

Friction

Task 1: Slide your finger along the desk. Now explain the texture you feel.

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Task 2: Read the paragraph below and then explain the term friction in your own words:

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What is friction?

A surface such as a metal slide in a playground looks and feels really smooth. Now imagine zooming in on it – you will see that it is actually rough.

When a book is resting on the table you can push on it but it may not move. **Friction** grips objects. As you increase the force by pushing harder the book will start to move. If you remove the force the book slows down and stops. This is because the rough surfaces can no longer move past each other.

Task 3: Do you think friction is greater on a rough or a smooth surface? Give reasons for your answer

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What is drag?

As you learnt in Book 1, 1.1.1 Introduction to forces, friction and air resistance are **contact forces**. They act when surfaces are in contact. Forces are measured in **newtons**.

If an object is moving through a fluid, such as air or water, the force slowing it down is called a **drag force**. A dolphin swimming through the water and a surfer paddling through water will both experience **water resistance**. As a snowboarder jumps through the air he will experience **air resistance**.

Task 4: Now read the last sentence from task three.

Explain what is meant by this using fully labelled diagrams

