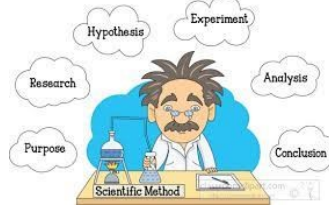


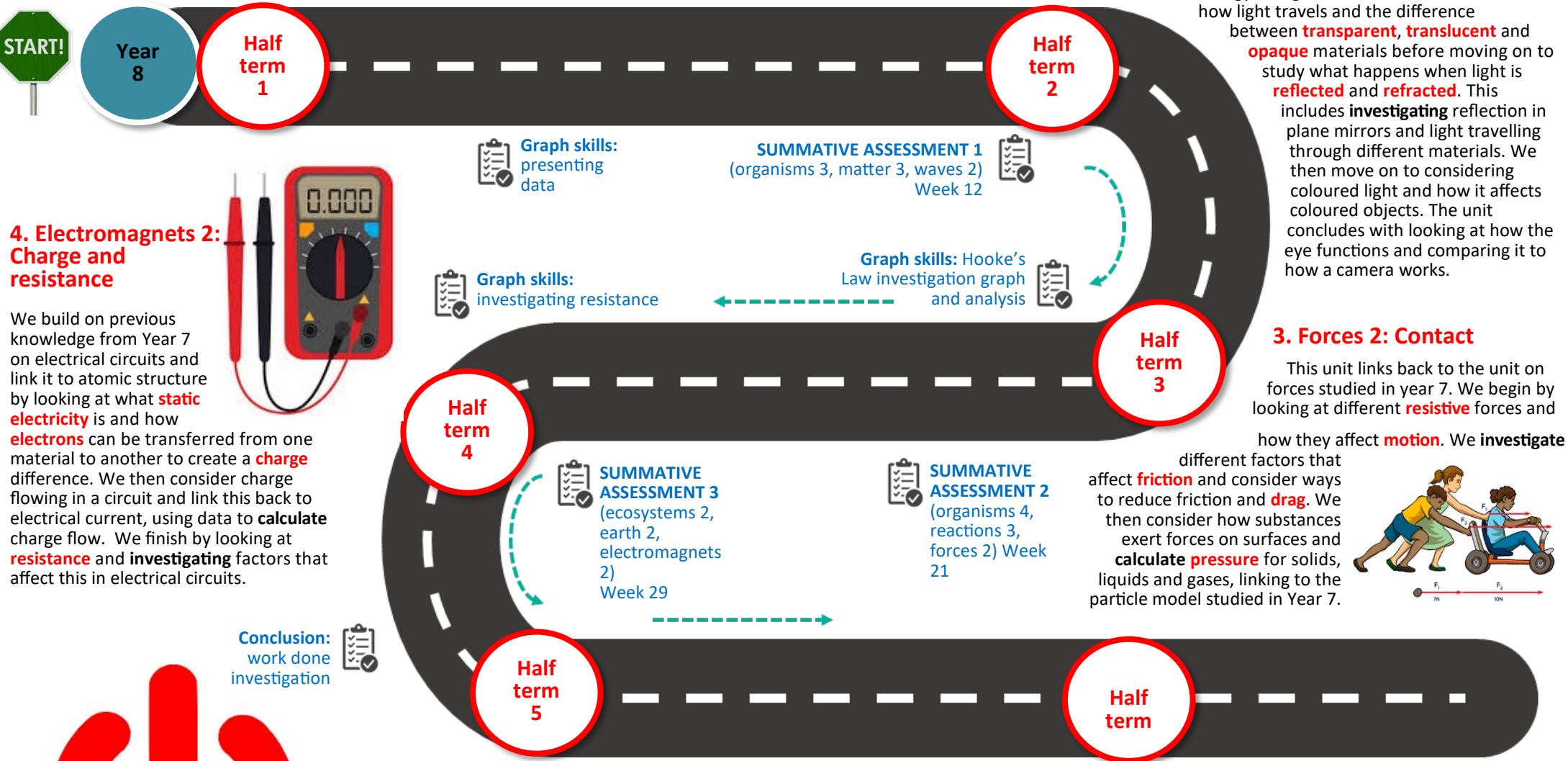
**1. Scientific Investigation** To start Year 8 we revisit the work on scientific investigations covered during Year 7. In this first unit we will be investigating why penguins huddle. All the scientific skills will be covered including **planning** an investigation, displaying data appropriately, **plotting graphs**, drawing **conclusions** from data and **evaluating** investigations.



**Maths skills:** using a protractor to measure angles accurately

**2. Waves 2: Light**

Building on our prior work on waves we study the transfer of energy via light. The unit covers how light travels and the difference between **transparent**, **translucent** and **opaque** materials before moving on to study what happens when light is **reflected** and **refracted**. This includes **investigating** reflection in plane mirrors and light travelling through different materials. We then move on to considering coloured light and how it affects coloured objects. The unit concludes with looking at how the eye functions and comparing it to how a camera works.



**4. Electromagnets 2: Charge and resistance**

We build on previous knowledge from Year 7 on electrical circuits and link it to atomic structure by looking at what **static electricity** is and how **electrons** can be transferred from one material to another to create a **charge** difference. We then consider charge flowing in a circuit and link this back to electrical current, using data to **calculate** charge flow. We finish by looking at **resistance** and **investigating** factors that affect this in electrical circuits.



**Conclusion:** work done investigation



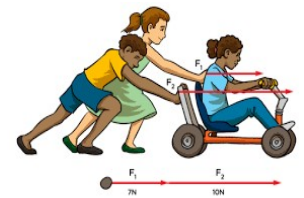
**5. Energy 2: Power**

We start by linking together ideas on forces and energy transfer to **investigate** how much **work** is done to move an object over different surfaces. We then **calculate power** for different scenarios and electrical **appliances** and discuss how electricity bills are calculated. The unit then moves on to look at the **dissipation** of energy and calculating **efficiency** of different energy transfers.

**3. Forces 2: Contact**

This unit links back to the unit on forces studied in year 7. We begin by looking at different **resistive** forces and

how they affect **motion**. We **investigate** different factors that affect **friction** and consider ways to reduce friction and **drag**. We then consider how substances exert forces on surfaces and **calculate pressure** for solids, liquids and gases, linking to the particle model studied in Year 7.



**SUMMATIVE ASSESSMENT 4** (genes 3, matter 4, energy 2) Week 38

