



Conditions for growing plants

The Maya and Aztecs grew different types of food crops, especially corn (maize). They thought corn was the most important crop because they believed that the Gods created the first humans from a piece of corn.

- 🕒 Can we grow our own food crops?
- 🕒 Can we find out the best way to grow food crops?
- 🕒 Can we find out the best places to grow food crops?
- 🕒 What kind of food crops grow best on our school grounds?

Habitats and environment

The Maya and Aztecs used pictures and symbols to write words. This style of writing is called hieroglyphics.

- 🕒 Can we find out which animals the Maya and Aztecs used as symbols to write their words?
- 🕒 Which of these animals could live happily where we live?
- 🕒 Why do you think some of the animals wouldn't be able to live where we live?

Contact forces

The Maya and Aztecs played ball games. They used a ball made from rubber.

- 🕒 How high does a rubber ball bounce when we drop it?
- 🕒 How high does a rubber ball bounce when we throw it at the floor?

Living things

As well as corn, the Maya and Aztecs also ate fish and meat as part of their diet. Although they didn't eat a lot of meat, they ate deer, pheasant, monkey, iguana, rattlesnake, boar and turkey.

- 🕒 Do people eat every type of animal?
- 🕒 Which types of animals do most people avoid eating?
- 🕒 Can we find out why some people don't eat some animals?
- 🕒 Can we find out why some people are vegetarians?

BIOLOGY

Light and shadows

For Maya and Aztecs the most important object in the sky was the sun. The sun was recognised as the main life-giver on Earth.

- 🕒 Why is the sun so important for life?
- 🕒 What other sources of light can we find?
- 🕒 Can we create a shadow puppet theatre and use it to tell an ancient Maya or Aztec story?

Pure substances & mixtures

Maya and Aztec people produced lots of art. Some of their art is full of shades of blue, from a bright vivid blue to almost green.

- 🕒 What colours can we mix to make different shades of blue?
- 🕒 Can we make every shade of blue, or are there some we can't make?
- 🕒 Can we use tie-dyes and white sheets to make Maya and Aztec pictures using different shades of blue?

CHEMISTRY

Seasonal Change

The Maya and Aztecs had calendars that were divided into 365 days of the year, based on the movement of the sun. They learned that the weather depends on where the sun is in the sky and they discovered the seasons.

- 🕒 What can we find out about the different seasons of the year?
- 🕒 How is each season different from the others?
- 🕒 What are the indicators in nature that show a change in season?

Changes of state

The Maya people discovered chocolate. The Maya and Aztecs loved chocolate drinks made from crushed and roasted cocoa beans mixed with water, chili peppers and cornmeal.

- 🕒 What shape and form does chocolate come in?
- 🕒 How can we make chocolate into a liquid for drinking?
- 🕒 Can we make our own drinking chocolate using dried cocoa beans (or milk powder and cocoa powder)?

Identifying and grouping everyday materials

The Maya and Aztecs carved stones to make sculptures and facades on their temples and important buildings. They used tools made out of harder stone for carving.

- 🕒 Which materials can/can't be used to carve stone?
- 🕒 Can we put these into a table to show which materials will carve stone and which won't?
- 🕒 Can every kind of stone be carved?



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Nutrition – eating the right foods

The Maya and Aztecs ate a variety of foods. Their diet included grains, meat, fish and fruit.

- 🕒 How does a modern diet compare with the Maya and Aztecs?
- 🕒 Do most of us eat grains, meat, fish and fruit?
- 🕒 Can we create a chart for a healthy, balanced diet?
- 🕒 How does this compare with what most of us actually eat?

Keeping teeth healthy

The Maya and Aztecs brushed their teeth using toothbrushes made from twigs and leaves.

- 🕒 Why do you think a toothbrush is better than twigs and leaves for cleaning teeth?
- 🕒 What do you think we could do to clean our teeth if we didn't have toothbrushes and toothpaste?

Identifying and grouping everyday materials

Maya and Aztec people produced stone carvings, jewellery, pottery and other forms of art. They used local plants to make dyes.

- 🕒 Can we find out how to make a dye from plants?
- 🕒 Which parts of plants make the best dyes?
- 🕒 Can we create an instruction leaflet for making plant dyes?

Solids, liquids and gases

The Maya and Aztecs drank a chocolate drink made from ground cocoa beans, chili peppers, cornmeal and water. Their favourite part of the drink was the froth they created by pouring the liquid repeatedly from glass to glass.

- 🕒 Can we make our own froth? We could try making a milky hot chocolate and pouring it from cup to cup.
- 🕒 What happens to froth after a while?
- 🕒 What can we find out about froth and how it forms on top of hot chocolate?

Ecosystems

The Maya and Aztecs changed their environment to grow crops better. They removed forests to make fields, created terraced hillsides, and made dams and canals for irrigation.

- 🕒 Can we find examples of how people have changed the environment for growing crops in our town?
- 🕒 Can we find examples of where people changing their environment has caused problems?

BIOLOGY



CHEMISTRY

Reversible and irreversible changes

The Maya and Aztecs got fresh water to drink by collecting rain water or from underground caves. The water in the caves contained dissolved limestone and other soluble rocks so it had to be purified before they could drink it.

- 🕒 Can we create a table to show rocks that dissolve in water and those that don't?
- 🕒 How could the Maya and Aztecs have purified their water?

Magnets

The Maya and Aztec people traded with people in other countries. The boats that carried the goods would have a navigation system similar to a compass.

- 🕒 What can we find out about how compasses work?
- 🕒 Can we make a compass that might have been used on Maya and Aztec ships?
- 🕒 Can we use our compass to navigate round the school grounds?

PHYSICS

Contact forces

The Maya and Aztecs made magnificent buildings for their gods and for important people. The first Maya temples were built from rocks and stone more than 2000 years ago.

- 🕒 How does moving a rock on sand compare with moving a rock on another surface?
- 🕒 Moving rocks on sand creates friction. How many ways can we find to reduce friction so rocks move more easily?

Contact forces

Whenever the Maya and Aztec started a new settlement they would build a temple to a god and create a ball court for playing *Ullamaliztli* (a game similar to basketball). The ball used in this game was made from rubber.

- 🕒 If we drop a rubber ball, how many times does it bounce?
- 🕒 Does the height the ball is dropped from affect the number of bounces?
- 🕒 Can we find out how bouncy rubber is compared to other materials?



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Plants and effects of drugs

The Maya and Aztecs used a variety of plants to make medicines. Many of these ancient remedies are still used today.

🕒 Can we find out which types of plants are used to make medicines and drugs? We could make a table or poster to show the type of plant used, which part of the plant is used and what illness or disease it is used for.

Evolution and inheritance

The Maya believed that cross-eyes children with flat noses were beautiful. Sometimes, babies had boards pressed on their foreheads to flatten their faces. To get a baby cross-eyed, objects were dangled in front of its eyes until its eyes were crossed.

🕒 If I hold a board on my forehead to flatten my facial features, what would my children look like? 🕒 Do you think that having a flat nose and cross-eyes would help a person to survive?

Forces: buoyancy

Aztec people used raised beds surrounded by water for growing food crops and floating rafts of reeds as seed beds.

🕒 How many ways can you think of to make a garden float on water? 🕒 A garden will get heavier as the plants grow. What could we do to stop the garden from sinking?

Human circulatory system

The Maya and Aztecs believed that the life-giving sun needed to be kept happy to prevent darkness from taking over. Human blood was offered to the sun to keep it happy. Humans were sacrificed to get their blood.

🕒 What would happen to a person if their blood was drained away? 🕒 What can we find out about how to treat a person who is bleeding badly?

BIOLOGY

The Earth and the sun

The Maya and Aztec studied astronomy. They observed the sky carefully and learnt about the solar system and the stars.

🕒 What can we find out about how the planets move around the sun? 🕒 Can we make a model to show why some parts of the Earth are dark when other parts are light?

PHYSICS

Uses and properties of materials

The Maya and Aztecs had the problem of what to do with waste. One solution was to create rubbish dumps. They had a monthly ritual where they would gather together and burn their rubbish in large dumps.

🕒 What do you think happens to rubbish when we burn it? 🕒 What can we find out about recycling rubbish? 🕒 Can we make a table to show the advantages and disadvantages of recycling rubbish?

CHEMISTRY

Light sources

The Maya and Aztecs developed very sophisticated pyramid-like structures. Many of these structures had burial chambers deep inside them.

🕒 It would be dark inside the burial chambers. How do you think the people building them could see what they were doing? 🕒 Can we make a table to show the advantages of modern light sources compared to those used by the Maya and Aztecs?

Natural resources

The Maya created magnificent buildings as temples for the gods. They used different types of stone extracted from the earth to build these temples.

🕒 What can we find out about how rocks are extracted from the earth? 🕒 Can we make a table to show which natural resources are extracted from the earth, how these are extracted, and what impact this has?

Identifying and grouping everyday materials

The Maya and Aztecs drank a chocolate drink made from cacao beans, water and flavourings such as vanilla and chili peppers. They drank their chocolate drink cold, but we usually prefer our chocolate drinks hot.

🕒 Can we find out which materials make the best insulators for keeping our hot chocolate hot? 🕒 Which materials should we avoid using for insulators?



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