

Living or never alive?

➔ Teacher Guidance

This section encourages children to explore the nature of living organisms. They need to decide whether something is living or has never been alive, and what are the particular characteristics that make something 'living' rather than not living. As they probe further, the children may get some surprises when they realise that plants are living just as much as animals, and that all living things carry out the same processes, but often in rather different ways. In particular, younger children need to recognise that living things move, feed, grow, reproduce and use their senses. Reference to the 'Background information for teachers' may help give teachers a secure grounding and enable them to respond to and take forward some of the ideas that come from the children.

Activity 1: Going on a treasure hunt

The aims are to decide whether objects are living or have never been alive, using features that the children observe. The 'Treasure hunt' approach is probably familiar to many teachers but it is largely through the discussion, in groups and in the class, that children are able to develop and establish their ideas. As they do this, you can begin to elicit children's existing understanding of groups of living things. Then, as they progress through these activities, children begin to become aware of the seven processes carried out by living things and can discuss what living things do.

These activities are likely to be used at two levels – firstly a relatively simple version for younger or less able children and secondly a more complex version that may be used even two years later with older children. The second version gives a useful approach for children ready to understand the differences between plants and animals. Teachers may wish to refer to the Background information for teachers (page 30).



Going on a treasure hunt (1)

This version is suitable for younger or less able children. The initial hunt can be carried out in the school grounds or playground. If this is not possible, the teacher can collect a suitable range of objects before the lesson and the children then carry out the sorting part of the activity. The game can easily be played in an urban school, with some objects being deliberately 'planted'.

Choose objects that are readily available in the chosen area around the school. Here are some suggestions, but make sure that children understand that they should not collect whole plants or whole animals as part of the treasure hunt.

Suggested objects: a piece of paper; a stone; a fallen leaf; a piece of plastic; something made of metal; a twig; a fruit or seed; an artificial flower; something that the child can choose.

The activity

The children can work in groups of three or four. Give each group a bag or tray and a list of the objects they are going to hunt for in the chosen area. The activity can be timed to limit the time spent on the 'hunt'. When time is up, the children bring the objects back to the classroom.

In the classroom

Ask the children to sort the objects into two groups, justifying their choice. Discuss as a class the different ways they have grouped the objects. Let them see that trying to sort things into groups can cause problems.

Whichever criteria they use, the activity is likely to start making them think about alternative ways of classifying objects (e.g. big or small, rough or smooth). Next focus on grouping them into 'living' and 'have never been alive'. Discuss why certain objects have been put into the living group and what they all have in common.



Figure 1a. Here are some things that have once been alive...



Figure 1b. ...and some things that have never been alive.

Going on a treasure hunt (2)

This version is suitable for older or more able children. Follow the instructions as given above, but provide a different list of objects (or the teacher collects them before the lesson). The emphasis now is to begin to sort living things into plants and animals and to use a more extended vocabulary.

Suggested objects: a piece of paper; a rough stone; a fallen leaf; a fallen petal; something from an animal (e.g. a bone, feather, shell, wool, fur); a piece of plastic; something made of metal; a small twig; a fruit or seed; a blade of grass; a pine cone; a smooth round stone; a silk or plastic flower; something that the child can choose.

In the classroom

As in (1), ask the children to sort the objects into groups, but discard the 'never been alive' group of objects. Then let the children focus on the living group and split them into two groups, giving reasons for their choice. Again, discuss as a class the different ways they have grouped the living objects. Within the living group, focus on how they have sorted the objects into 'plant' and 'animal' and the criteria they have used.

Curriculum links

National Curriculum (Sc2)

QCA guidelines – Scheme of work

Scottish ISE 5-14 framework/attainment targets

KS1: 1a, 4b. KS2: 4c

Unit 1B; Unit 2B; Unit 2C

LT-A1.2

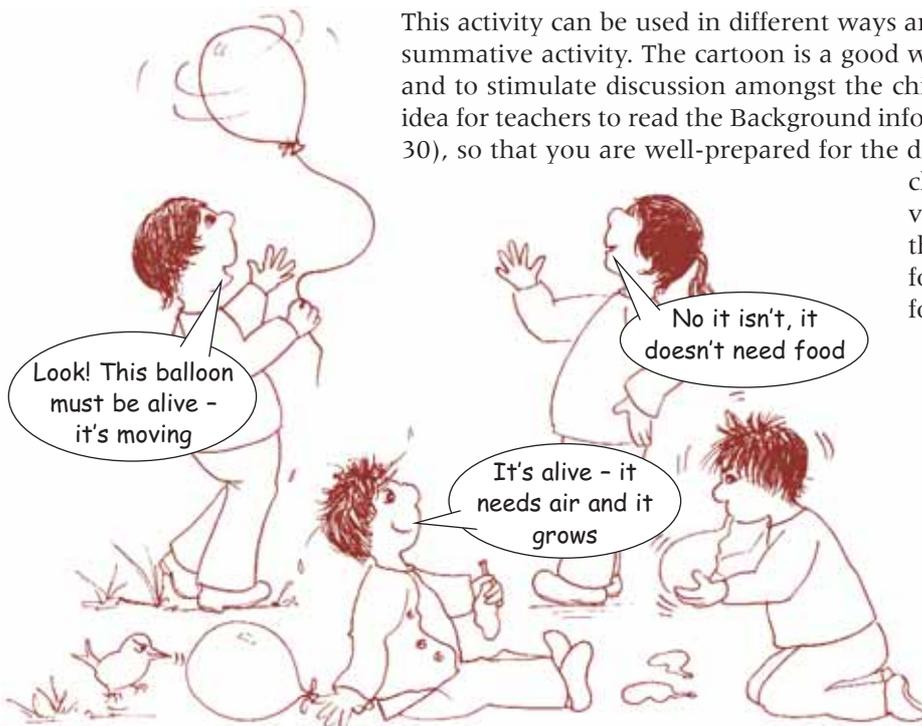
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Activity 2: Living things - what they need and what they can do

This activity follows on naturally from the treasure hunt activities (at either level), in which children begin to become aware of whether things are living or non-living (never been alive). As they try to give reasons for their decisions (in the treasure hunt activity), the children begin to think about what living things do. It is usually easier for children to talk about what animals do (as living things) and harder for them to understand that plants show the same range of characteristics.

This activity can be used in different ways and is useful as a formative or a summative activity. The cartoon is a good way of introducing this activity and to stimulate discussion amongst the children in the class. It is a good idea for teachers to read the Background information for teachers first (page 30), so that you are well-prepared for the different questions that curious children are likely to ask. This version uses 'MRS GREN' as the guide, but you may adapt it for MRS NERG or whatever format you prefer.



The activity

Children may work in groups or individually. In the Pupil Sheet, three of the rows in the table have a greenish background. These rows are suitable for older or more able children, whereas most children should be familiar with the rest of the table (with a white background).

Ask the children to choose an 'example' of a plant, of an animal and of an object that has never been alive. The teacher may provide a selection for the children to choose from. Ask the children to write their chosen examples in the appropriate boxes on the Pupil Sheet. They use their own examples when trying to answer the questions.

Encourage discussion as the children try to write their answers in the boxes and use the cartoon to stimulate discussion. The cartoon is also available as a separate file on the SAPS website, so can be viewed using an interactive whiteboard or displayed in some other way.

Curriculum links

National Curriculum (Sc2)

KS1: 1a, 4b. KS2: 1a; 1b

QCA guidelines – Scheme of work

Unit 2C

Scottish ISE 5-14 framework/attainment targets

LT-A1.2

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↓ Pupil Sheet

Living things - what they need and what they can do

1. Choose a plant, then write its name on the dotted line in the box in the table.
 Choose an animal and write its name on the dotted line in the middle box.
 Choose an object that has never been alive and write its name on the dotted line in the last box.
2. Then look at your plant and answer each of the questions. If the plant does the characteristic in the list, write YES in the box.
 If the plant does not do the characteristic, write NO in the box. Then repeat this for the animal and for the object you chose.

First answer the questions for M, G, R and N, in the rows with a white background. Your teacher may also ask you to do the other ones shown with a green background.

Characteristics (Living things need to do all these things)	a plant	an animal	an object that has never been alive
M Does it show any movement?			
R Does it need air or oxygen?			
S Does it react to what is happening in its surroundings?			
G Can it grow larger?			
R Can it make more living things like itself?			
E Can it get rid of waste from itself?			
N Does it need food for energy?			