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STUDY MATERIAL SCIENCE

CLASS-VIII

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▸ Friction

Wheels reduce friction :

Friction can also be reduced by using smooth wheels. Normally a loaded suitcase is difficult to drag around. However, attaching wheels can make it move easily, since rolling reduces friction. When one body rolls over the surface of another, the resistance to its motion is called rolling friction, which is always smaller than sliding friction. That is why most machinery, such as fans, washing machines and bicycle and motorbike wheels, where an axle rotates within a bearing, use ball bearings. In a ball bearing, a row of tiny steel balls placed in a groove separates the moving part from the stationary part of the machine. When the axle rotates, the balls roll rather than slide, which reduces friction considerably.