **Standard Units**  Over time, different parts of the world developed their own systems of measurement. However, as people began to travel more, these varied systems caused confusion. To solve this, countries came together and agreed on a standard set of units known as the **International System of Units, or SI units**.   * The standard SI unit of length is the metre (m). * For smaller lengths, units like centimetre (cm) and millimetre (mm) are used:   1 m = 100 cm  1 cm = 10 mm   * For larger distances, the kilometre (km) is used:   1 km = 1000 m |
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| **Correct Methods of Measuring**   * It is important to place the scale correctly along the object being measured for accurate results. * Eye position should be directly above the point being measured to avoid parallax errors. * Even if the ends of the scale are broken, measurements can still be made by reading the scale from any full mark (e.g., from 1 cm).     **Measuring Curved Lines**  For measuring curved lines (like strings or decorations), a thread is used to trace the curve, and then it is straightened to measure with a scale. |
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| Motion: An object is said to be in motion if its position changes concerning the reference point with time.  → Rest: If an object does not change its position concerning a fixed object, it is said to be at rest.  → Reference point: It is a stationary or fixed point that serves as a basis for observing and describing the position, and velocity of the object in consideration.  → Types of motion: The motion of objects is classified in the following ways:  **Types of Motion:**   * Linear Motion * Circular Motion * Oscillatory Motion   **Linear Motion**: When an object moves along a straight line. For example, when you drop an eraser, it falls straight down. Pushing a box or a ball rolling in a straight line are also examples of linear motion.  **Circular Motion**: When an object moves along a circular path. For example, tying an eraser to a string and swinging it in a circle mimics circular motion. Merry-go-rounds are common examples of circular motion.  **Oscillatory Motion:** When an object moves to and fro about a fixed point, such as a swing moving back and forth or a pendulum. |
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