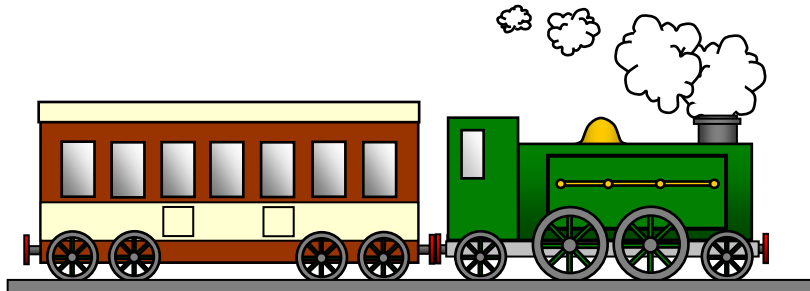


Episode 210: Preparation for Newton's laws of motion

Students are likely to have come across these laws in various forms during their earlier studies of science. However, you now have to formalise their understanding, and help them to apply the laws.

Some students will feel that the laws are self-evident, but this is because they have met them before. (Don't forget it took Galileo, Newton *et al* many years to establish them clearly.) They are counter-intuitive, and need a great deal of practice to ensure they are used correctly.



Episode 211: Newton's second law of motion

Episode 212: Newton's third law of motion

Main aims

Students will:

1. use the equations of motion to investigate the relationship between force and acceleration for a constant mass.
2. perform simple calculations using $F = ma$.
3. state the relationship between mass and acceleration for a constant force.
4. understand the range and application of Newton's Third Law.
5. perform calculations using the concept of the Third Law.

Prior knowledge

It is likely that students will have met these laws in some form previously. Now is your chance to ensure that they deepen their grasp of their significance.

Where this leads

Newton's laws of motion are applied in many different situations. Hopefully, they will gradually become second nature to your students.