



Parts of the body

Roman soldiers used coverings for different parts of the body, such as a helmet to protect their head.

- 🕒 Can we explain why they protected those areas but not every part of the body?
- 🕒 What would ordinary Romans wear?
- 🕒 What do we use to protect different parts of our bodies and why? (Examples – a helmet for cycling, knee guards for roller skating)

Basic structure of a plant and functions of parts of a plant

Roman farmers grew a wide variety of crops, including wheat, olives, grapes, plums, apricots, figs, beetroot, onions and cabbage.

- 🕒 What foods do we get from plants?
- 🕒 Which parts of a plant do we eat?

Grouping and identifying everyday materials

Romans used metals in coins (eg silver, bronze), armour and weapons (eg bronze, iron), jewellery (eg silver, gold) and water pipes (lead), leather in footwear and clothing, fabrics (eg linen) in clothing and furniture.

- 🕒 Where can we find more examples of metals, leather and fabrics used in Roman times and today?
- 🕒 Are they used for similar or different things?

Changes in materials

Romans dyed fabrics with various naturally occurring pigments, usually made from parts of plants eg beetroot, blueberries, red cabbage, saffron, turmeric, spinach.

- 🕒 Can we make our own coloured fabrics using natural dyes?
- 🕒 Who can make the most colourful fabric?
- 🕒 Which parts of plants seem to make the best dyes?

Nutrition – eating the right foods

Poor people and rich people in Rome would have had very different diets.

- 🕒 Which diet do you think is healthiest?
- 🕒 Why?
- 🕒 What foods would you include if you were planning a healthy feast?

BIOLOGY

CHEMISTRY

ROMANS

Distinguishing between an object and its material

Romans used metals in coins (eg silver, bronze), armour and weapons (eg bronze, iron), jewellery (eg silver, gold) and water pipes (lead), leather in footwear and clothing, fabrics (eg linen) in clothing and furniture.

- 🕒 Can we make a table to show what things are usually made from? (Examples – sandal: leather, toga: fabric, candle: wax, button: wood, window: glass, helmet: metal)
- 🕒 Can we make a table to show materials that wouldn't be any good for a particular job? (Example – a wooden window)

Light sources

Romans used candles and oil lamps to light their homes.

- 🕒 Where does light come from?
- 🕒 What light sources can we identify?
- 🕒 Which is the brightest?

PHYSICS

Light reflection from surfaces

Romans used mirrors of polished metal or metal-backed glass for personal care and signalling.

- 🕒 What can we see in a mirror?
- 🕒 What can we see in a curved or bendy mirror?
- 🕒 How are curved mirrors useful to us?
- 🕒 Can we use a mirror to signal like the Romans did?

Seasonal Change

Roman soldiers probably wouldn't like life in Britain because of the cold weather here.

- 🕒 What's the weather like today?
- 🕒 What's the weather like in Rome?
- 🕒 How does the weather here and in Rome change over the year?
- 🕒 Do the seasons change in the same way everywhere?

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Functions of the skeleton

Roman warriors used armour and chainmail to protect themselves from being injured in battles.

- 🕒 How do different parts of our bodies protect important organs?
- 🕒 How do other animals protect themselves?

Exercise and healthy lifestyles

Roman boys engaged in lots of sporting activities, such as swimming, riding, ball games, running, wrestling and hunting.

- 🕒 How does exercise affect our pulse rate and breathing rate?
- 🕒 How is this helpful?
- 🕒 Why do you think Roman girls didn't do lots of sports?
- 🕒 Do girls do as much sport as boys today?

Uses and properties of materials

Romans used metals in coins (eg silver, bronze), armour and weapons (eg bronze, iron), jewellery (eg silver, gold), cooking utensils (eg pewter) and water pipes (lead).

- 🕒 Can we create a table showing what different metals are used for and why they are used in those ways?

Changes of state

Romans had reusable writing tablets made from beeswax.

- 🕒 Can we make a wax writing tablet? **[SAFETY NOTE: re melting wax – a low melting point wax is recommended, such as soybean wax]**
- 🕒 How would you save the information on your tablet in very hot weather?

Keeping teeth healthy

Rich Romans did not generally have high levels of tooth decay.

- 🕒 Why do you think their teeth didn't decay much?
- 🕒 What can we do to keep our teeth healthy?

Reversible and irreversible changes

Romans used pottery in cooking, storage jars and roof tiles.

- 🕒 Can we find more examples of things that don't change back after they have been heated?

Conditions for growing plants

Roman farmers grew a wide variety of crops, including wheat, olives, grapes, plums, apricots, figs, beetroot, onions and cabbage.

- 🕒 What foods are grown in our town?
- 🕒 What foods can we grow in our school grounds?
- 🕒 What's the best way to grow beans/corn/courgettes/onions?

BIOLOGY



CHEMISTRY

Mixtures of materials

Romans used pumice as an abrasive and a lightweight building material.

- 🕒 Why do you think pumice floats on water?
- 🕒 How can we find out?
- 🕒 Why do you think it is lighter than other rocks?
- 🕒 How many examples of solid/gas and liquid/gas mixtures can we find?

Light and shadows

Romans used parasols to protect themselves from strong sunlight.

- 🕒 What is a shadow?
- 🕒 When are shadows useful to us?
- 🕒 Can we make a shadow puppet?
- 🕒 Which materials don't make shadows?

PHYSICS

Effects of forces in producing movement

Throwing sports, such as discus and spear, were popular in Roman times.

- 🕒 What's the best way to throw something as far as possible? (Examples – using different muscles in arm/shoulder, how hard you throw, angle of throwing, whether to use a running throw)

Effects of gravity

Roman aqueducts carried fresh water over long distances to the towns and cities.

- 🕒 What are aqueducts used for now in the UK?
- 🕒 What is the longest aqueduct that we can make?
- 🕒 How does gravity help us get water from a water tower?

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Harmful effects of microorganisms

Romans knew that food would go bad or mouldy and found ways to prevent this eg salting and smoking.

- ② What ways can we find to keep food fresh and stop microorganisms growing?
- ② How long can we keep food fresh?
- ② Are some ways of keeping food fresh better than others?

Beneficial effects of microorganisms

Romans used microorganisms to make different foods, such as wine and yoghurt.

- ② What foods and drinks are made using microorganisms?
- ② Can we make any foods using microorganisms?

Separating mixtures

Romans obtained salt by evaporating water from brine springs in Cheshire.

- ② Why did they need salt?
- ② Where does brine come from?
- ② Can we get clean salt from dirty salty water?
- ② Can we get clean water from dirty salty water?
- ② Would the water be safe to drink?

Mixtures of materials: dissolving

Romans, thinking that lead was insoluble, used it in pots for wine-making and in water pipes. In fact, small amounts of lead dissolved in water and in wine, causing lead poisoning.

- ② How well do different materials dissolve?
- ② Is there a way to tell if a very small amount of something has dissolved?

Healthy life choices

Romans had flush toilets, bathed and washed their hands, washed their clothes and made fresh water available.

- ② What can we find out about the importance of good sanitation?
- ② What can we do to keep clean if we can't get fresh water?

Day and night, day length

Romans made sundials and water clocks to tell the time.

- ② How can everyday shadows help us to measure time?
- ② Can we make a sundial or a water clock?
- ② Who can make the most accurate time measurer?

Air resistance

Throwing the discus and javelin were sports that Romans could take part in.

- ② How do we use air resistance when we fire an arrow or throw a flying disc?
- ② Who can get a paper aeroplane to go furthest?

BIOLOGY

CHEMISTRY

Changes of state

When the volcano Vesuvius erupted near the Roman city of Pompeii, it spewed out liquid rock in the form of lava.

- ② How hot does rock have to be to melt?
- ② How many things can we find that change from one state to another when they are heated or cooled?

Irreversible changes

Romans made ink using soot that they collected from burning candles. They also used lime mortar to make concrete.

- ② These are examples of irreversible changes. How many more examples of irreversible changes can we find in our homes?

Balanced forces

Tug-of-war was a sport that Roman people could take part in.

- ② Where can we find examples of forces that are balanced?
- ② What happens when forces are not balanced?
- ② Can we make a balancing toy?

Light reflection from surfaces

Romans used mirrors of polished metal or metal-backed glass for personal care and for signalling.

- ② Can we use a data logger to find out how much light different surfaces reflect?
- ② Which surfaces are the best reflectors?
- ② Can we send a signal using reflected light?

