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Cross-curricular links

Chapter	Science	Citizenship	Literacy framework	Numeracy framework	ICT SoW
1	Unit 1A		Y1, Term 1: W8		Unit 1C Unit 2A
2	Unit 1A		Y1, Term 1: W8 Y1, Term 2: W5, W10 Y1, Term 3: W8		Unit 2B
3	Unit 1A		Y1, Term 2: W10		Unit 1C
4	Unit 1A		Y1, Term 1: W8 Y1, Term 2: W5		Unit 2A
5	Unit 1A		Y1, Term 1: W8 Y1, Term 2: W5		Unit 1C
6	Unit 1A	Unit 5	Y1, Term 1: W8	Solving problems – organising and using data	Unit 2C
7	Unit 1A		Y1, Term 1: W8 Y1, Term 2: W5		Unit 1A
8	Unit 2A		Y1, Term 1: T15 Y1, Term 2: T25		Unit 1D
9	Unit 2A		Y1, Term 2: T25 Y1, Term 3, T19, T20	Solving problems – organising and using data	Unit 1E
10	Unit 2A		Y1, Term 1: W8 Y1, Term 2: W5 Y1, Term 2: T25		Unit 1C
11	Unit 2A		Y1, Term 1: W8 Y1, Term 2: W5		Unit 1D
12	Unit 2A	Unit 4	Y1, Term 1: W8 Y1, Term 2: W5 Y1, Term 2: T25		Unit 1D

Introduction

Curriculum Focus: Ourselves helps to make science fun by giving you (especially those of you who are not science specialists) the support you need to plan stimulating and exciting lessons.

This book will help you to plan and teach a unit of work based on the QCA Scheme of Work for Science at Key Stage 1. Also, where appropriate, this book gives indications as to how the work can be linked with other areas of the curriculum.

The material in this book gives you a sound foundation from which to plan a unit of work for your classes.

The material includes:

- detailed **Teachers' notes** giving **background information** on each topic and/or concept to be taught;
- fully illustrated **Generic sheets** offering a wealth of resource material that can be used again and again;
- **Lesson plans** full of ideas for introducing and developing the lesson;
- photocopiable and **differentiated Activity sheets** to support individual and group work.

We recognise that there will be different levels of attainment among the children and that their developing literacy skills will require different levels of support during individual and group work. To help you provide activities that meet the needs of your classes, each chapter contains three photocopiable sheets based on the same material, but for children of different levels of attainment. This enables the whole class to take part in a similar activity.

- Activity sheet 1 in each chapter is intended for lower-attaining children.
- Activity sheet 2 is suitable for most children.
- Activity sheet 3 challenges the higher-attaining children.

Young children have a natural curiosity about themselves and their bodies – their height, weight, hair, eye colour, birthdays and likes and dislikes fascinate them. As a result, they bring a good deal of their own knowledge and understanding to a study of the body. These ideas need to be carefully explored in order to prevent misunderstandings, while at the same time they present ideal opportunities to develop the children's knowledge and experience.

The activities in this book offer opportunities to examine some of the body parts and to discuss their function and, later, to see how some of these parts help us to survive. The activities also provide the background information that will enable the children to explore the similarities and differences between humans and to look at growth and the human life cycle. They also explore ways in which we can stay healthy by eating a varied diet and avoiding substances that could be harmful to the body.

During the course of this work the children will gain experience in questioning, observing, comparing, predicting, recording, measuring and drawing conclusions. They will also have opportunities to work cooperatively and to share their ideas with others.

It almost goes without saying that great care and sensitivity is needed in any work where children compare themselves, and their bodies or their lifestyles, with those of other people. It is also important for the sake of their future happiness and wellbeing, particularly when discussing bodily parts and such functions as excretion, defaecation and reproduction, that children do not come to associate any part of their bodies with adult disapproval.

There are some ideas for taking children's photos. check your school policy and whether you should obtain permission from parents or carers first.

Humans and other mammals

Humans belong to a group of animals called mammals. Mammals are warm-blooded, which means they maintain a steady body temperature, whatever the external temperature may be.

The main characteristic of mammals is mammary glands in the skin of the females. These secrete milk for the young. Mammals are backboned animals (vertebrates) and in most species the young are not hatched from eggs but born alive from within the mother. Many mammals have an insulating layer of hair which prevents excessive loss of heat, but humans, whales, porpoises, dolphins and seals are much less hairy. Some mammal species have spines or scales instead of hair.

Humans have a jointed internal skeleton made up of bones, with muscles attached to them to enable movement. (See Chapter 5 for more information on the skeleton, muscles and movement.) We are totally bipedal – in other words, the body is fully and continuously balanced on the two hind limbs. We have two arms, hands and fingers. One small but significant difference between humans and our closest relatives, the apes and monkeys, is our long thumb. All the apes and monkeys have so-called opposable thumbs – thumbs that can bend across the palm – but the human thumb is especially long. This makes it possible for us to carry out delicate tasks. Another advantage we have over our ape and monkey relatives is our large brain. We are probably the most intelligent animal species that has ever lived.

Various parts of our body are used for the senses: ears for hearing, nose for smelling, eyes for seeing, tongue for tasting and skin for feeling. (See Chapter 2 for more information on the senses.)

Cells, tissues, organs and systems

Like all living things, a human body is made up of building blocks called cells. Most cells are so small that they can only be seen through a powerful microscope. There are more than 50 billion cells in

a human body. The largest is the human egg, which is about the size of a printed full stop.

An organ is a collection of tissues with a particular job to do. For instance, the heart pumps blood and the stomach and liver help to digest food.

More than one organ is needed to digest food. The stomach does some of the work, but the mouth, intestines, liver, pancreas and other organs also help. These various organs form the digestive system. The heart, veins and arteries are organs of the blood system or circulatory system. They work together to circulate blood around the body. A number of different systems go to make up the human body. They include the skeletal, muscular, digestive, nervous, excretory, respiratory, circulatory, reproductive and endocrine systems.

In addition

Other features of mammals include:

- an external part to the ear, known as the pinna;
- different types of teeth to chew, grind or chop food;
- toes or fingers that terminate in nails, claws or hoofs;
- a well-developed brain;
- a muscular sheet, called the diaphragm, which separates the chest from the abdomen and is used in breathing.

Most mammals also have sweat glands in the skin, and as the sweat evaporates it takes away heat, helping to cool the animal's body.

Unlike all other animals, we humans have a complicated language with which we communicate our ideas to others. We are able to store information in written records and, more recently, by other means, and to pass it on from one generation to another. We can work out the answers to questions and difficult problems and also make and use tools and machines.

Humans have a long postnatal development. After a gestation period of nine months, one baby (but

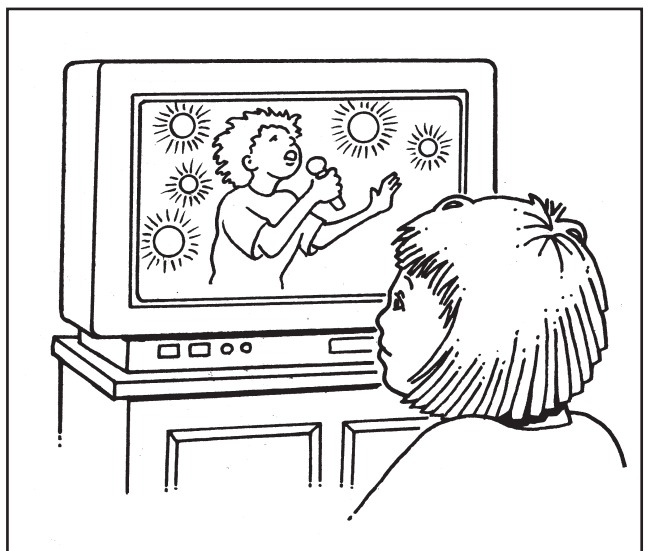
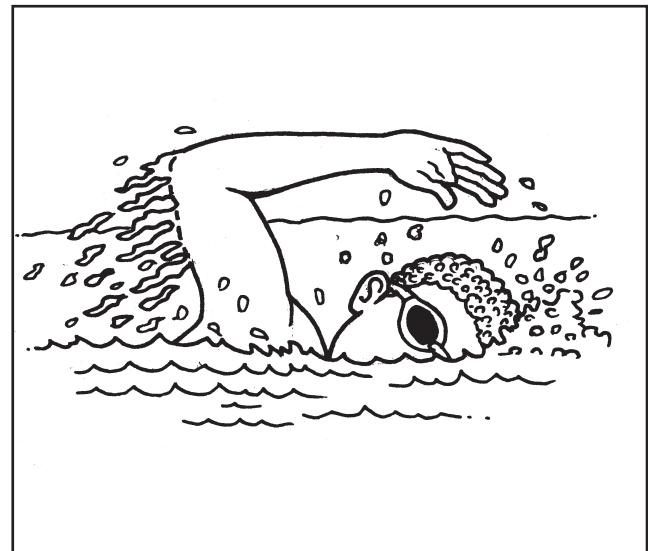
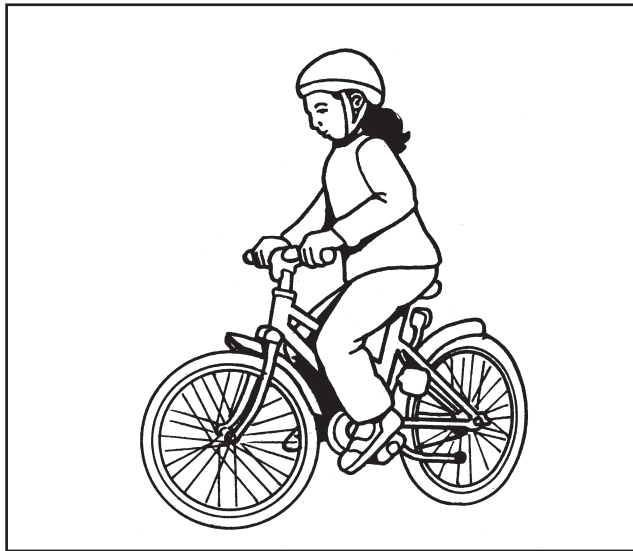
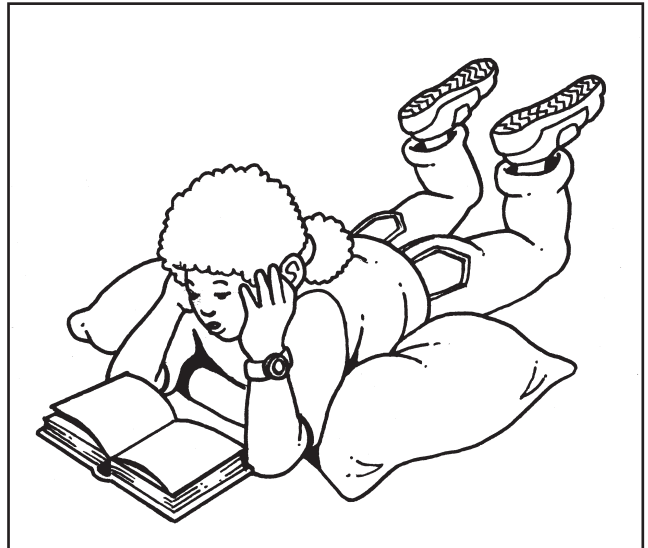
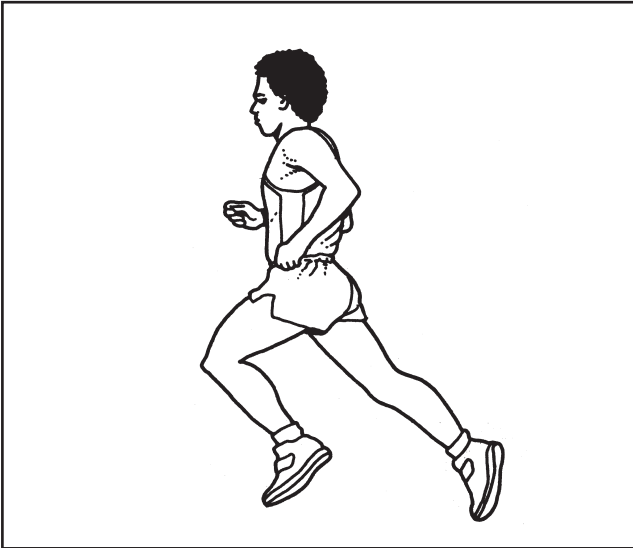
occasionally larger numbers of offspring) is born which suckles for periods of up to several years before weaning, depending upon cultural practices. The rate of development is slow and the period of childhood prolonged, which has a great influence on the family and social organisation of the human race.

Technical terms

Humans have bodies with similar parts. Key Stage 1 children need to be familiar with the following words:

Body, head, hair, forehead, cheek, chin, ear, eye, nose, mouth, neck, shoulder, arm, elbow, wrist, hand, finger, thumb, leg, knee, ankle, foot, heel, toe, waist.

Our bodies



Our bodies



Science objective (Unit 1A)

- To know that humans have bodies with similar parts.

Resources

- A large cut-out picture of a person, or a shop dummy
- Tie-on labels
- Coloured pencils or crayons
- Generic sheet 1 (page 8)
- Photocopiable activity sheets 1–3 (pages 10–12)

Starting points: *whole class*

Gather the children around the cut-out figure or dummy. Point to a part of the model's body and ask them to point to the same part on their own bodies. Invite them to name that part and, if successful, to tie a label on the appropriate part of the model. Parts could include head, arms, legs, hand, foot, fingers, toes and face.

Introduce the game 'Simon says'. This provides a quick and easy means of assessing the children's level of knowledge. You could put the more able children at the back of the class to prevent the less knowledgeable children from copying them.

Show the children Generic sheet 1 which has pictures of people carrying out different activities. Ask them to say which part or parts of the body are being used for each activity.

Group activities

Activity sheet 1

This sheet is for children who need more support. They are required to study the outline of the human body and to label the parts using the words provided.

Activity sheet 2

This sheet is aimed at children who can recognise more external features than in Activity sheet 1.

Activity sheet 3

This sheet allows the children free rein to use their knowledge of bodily parts. They are also required to demonstrate, in writing, some knowledge of the functions of parts of the body.

Plenary session

Ask a volunteer to lie on a large sheet of paper and draw around him or her. Cut out the entire life-size shape and then carefully cut off the limbs and head from the body shape and label all the parts.

Challenge the children to reassemble the body, like a puzzle. If desired, this activity can be treated as a race to put the body back together again, using a timer. Discuss what we use the different parts of the body for.

Ideas for support

Produce a display of photographs and other pictures showing people with the parts of their bodies labelled. The parts of a large doll could be similarly labelled.

Ideas for extension

Make a collection of dolls and similar articulated figures. Make a 'dolls' hospital', using shoe boxes as beds. Let the children decide which part of the body on each figure is ill or injured. Label the 'bed' accordingly and perhaps put a small paper bandage on the injured part.

Plan more opportunities for activities that involve naming parts of the body, such as 'Raise your hands', 'Lift one leg', 'Touch your neck' and 'Shake your foot'. These can be incorporated into a classroom lesson or linked with a PE activity.