



# TESSA

**Teacher Education in Sub-Saharan Africa**

## Teaching Pack No. 8

### Middle Primary

**Section 1 Literacy:** Creating opportunities for communication

**Section 2 Numeracy:** What's in a box?

**Section 3 Science:** Plants and animals adapting to survive

**Section 4 Social Studies:** Investigating weather

**Section 5 Life Skills:** Ways of taking responsibility

**Additional Resources:**

- Group work in your classroom
- Working with large/multigrade classes

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## Literacy: Creating opportunities for communication

1 Information gaps in communication

2 Visual information

3 Making meaning

Key Question for the teacher:

How can you create activities to promote communication in the additional language?

Keywords: information gap; interaction; meaningful; creating activities; groups

Learning Outcomes for Teachers:

By the end of this section, you will have:

- created activities for real communication in your additional language class
- explored ways to teach students how to read and write about information presented in different forms
- developed a 'library' of resources to stimulate natural communication
- used group and pair work to develop interaction in the additional language

## Overview

As a teacher, you need to make use of research findings related to what you are doing. Recent research indicates that people acquire language through participating in meaningful interaction in the language, in natural contexts. What does this mean?

- 'Participating': Each student should participate – or be actively involved.
- 'Meaningful': The activity should be relevant and have meaning for students.
- 'Interaction': Communication should be two-way (or three- or four-way).
- 'Natural contexts': The language used should be everyday language.

In this section, we look at how to stimulate this kind of interaction in your classroom, largely through the use of pictures. We suggest that you develop a selection of resources.

Interactive classroom work usually takes place in small groups. This is the approach in the **Teaching Examples** and **Activities** that follow.

# 1 Information gaps in communication

Motivating students to communicate with each other involves setting up activities they can carry out together that are 'real'. Groups are supportive and allow students to try out new language.

'Real' communication involves an 'information gap'; in other words, students find out something from one another that they don't know already. In the past, students may have been instructed to ask a classmate, whose name they knew well, 'What is your name?' There is no information gap here, so communication is not 'real'.

**Teaching Example 1** and **Activity 1** show how finding missing information can be used in order to form groups or pairs.

## Teaching Example 1

Liz Botha in East London, South Africa, wanted to divide a group of 40 teachers into groups of four, in a way that would help them communicate with one another.

She found a set of 16 pictures all on one page in a textbook. She made four copies of the page and cut ten pictures from each page so that she had ten sets of four pictures: shoes; flags, etc. She shuffled the pictures.

As the teachers arrived, she handed each one a picture, and told them not to show it to anyone. She then instructed them to move around the room, asking questions of the kind:

Question: Do you have a picture of a(n) .... ?

Answer: No, I don't./Yes, I do.

They continued with this until they had gathered a group of four people with similar pictures.

Once groups were formed, members had to talk about themselves to one another, and find, through discussion, one thing that they had in common: perhaps all four had younger sisters, or liked or disliked a particular kind of food or music, etc.

They enjoyed the activity enormously, and ended up knowing one another well.

How can you do something similar in your classroom?

## Activity 1

- Write up a list of words related to a recent lesson.
- Give each pair of students one word from the list and two small pieces of paper. Ask them to split their word into half and to write one half on each of the small pieces of paper.
- Collect and mix up all the pieces of paper. Now give each student a half-word.

- Ask students to find the student who has the other half of their word, and stand with him/her.
- Pairs read their words to the class.
- Each pair then writes the meaning of their word on another piece of paper. Collect the meanings and the half-words.
- Give out the half-words again and repeat the matching process.
- Next, call out each meaning in turn and ask the pair to sit down when they hear their meaning. No one should comment on whether they have sat down correctly or not. The meanings eventually become clarified.
- Try the game again and see if they can play it more quickly and accurately.

**Did this activity help your students to understand the meaning of the words? How do you know this?**

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## 2 Visual information

As a teacher, you should always be looking out for activities that develop the skill of listening with understanding.

Here, **Activity 2** involves listening and drawing, or converting language information into visual information. It has a similar advantage to total physical response (TPR), as students do not have to produce language to show their understanding. However, it requires the one who is describing to be very clear and accurate – otherwise the consequences can be seen in the partner's picture.

### Teaching Example 2

Lulu was always getting 'junk mail' pushed through her letter box: advertisements from different shops showing pictures of their wares. One day she decided to keep them, instead of throwing them in the bin.

She cut out the different household products: packets of Indomie, sugar and flour; boxes of washing powder and cereal, etc. She had many duplicates.

She drew six pictures of kitchen shelves, and stuck the household products onto three of them. Each of the three pictures was different. She then cut out duplicates of all the products on the kitchen shelves. She also had three empty kitchen shelves.

In her Grade 4 class the next day, three groups of six or seven students were given pictures of full shelves. The empty shelves went to the other three groups, and different students in these groups got the duplicate products.

She paired the groups, letting Group 1 (with the complete picture) sit near Group 2 (with the empty shelf and separate products). The members of Group 1 described how the products were arranged on the shelf, and the members of the other group arranged them on the empty shelf. They asked questions when they were not sure. This gave them practice in using words about positions in a 'realistic' situation.

The lesson went well. Lulu decided that next time she would extend her students' vocabulary by asking them to sort and describe images of – or, if possible, actual – drums and artefacts from the local community.

## Activity 2

This activity is carried out in pairs or groups. One member describes and the other(s) draw(s). In a multigrade class, the older students might describe, while the younger draw.

- Find some very simple pictures or diagrams or draw your own, e.g. line drawing of a house or tree. You will need one picture per pair, or group, of students. The pictures can be the same, or all different.
- Introduce students to the vocabulary and sentence types that they will need to use, e.g. 'Draw a square in the middle of the page.' 'Draw two chickens beside the house.'
- Hand out one picture per pair (or group), instructing 'describers' not to let their partners see them. The student with the picture describes it to the other student(s), who tries to draw what is described. They must not say what the picture is.
- At the end the describer and the drawer(s) compare their pictures. Start a whole class discussion: 'Asanda's circle is much smaller than the one in the picture.' 'Thabo's chickens have big heads, but the ones in the picture have small heads.' With practice, they will get better at this kind of activity.

## 3 Making meaning

As a teacher, you need to remember that human beings (including your students) always try to find meaning in what they do. Every activity you give your students should give them an opportunity to search for meaning.

Teaching Example 3 and the Activity 3 explore ways to search for the meaning in passages and texts. Students practise some of the crucial skills involved in reading: prediction and anticipation (guessing what might happen next). They also have to interact with one another in order to solve a problem. Each person has a part to play in order to solve the 'puzzle' and find the meaning.

### Teaching Example 3

Mrs Ndaba's Grade 6 class had brought stories from home and illustrated them. On each page, they had written a sentence and drawn a picture to match it. The pages had been inserted into plastic sleeves in files to make books.

Her colleague, Ms Mdlalose, who taught the Grade 3s, had seen the illustrated stories, and asked to borrow them for a reading activity with her students. Mrs Ndaba came and watched.

Ms Mdlalose divided her class into five groups. She gave each group a story but she took the pages out of the file, and put the file in the middle of the table. She then gave each student in the group one page of the story, making sure that she mixed the order of the pages. Each student had to read the sentence on their page to the group. Through discussion, the group decided which sentence came first in the story, put all the sentences in order and put the pages back into the file in the correct order.

Mrs Mdlalose asked one student from each group to read their group's story to the class and they commented about the order. As a class, they selected their favourite story and a five-minute drama was organised to perform this story.

### Activity 3

You can use this kind of activity at any level.

- Select a short, well-written story or passage that your students can understand and relate to. You could use a story, a picture story or paragraph(s) or a more complex passage in any language or subject area. Each group could have the same or a different story to work on.
- Cut it up into six or seven pieces. These could be paragraphs, sentences or groups of sentences depending on the age and competence of your students. Mount each piece on card.
- Give each group a set of the cut-up parts of the passage.
- Each member has a piece of the passage, and reads their piece to the others. As a group, they put the passage together in its correct order.
- With more experienced or able students, ask them to explain how they worked out the correct order.
- Read the passages or stories to the class.

### More information gap activities

#### What is common?

Choose sets of six or eight pictures. Each set of pictures should have something in common. For instance, you might have six pictures which all have something in them that is made of glass or a set of six where someone is eating in every picture. Maybe you have six pictures that all show a baby, or show poverty, or kindness.

Divide your class into groups so that each group can have a set of pictures. Make sure that you have some spare sets, for any groups that finish quickly.

Once a group has finished, you can collect their set of pictures and hand them to another group that has finished.

The members of the group should not show one another their pictures. They should ask the following kind of questions of the other people in the group:

Is there (a) .... in your picture?

Are there .... in your picture?

Does your picture show .... ?

The other members answer:

No, there isn't/aren't. or Yes, there is/are.

No, it doesn't. or Yes, it does.

The person who identifies the common element is the winner.

The game is easier or more difficult depending on how abstract the common element is.

### What do they do for a living?

Write a list of occupations, like the one below, on the board.

Doctor	Dentist	Teacher
Shopkeeper	Nurse	Manager
Clerk	Pilot	Engineer
Gardener	Bookkeeper	Police officer
Farmer	Fishmonger	Computer operator
Air hostess	Pharmacist	Food vendor
Florist	Scientist	Musician
Computer technician	Shop assistant	Garage mechanic

- Ask the students to say what they would like to do when they finish their studies. They might want to add occupations to those listed.
- Give out cards to pairs of students and let them write the name of an occupation on their card. On another card, they should write the meaning of the occupation.
- Ask one member from each pair to report to the class on the type of occupation they had, and its definition. The other students should comment on whether they think the definition is correct.
- Collect the occupation and definition cards, and distribute them randomly. Ask students to go round the class and find a partner with the appropriate definition or word.
- When the partners have found each other, they should stand together until everybody has finished the activity.

## Numeracy: What's in a box?

- 1 Investigating nets
- 2 Designing and identifying nets
- 3 Drawing nets for different shapes

**Key Question for the teacher:**

**How can you help students 'see' and mentally transform geometric shapes?**

**Keywords:** nets; geometry; visualisation; transformation; boxes; dice; investigations

**Learning Outcomes for Teachers:**

By the end of this section, you will have:

- explored practical ways to use the local environment and simple nets to help students understand 3D objects
- used investigation and problem solving to extend your students' thinking about the different nets to make cubes
- used dice to encourage mental visualisation and transformation of cubic nets

## Overview

Imagine you have to draw a shape on a piece of paper, which can be cut out and folded into a cube. On the paper you will draw the six squares that will fold up to make the six sides of the cube. Can you imagine the shape you would draw on the paper to make the cube?

It is not easy to do, as this imaginary exercise requires two important mathematical skills – mental visualisation (being able to 'see' with your mind's eye a two-dimensional [2D] or three-dimensional [3D] mathematical image) and mental transformation (being able to 'manipulate' or change that image in some way).

This section explores practical ways to develop these skills in your students as they make nets. (A net is a 2D representation of a 3D shape, with dotted lines to represent folds, and solid lines to represent cuts.) Manipulating a real object will help your students visualise the transformations of this object and relate their understanding of shape to their own life.

# 1 Investigating nets

As your students work it is important that they feel that they are doing the investigation, that they are solving the problem. As a teacher, you need to be able to stand back and watch your students taking over the central stage. At first, this is often difficult to do, but if you can find a way to set up your classroom that gives students the space to think, talk and explore, many of them will surprise you with their imagination and understanding. This is the approach in the Teaching Examples and Activities that follow.

Activity 1 and Teaching Example 1 explore ways of allowing students to discover the nets for different shapes themselves.

## Teaching Example 1

Mrs Sawula in South Africa was doing work on shape. First, she took her class out into the local environment to look at all the different shapes they could find.

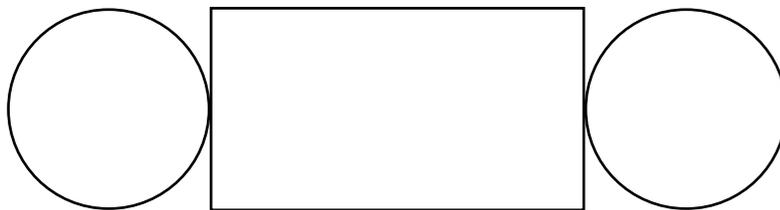
The next day, she wanted to start her lesson on nets by having her students discover a simple net for themselves.

Mrs Sawula asked them to think how they could make a paper plan of some of the shapes they had seen. She listened to some of these ideas. Then, having asked her students to bring in a tin (she collected a few herself for those who forgot or couldn't bring one in), she asked them this question to discuss in pairs: 'Your tin can was made from a flat piece of tin. Imagine your piece of paper is a piece of tin to be made into a can – what shape would have to be cut from the paper? Can you use the can to help you draw this shape on your paper?'

She gave the students time to try and solve this puzzle. Mrs Sawula enjoyed watching her students working and did not interfere unless she saw they were stuck.

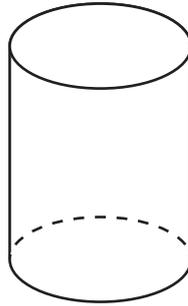
She was pleased at how many were able to produce the net.

A net is a flat or 2D shape that can be folded to make a 3D object. Below is the net of a tin, known as a cylinder.



A 2D net

The 3D object below (a cylinder) is what the 2D net looks like when it has been folded.

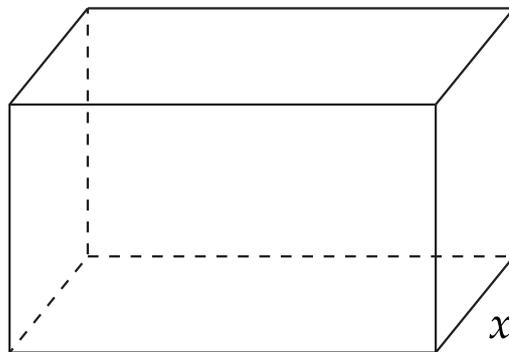


A 3D object (a cylinder)

### Activity 1

For this activity ask each student to bring in an empty box. You should collect some too.

- Give each group of four some glue or sticky tape and four sheets of A4 paper.
- Tell students that together they are going to explore how to make a box the same shape as the box (a rectangular prism – see below), using one A4 sheet and by drawing, folding and sticking.



- Ask them to work together and discuss how to do it before they start. Once they are happy with what they are doing, ask them to use one piece of paper to test their ideas.
- If some groups are stuck, give them a clue about how to start by suggesting they undo the box to make it flat.
- Walk around silently; only help if a group is stuck or asks for support.
- Ask each group to show their work to the class.
- In the next lesson, ask students to decorate their boxes and hang them from the ceiling.

Finally, ask them to draw their plans or nets for the box they made and display these too.

## 2 Designing and identifying nets

In this part, you will help students extend their understanding by moving from open to closed boxes. This means adding a lid to the box and explaining what changes need to be made to the net.

Using the same groups working together, means that students can build on their collective ideas. Putting your students into new groups, in this case, would mean they would have to revisit earlier ideas first, which would slow down the development of new ideas.

In this part, you show your students how there is not just one correct answer, but many possible answers. By not telling them too much, but asking questions to guide their thinking, you are giving them the satisfaction of discovering things for themselves. This will build their confidence and give them courage to try new ideas.

### Teaching Example 2

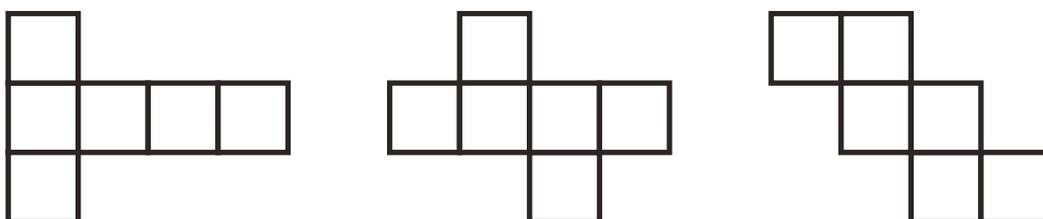
Mr Chishimba was pleased with the progress of his students in Activity 1. He explained that, in mathematics, some words have special meanings. In mathematics, for example, the word 'net' is sometimes used to mean a plane shape (a flat, 2D shape), which can be folded to form a solid 3D object. He asked his students to add this term to their mathematical dictionary and put in a definition. As they had made a net of an open box previously, he asked them to make a net of a closed box. He suggested they looked at the nets they had drawn last time and think how they could add a lid. Using the same groups, Mr Chishimba asked them to discuss together how to add a lid and draw the new net. He gave the groups ten minutes and then asked each group to draw what they found on the board.

Then he asked each group to look at the different nets and agree whether they all worked.

### Activity 2

Make sure students understand what a cube is, then ask pairs of students to find as many different nets for a cube as they can. They should first draw each net, then cut it out and check that it makes a cube, before trying to draw a different net.

(You may want to show one or more examples such as those below to get them started.)

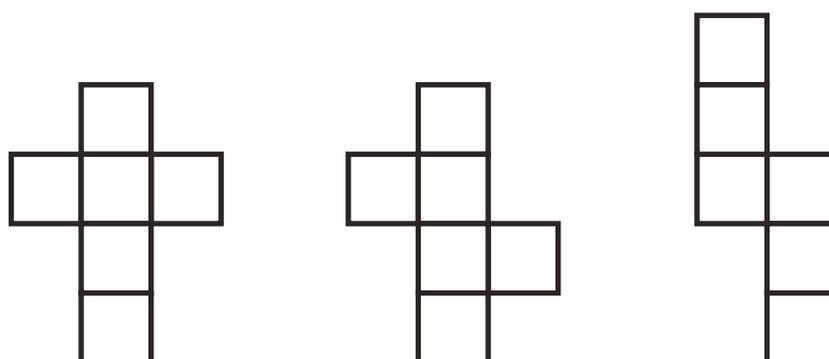
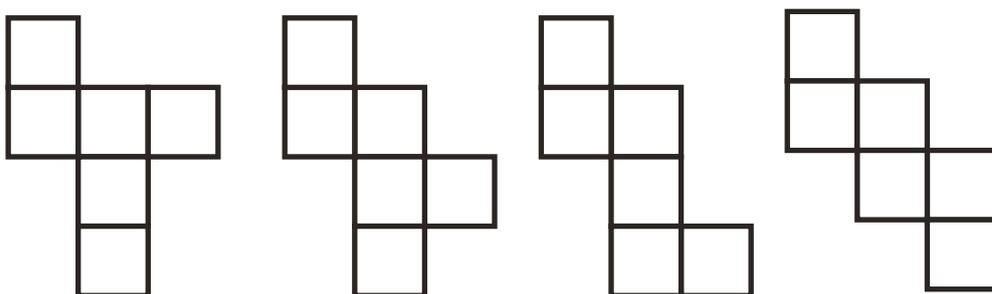
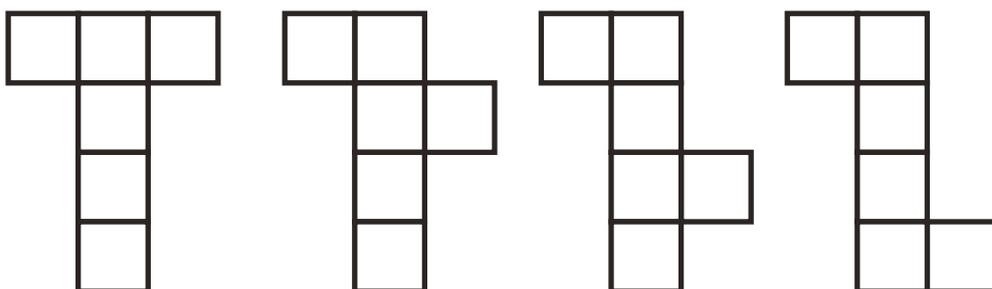


You might like to set this up as a competition, with a reward for the group that can make the most nets for cubes, (see below).

Again, do not interfere or talk too much during this lesson; make space for the students to talk through their ideas and to enjoy the activity. Listen carefully to them and identify how they are able to solve their own problems.

Display the finished cubes and, if there is time, allow them to decorate them to celebrate what they have achieved.

Discuss how many different nets they have found. Ask them to make a wall chart of the 11 possibilities of a net for a cube.



### 3 Drawing nets for different shapes

Having established familiarity with nets, and making cuboid shapes from them, you now move on to ways of helping your students to visualise and transform these nets mentally. One way to do this is by using a dice. Another way is to look at shapes in the environment.

A dice is a special kind of cube, where each surface has a unique number between 1 and 6, and where the numbers on opposite surfaces add up to 7.

In order to correctly number the squares on a cubic net, before it is folded into a cube, the student must be able to visualise the transformation from 2D to 3D in their mind's eye. Teaching Example 3 and the Activity 3 explore these ideas in different ways.

#### Teaching Example 3

Mrs Moyo wanted to develop her students' awareness of mathematics around them in everyday life and so she went to the nearby ZCBC supermarket and took some pictures of various containers with her mobile phone. She printed the pictures and took them to her class.

She asked her students to make neat drawings of what they thought the nets for these containers would be, and label them with the product names. When they had drawn the nets, they cut them out and made them into 3D objects so Mrs Moyo could hang them in the classroom. The students were very pleased with what they produced and so she asked them to invite their parents to come and see their work. Mrs Moyo knows that it is important to have good parent cooperation, as this enhances teaching.



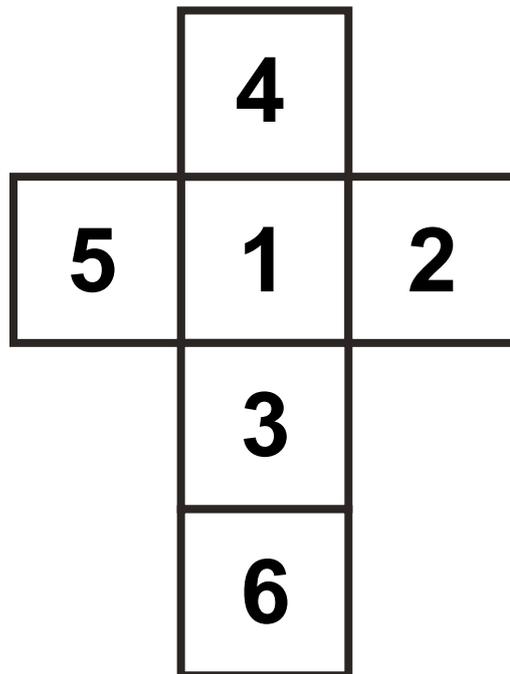
### Activity 3

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Before the lesson, collect up or make several dice to show your class.

- Ask students in pairs to look at a dice, and look carefully at the numbers – they should be able to identify that each side has a number between 1 and 6; you may have to prompt them to see that opposite sides add to 7. Allow them time to check if this rule is followed on all their dice.
- Now give each pair two sets of empty 5 x 5 square grid papers. Ask them to design different nets for a dice: a cube net with numbers written on the squares so that they obey the rules above. When they think they have solved the problem, they may cut out the nets and check that they have 'correct' dice.
- After the pairs have solved this problem, they could mark dice numbers on some of the other 11 cube nets that they identified.
- Ask each pair to make a poster to display the different numbering patterns for each net.
- You could extend this activity by asking your class to make a board game about shape and use their own dice to play it.

You may wish to use a double lesson for this activity.



## Science: Plants and animals adapting to survive

1 Teaching students to think for themselves

2 Observation

3 Project work

**Key Question for the teacher:**

**How can you encourage students to make deductions from their detailed observations?**

**Keywords:** plants; animals; observations; adaptation; mind maps; brainstorming; project

**Learning Outcomes for Teachers:**

By the end of this section, you will have:

- encouraged students to make deductions from their observations of living things (thinking and behaving scientifically)
- used mind maps to record observations
- undertaken collaborative open-ended activities

### Overview

One important way in which scientists work is to make logical deductions based on careful observations and data.

Too often, teachers prevent this by giving students ready-made facts to memorise (and which students often forget). So we need to support students as they work things out for themselves. This section looks at encouraging students to interrogate (ask questions about) their observations in order to make reasonable deductions for themselves.

To tackle this, we focus on how animals adapt for survival and movement.

Ponds and pools of water support a complex balanced system of life. Observations of such an ecosystem can be organised on a mind map. Students can then add their ideas in a different colour.

In Activity 1 we encourage you to start an open-ended project – making a temporary pond at school. This can be populated by plants and animals borrowed from a local source. It is best if you involve your class in discussions about how you will collect pond life and safely keep it in the temporary 'pond'. Students make accurate observations of life in the pond over a few weeks. By temporarily bringing nature close to the classroom, you have a resource for extending initial observations into deeper science thinking.

# 1 Teaching students to think for themselves

Teachers often feel insecure when doing more open-ended work like this. But it is more 'learner centred'; it builds on students' ideas and interests. You will probably be surprised by your students' enthusiasm and the high quality of work produced. Remember that there are no 'right answers' to open-ended work like this. There is accurate observation and there is good, clear thinking that builds deductions that make sense.

**Teaching Example 1** describes how a specific local environmental problem can be the basis for similar work. Do you have any similar problems in your area? This is a good opportunity to ask a local expert to visit your classroom to talk about the problem; remember to spend time preparing questions with your students before the visit.

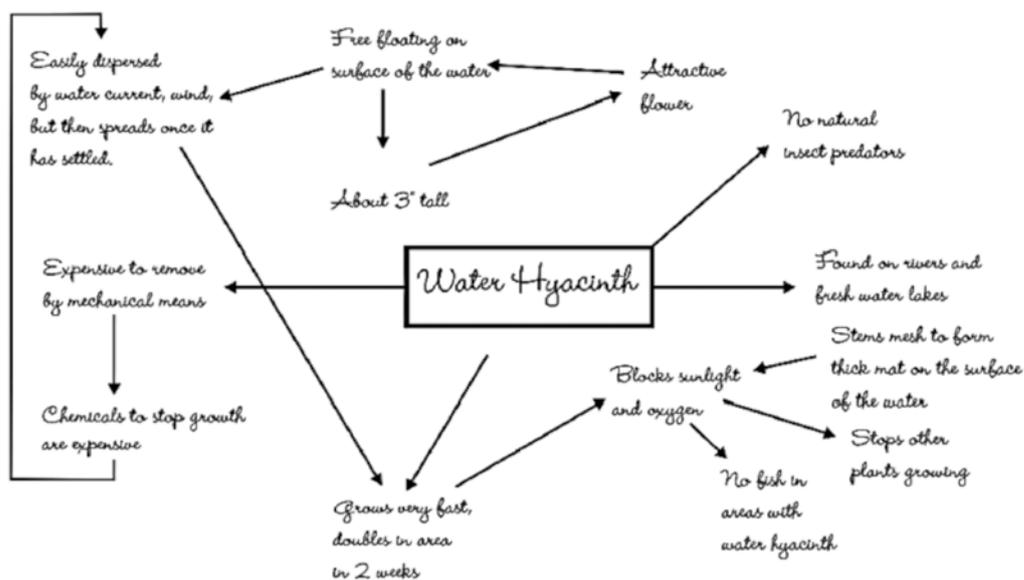
## Teaching Example 1

Bongile Mpuntsha teaches in the rural Nxarhuni valley (South Africa) where there are weirs (barriers) to retain river water for farming. But there is a huge problem on the water. An alien plant – water hyacinth – is growing rampantly out of control and clogging the water.

Bongile uses the problem as a basis for science work. He starts with the observation of actual samples (specimens) of the plant. These initial observations are recorded on a collective class mind map. The students discuss the mind map, which leads to further observations. Then, from what they have observed, students work to answer the core question: What factors and adaptations make this plant such a successful invader?

It is clear that the students are able to think scientifically, given the opportunity. Bongile is surprised and pleased with their deductions. These are discussed and written up on the mind map in a second colour.

### Observations on the water hyacinth – an example from the class



**Background information on the water hyacinth**

Water hyacinth, *Eichhornia crassipes*, is a free-floating perennial herb. The plants grow about 3 feet tall as they float on the water's surface, with stems intertwining to form dense mats.

Out of its enemies' reach (mechanical/chemical removal or strong water flow/wind), the water hyacinth has become one of the most troublesome floating aquatic weeds in many tropical and subtropical parts of the Americas, Asia, Australia, and Africa. In Africa, it infests every major river and nearly every major freshwater lake.

Water hyacinth damages water quality by blocking sunlight and oxygen and slowing the water's flow. Capable of doubling within a couple of weeks, it can grow faster than any other plant. By choking out other vegetation, it makes an area unusable by plants and animals that live in or depend on the water. Fish spawning areas may vanish.

Uncontrolled, water hyacinth robs water from potential drinking and irrigation supplies. The mats can block boat travel. Chunks of mat can break free to clog downstream pump stations supplying water for drinking, irrigation and hydropower.

Chemicals and mechanical removal, the primary weapons against the weed, are costly and often ineffective.

**Lake Victoria's water hyacinth problem**

No one's sure how the South America water hyacinth invaded Africa's Lake Victoria but there's little doubt as to the damage it has caused. In 1989, the weed was spotted in the lake and seven years later, it had clogged 80% of Uganda's shoreline. Freed from its natural insect enemies, it continued to spread. Getting to fishing grounds became a terrible struggle. A reduced catch and lowered income threatened to trigger widespread famine. Rotting vegetation, under the suffocating blanket of weeds, began to foul drinking water – which comes straight from the lake. Meanwhile, along the edges of the floating weeds, water snails harbouring the deadly schistosomiasis parasite found a new place to breed.

**James Ogwang – decided to spoil the party**

Ogwang, a scientist from Uganda, imported another invasive species – a voracious South American weevil and natural enemy of the water hyacinth. Ogwang tested to see if his new tiny imports would solely attack the water hyacinth and not any local crops. Satisfied with their specificity, he released his tiny army and they got to work.

*Adapted from: 'Watch out Water Hyacinths New Jungle Enemies are Coming'*

**Activity 1**

Build and establish the pond. It is really best if the ideas come from the students themselves. Remember that we all learn a great deal from our mistakes – especially scientists, who often have to change their ideas as projects progress.

With your students, think of ways to record information about animals and plants in your pond. Perhaps you need a checklist or table for noting the names of

all the plants and animals found? How will the work of observing be divided and shared among students? How will recording happen? Will you keep a scrapbook near the pond?

When you have a good range of observations, try to make a mind map of them. How will it be organised? You could use a large piece of newsprint/paper, the wall or the chalkboard. You might find the Additional Resource useful: **Using mind maps and brainstorming to explore ideas**

Next, ask your students, in pairs or small groups, to think of deductions that can then be added to the mind map in a separate colour. You could write students' initials next to their deductions to acknowledge their work.

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## 2 Observation

Plants and animals adapt to a wide range of conditions on land. This makes a fascinating topic to study.

You can work out much from pictures or specimens of plants or animals about how or where they live. Clues are:

- the overall body shape
- the type of outer covering
- the proportions of the body parts
- any unusual structures or arrangements of parts

We do this by processes of deduction. Activity 2 suggests how you can encourage the development of this skill by observing small animals that are found around the school. If you have suitable books, you might extend this work using pictures of other animals or by thinking about humans.

In Teaching Example 2, a teacher helps his students to extend their science thinking based on one student's observation. Read this before doing the activity with your class.

You might ask your class to think about how plants adapt to your own environment.

### Teaching Example 2

Alias Morindat grew up and teaches in the dry Dodoma region. Every few years, he asks his multigrade, farm-school class to list different ways local plants are suited to survival in dry conditions. He is always impressed with just how much knowledge they produce, recording observations and conclusions in a collective mind map. To assess their work, they enjoy comparing it with work from a few years back (including that of their older brothers and sisters).

Here is one example of how this work can encourage students to make deductions from their observations.



One year, a student made this observation: 'Here in Dodoma region, more plants have thorns or spines than those near Tanga (at the coast).' What could be deduced from this observation? Are thorns and spines an important adaptation for dry area plants – and why?

Alias asked groups to consider this. Most agreed that it is an advantage to have thorns because plants in dry places cannot easily replace green parts eaten by animals. One child observed how people in wetter areas encourage fresh growth by cutting off branches. Others noted that some plants also combined thorns with bitter tasting or irritating juices. This stops them being eaten.

They deduced that it must be very important for the survival of xerophytes (organisms which live, or even thrive, in areas with very little moisture) not to have to replace lost parts.

## Activity 2

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This activity requires small clear polythene bags. Give one bag to each group (three/four students). Then ask each group to go outside (with your supervision) and catch one single different small animal – not something with a poisonous bite or sting – a grasshopper, for example. Back in class, groups study their mini-beast, which is easily visible and safely contained with enough air to survive until released.

They record all their observations in the form of a mind map. 'Where it was found' and 'What it was doing there' is recorded top right. Its features are carefully recorded bottom right. Bottom left they list what they already know about the creature and the top left is used for questions they raise.

In a multigrade class, you might ask older students to work with younger students to help them record their observations and questions.

Groups share their observations and questions, and add information from other students to their mind maps. Then they think carefully of something more they can add in another colour for each observation or question they have written. This helps them deepen their thinking.

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## 3 Project work

All land-living things need air for life processes such as respiration and photosynthesis. But many living things have adapted to moving in air (flight), or to using air in some effective way for survival.

Teaching Example 3 describes a teacher guiding the further investigation of a single group of students in a focused, but still open-ended, project. Activity 3 is much broader and involves students taking more responsibility for their own learning as they work together to meet a challenge. It builds on the skills of observation and deduction from the previous activities.

If there is access to the Internet in your community, your students could use it to find out more for their projects.

### Teaching Example 3

Justin Chidawale's class had spent a term on a 'moving through air' project (see Activity 3), finding out about natural things flying, gliding, parachuting, floating and spiralling through air. They had also discovered that the importance of air carrying smells and odours.

Two boys and a girl came back from the holidays with a question: 'How does a kingfisher bird stay in one place in the air before diving? It doesn't have rotors like a helicopter!'

Justin did two things. First, he gave them time and encouraged them to find out what other living things hovered (dragonflies, hawks, bees, hoverflies and certain moths). Then he encouraged them to spend time observing these creatures in action. Sharifa's deduction was that they could move their wings round and round in a figure of eight pattern. She thought this might be true because that is how she used her arms to stay up in one place when swimming.

Then, Justin arranged for them to use the science textbooks in the nearby high school; one of the teachers helped them. The wonderful thing is that they submitted their project to the Young Scientists competition and won a flight to the national finals in Dodoma.

### Activity 3

Take students into the open air to breathe and appreciate our 'ocean of air'. Notice clouds, quality of light, dusty haze in the distance and evidence of pollution. Ask: What living things and parts of living things move in the air? Challenge students to find out all they can – this is a project to do over several weeks. Back in the classroom start by brainstorming the question with students – perhaps display this as a list on the classroom wall:

Feathers: What are they made for? How do they grow? How many feathers does a bird have? What is the structure of a feather?

Structure of a bird: How do a bird's body shape and other features help it to fly?

What kind of animals can parachute, glide or fly?

What parts of flowers and plants can move through air?

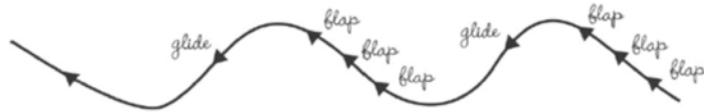
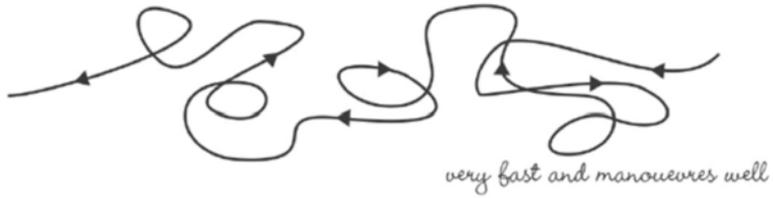
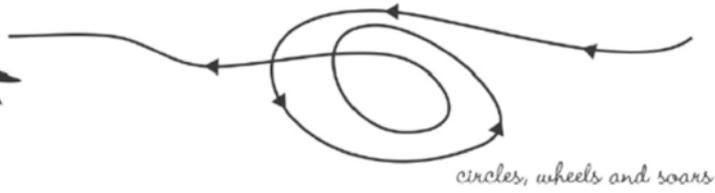
Organise your students into groups of between four and eight. Each group should observe and anticipate one area. You need to plan regular report-back sessions through the project. Keep students motivated with interested support, ask questions and give feedback.

Groups looking at animals could do drawings of different flight patterns (for example gliding, parachuting) and this could lead to drawings of comparative wing shapes.

At the end of the project, each group gives a presentation to the class – think about what criteria you will use to assess their work. Could they assess their own work? You might find the Additional Resource: Assessing learning

Did you and your students enjoy this activity? Could you use this approach for other topics and other subjects?

### Movement through air



## Social Studies: Investigating weather

- 1 Weather observation
- 2 Meteorology
- 3 The impact of weather

**Key question for the teacher:** How can you make the study of the weather more open-ended and activity based?

**Keywords:** problem solving; weather; group work; patterns; observations; brainstorming

**Learning Outcomes for Teachers:**

By the end of this section, you will have:

- developed students' skills of observation, data collection and interpretation of weather patterns in order to predict and forecast the weather
- used group work to encourage cooperative learning as students design and construct weather instruments

### Overview

In this section, you will use group work to develop students' cooperative and thinking skills. You will plan practical activities to encourage interaction between students.

For many people, watching the weather is an important part of everyday life. For example, farmers need to be able to judge the best time to sow their crops and fishermen need to know when to set out to sea. The weather patterns are different across Sub-Saharan Africa and rainy seasons and sunny periods will vary. Encouraging your students to observe the changes and patterns – however small – will help them understand the link between the weather, people and their environment.

# 1 Weather observation

There are many beliefs, poems and rhymes about the weather in different parts of the world, including Africa. Using these as a starting point to explore weather will stimulate your students' interest in observing the local weather and encourage them to be more sensitive and responsive to the changes in their natural environment. For example, in Nigeria, the Yoruba people are said to have believed that lightning was a storm spirit who carried powerful magic. That spirit scolded them with fiery bolts of light shot from his mouth. Teaching Example 1 shows one way of using local sayings with your students.

When teaching about the weather, you have a rich resource outside the classroom. By asking your students to collect weather data and look for patterns in the data in **Activity 1**, you will be encouraging them to develop their skills of observation.

## Teaching Example 1

Mrs Ogun from Abeokuta in Nigeria wanted to teach her students about the weather and decided to begin by asking them to tell her what they already knew. The day before she started the topic, she asked her students to ask their families and carers for any rhymes and poems they knew about the weather and bring them to school.

The next day, she asked two or three students to recite or sing the rhymes they had found. She also wrote on the chalkboard a few folklores about the weather from other parts of Africa and discussed the meaning of them, but not the scientific explanation.

Next, she asked why they thought there were so many different folklores about the weather. Her students suggested that people long ago did not understand why the weather changed and so created folklores to explain them;

Mrs Ogun asked the class why they thought it was necessary to understand weather patterns. They suggested the following ideas, which she wrote on the board:

- To know what clothes to wear.
- For farmers to know weather patterns, so they could plant their seeds, and harvest at the right times of the year.
- To plan for any disasters that might occur as a result of bad weather.

She asked the class to work in groups of six and, using any one of the ideas on the chalkboard, to create a little story or folklore about the weather. Some students wrote their stories and others decided to act them for the rest of the class



Country or region and type of weather	Myth	Scientific Explanation
Lightning	<p><u>Folklore:</u> People hit by lightning were thought by many ancient Africans to have incurred the anger of the gods. Lightning bolts were considered bolts of justice.</p>	<p><u>Science:</u> Lightning occurs when electricity travels between areas of opposite electrical charge within a cloud, between clouds, or between a cloud and the ground. Lightning bolts between cloud and ground ('bolts of justice') start with electrons (negatively charged particles) zigzagging downwards from the cloud, drawing a streamer of positively charged ions up from the ground. When they meet, an intense wave of positive charge travels upwards at about 96,000 km (about 60,000 miles) per second! This process may repeat several times in less than half a second, making the lightning seem to flicker.</p>
Wind	<p><u>Folklore:</u> Many people believed evil spirits dwelt in whirlwinds, so they would chase the wind with knives.</p>	<p><u>Science:</u> The wind is caused by a complex collection of forces. Warming and cooling of the air causes changes in density, or pressure. Air tends to move from areas of high pressure to areas of low pressure. Even very small differences in pressure from one area to another can cause very strong winds. Friction from obstacles like trees, mountains and buildings affect winds, slowing them down, or creating updrafts, bottlenecks and so on. Also, Earth's rotation creates what is called the Coriolis effect, causing winds north of the equator to tend to curve to the right and winds south of the equator to curve to the left.</p>
Sun	<p><u>Folklore:</u> Ancient Egyptians, boating on the Nile, believed that the sun sailed across the sky in a shallow boat.</p>	<p><u>Science:</u> While the sun may seem to be sailing across the sky, it is we who are moving on Earth's surface as Earth rotates on its axis and orbits the sun. One rotation takes 23 hours 56 minutes, or one day, and one orbit takes 365.26 days, or one calendar year.</p>
Thunder	<p><u>Folklore:</u> The god of thunder, Mkunga Mburu, is believed by some to travel the heavens on a huge black bull with a spear in each hand, ready to hurl them at the clouds to make the loud noises.</p>	<p><u>Science:</u> The noise we call 'thunder' – a distinct crack, loud clap, or gentle rumbling – is caused when air that has been heated to more than 43,000 °F along a lightning stroke expands and then suddenly cools and contracts when the lightning stops.</p>
Rainbows	<p><u>Folklore:</u> Many of the ancient Zulus thought of rainbows as snakes that drank from pools of water on the ground. According to legend, a rainbow would inhabit whatever pool it was drinking from and devour anyone who happened to be bathing there.</p>	<p><u>Science:</u> Rainbows are by-products of rain. Raindrops act as tiny prisms when lit by the sun, bending light and separating it into its different colours. A rainbow's arch appears to dip down from the sky to meet Earth's surface. To see a rainbow, you must be standing with the sun behind you, looking at rain falling in another part of the sky. A rainbow may mean the rain is nearly over, since the sun must be peeping through the clouds to make the rainbow appear.</p>

### Activity 1

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- Ask each student to record daily (twice a day) weather observations for five consecutive days for temperature, sky conditions, rainfall and wind speed. Students will need to spend between five and ten minutes at the same time each day outside making these observations on their charts. With younger students, you may want to give them some words to help them describe the weather e.g. strong wind, breeze, calm.
  - Show your students how to read a thermometer to record temperature. (If you do not have a thermometer, ask them to estimate the weather, e.g. very hot, warm, etc.)
  - At the end of the week, ask them to work in groups of six and compare the data collected. How much do they agree? Are there any variations? If so, why do they think this is?
  - Next, ask them to predict the weather for the following week and record their predictions for display in the classroom. Ask them to include reasons for their predictions.
  - Record the next week's weather as before.
  - At the end of the week, review the actual weather against their predictions. Discuss with them how accurate they were and how they could make their predictions more accurate.
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## 2 Meteorology

The science of studying weather is called meteorology. Meteorologists measure temperature, rainfall, air pressure, wind, humidity, and so on. By looking at the data and patterns they find, they make predictions and forecasts about what the weather will do in the future. This is important for giving people advance notice of severe weather such as floods and hurricanes and is extremely helpful to many other people – farmers, for example.

This part explores how using local experts can stimulate students' interest and show ways of – and the relevance of – studying the weather. Activity 2 uses problem solving as a strategy to help students think more deeply about weather.

If you live in an area with regular rainfall, you could also ask students to develop a device to measure the rainfall each day in a two-week period.



### Teaching Example 2

Mrs Mweemba was fortunate in that there was a local weather station a few kilometres away from the school and she was able to organise a field trip. A few weeks before the trip, having obtained permission from the head teacher and informed the parents, she phoned the weather station to arrange a date and explain what she would like to happen. The deputy in charge agreed to guide the class around the station, to show them the instruments and explain what they were used for. Mrs Mweemba explained that the class had just started learning about weather and had very little prior knowledge of weather instruments.

Before the visit, Mrs Mweemba told her students what they were expected to do, what they needed to take with them and what they would need to do to ensure their safety throughout the visit.

At the station, students saw various weather instruments, including a barometer, a rain gauge and wind scale tools. Mrs Mweemba encouraged her students to ask many questions. With the help of the station officer, they tried using some of the instruments. They were also able to look at some of the records and could begin to see patterns in the weather. The deputy gave Mrs Mweemba a copy of some data to use with her class.

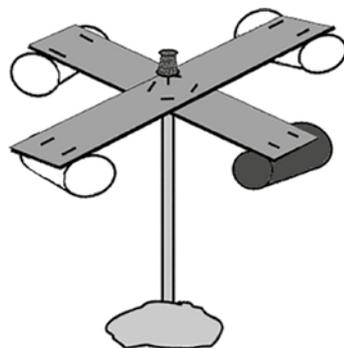
Back in the classroom, Mrs Mweemba asked each group of six students to think about how they could set up their own smaller weather station and how they could organise taking observations regularly. The groups fed back and then the class drew up an action plan.

The lesson ended with a promise from the class to involve their community in the establishment of their weather station.

### Activity 2

In advance make a wind vane and an anemometer. This can be done with simple materials and you could ask for help from someone in the community who is good with their hands. It is worthwhile spending some time on this as these teaching aids could be used by other teachers and in the years to come.

#### Making an anemometer to measure the speed of the wind



An anemometer is a device that tells you how fast the wind is blowing. A real one will be able to measure this accurately. Your model can give you an idea of how fast the wind is blowing, but will not be as accurate as a manufactured anemometer.

**You will need:**

- scissors
- four small paper cups (e.g. drinking cups)
- a marking pen
- two strips of stiff, corrugated cardboard – the same length
- drawing pin
- a stick
- some clay
- a watch that shows seconds

**Do this:**

1. Cut the rolled edges off the paper cups to make them lighter.
2. Colour the outside of one cup with the marking pen so you can see it each time it spins around.
3. Cross the cardboard strips so they make a plus (+) sign. Stick them together and mark the middle.
4. Stick or pin the cross to the top of your stick through the middle point.
5. Blow on the cups to make sure the cardboard spins around freely on the pin.
6. Place the modelling clay on a surface outside, such as a wooden fence, a wall or a rock. Stick the sharpened end of the pencil into the clay so it stands up straight.

**To measure wind speed:**

Using the watch, count the number of times the coloured cup spins around in one minute. You are measuring the wind speed in revolutions (turns) per minute. Weather forecasters' anemometers convert this speed into miles per hour (or kilometres per hour).

- Pose a problem for your students to solve. Ask them: 'Do you think that the wind is the same everywhere around the school grounds? How could you find out?'
- Let them talk in their groups about ways to investigate this.
- Go around and listen to their ideas, asking questions where appropriate. Use questions like: 'Where could you stand to feel the maximum wind?' 'Where would you stand to feel the minimum wind?'
- Make sure each group prepares a plan. This should include the use of different sites around the school.
- When each group plan is ready, let them carry out the investigation. You could send them out one group at a time. They should record their observations in a chart.



Week 1: Actuals						
Time of Day	Measurement	Day 1	Day 2	Day 3	Day 4	Day 5
Morning	Temperature Sky conditions Rainfall Wind speed					
Afternoon	Temperature Sky conditions Rainfall Wind speed					

- Discuss the results with the whole class:
- Which parts of the school do they think are most windy?
- Which part of the school is least windy?
- Why are there differences between these places?

Ask your students how they could see if this is true all year round.

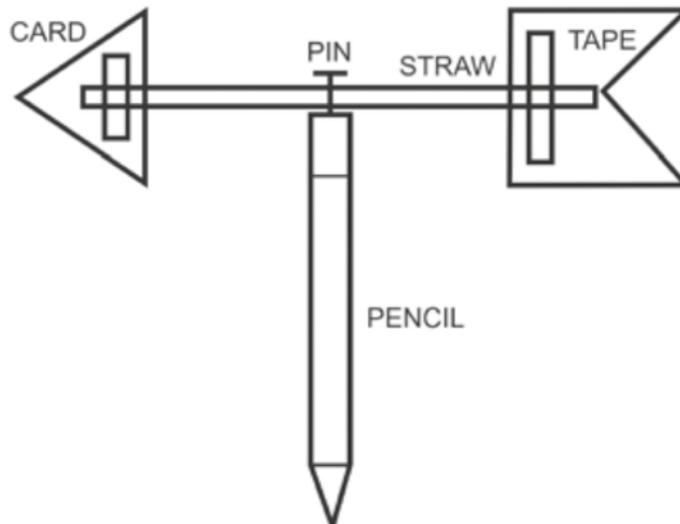


**Making a wind vane to measure the direction of the wind****You will need:**

- a straight pin
- a piece of card
- a straw
- scissors
- pencil (with eraser)
- tape

**Do this:**

1. Cut the point and tail of an arrow out of a piece of card.
2. Tape them onto the ends of the straw.
3. Push the pin through the middle of the straw.
4. Stick the pin into the eraser of the pencil. Make sure the straw can turn freely.



### 3 The impact of weather

While it is possible to collect weather data in the classroom for a certain period of time, it is less easy to explore the effects of weather over a longer period. 'Climate' describes the weather patterns at a place over a period of years.

One way to help students explore the longer-term effects of weather could be to use stories, as Teaching Example 3 does. Here, students are able to think about the wider issues. What would happen if certain weather situations persisted? The Activity 3 uses another approach. Students are encouraged to think about the problems weather can bring.

#### Teaching Example 3

Mrs Mweemba was keen to explore with her Grade 5 students how weather could affect people and resources in different ways. She began by telling them a story about drought.

Having read out the story to her students, Mrs Mweemba organised them into their discussion groups. She then gave them a series of questions.

- What were the different types of weather experienced by Mr Mubita's family?
- How many times did the weather change in the story?
- How did the farmer, Mr Mubita, feel about the sudden outbreak of rain?
- What impact did the rain have on Mr Mubita's crops?
- What impact do you think a lack of rain in his area would have on Mr Mubita and his family?
- How would you feel if you experienced each of the weather types stated in this story?

Mrs Mweemba asked one student in each group to write down the main points from their discussion and another to feed back their ideas to the whole class at the end of the discussion time

- Brainstorm with your students examples of extreme weather, e.g. hurricanes, droughts, floods, freezing temperatures, high winds, heat waves.
- Discuss with the class what happens in each case. Some students may know a lot about some of the examples.
- Divide your class into groups. Ask each group to take one example of extreme weather.
- They should then try to think about all the problems this weather situation would bring and write a short story to show how life would be affected.

Give your students plenty of time and encouragement to devise the story. Ask questions such as 'What would happen to the water supply?' 'Would you have fuel? Food?'



**How weather affected Mr Mubita and his family**

Mr Mubita is a farmer in Choma. He has a wife and six children.

One day, Mr Mubita's family woke up to bright and sunny weather. On their way to the farm, the youngest child was complaining about the biting sun, and had to remove his shirt because of the heat.

In the afternoon, when everybody was working on the farm, rain started to fall. Everybody was soaked in the rainwater and had to stop work until the rain stopped about one hour later. Meanwhile, the youngest child was enjoying the change in the weather and running around the farmland playing with the water on the leaves of plants.

After the rain, the children suddenly realised that the weather had become cool. The cool weather encouraged the family to work for another two hours before they finally left for home.

Mr Mubita was not expecting rain that day and so was not happy that the rain disorganised some of his plans for the day on the farm, but thanked God that the rain would make his crops do well.

That night, the weather became very cold and the family had to make a huge fire and sit round it in order to keep warm before they went to bed.

## Life Skills: Ways of taking responsibility

- 1 Good behaviour
- 2 Responsibility in the classroom
- 3 Developing rules

**Key question for the teacher:** How can you link home and school knowledge to help school achievement?

**Keywords:** group work; discussion; taking responsibility; achievement; home links

**Learning Outcomes for Teachers:**

By the end of this section, you will have:

- used linking activities at home and at school
- used group work and discussion to identify how beliefs and values relate to classroom behaviour
- helped students make their own rules for classroom

### Overview

Helping your students to want to take responsibility for their own learning is an important task.

Part of this means involving students in managing the classroom and its resources. In this section, you work with your students to make the classroom a more effective place, by explaining and then giving out particular responsibilities.

You will also encourage students to develop their own classroom rules, by showing how their beliefs can apply to their behaviour in the classroom. Having these rules will benefit both you and them. Showing respect and trust in your students will have a positive influence on their attitudes as people and learners.

# 1 Good behaviour

Every community has different beliefs and values, guided by the customs of the local society. These beliefs and values help to determine what behaviours are acceptable in that community.

Students will first learn these standards at home, and this can be useful to you. You can draw on their families' expectations to help identify the ways students and staff are expected to behave at school:

- in the classroom
- in the playground
- towards the teacher
- towards each other

Developing the principles of good behaviour with your students will assist their concentration during class. They are more likely to listen to what is being said and treat each other respectfully.

In addition, by finding out ideas from your students, they will feel that they have agreed to any expectations of behaviour. They are more likely to respect these expectations than if you had just told them they must behave in a certain way.

Doing this successfully involves some careful planning and can take some time to develop. At each step, you should listen carefully to your students' ideas.

## Teaching Example 1

Mrs Aber is a Grade 4 teacher in Uganda. She has 63 students. During orientation week, at the beginning of term, she asked her students about the behaviour expected of them at home. As she has a large class, she put the students into desk groups of eight, to compare their families' expectations. She asked them to list four rules common to all of them.

The class gave many examples of behaviour their families expected – many of which were the same for different children. Mrs Aber wrote some of these up on the board.

She then asked if there should be the same rules for behaviour in the classroom as at home.

In groups, they chose which home rules could be used in the classroom, and why they wanted to use them.



They then shared their ideas as a class. Mrs Aber was pleased, and used these ideas to establish some principles for behaviour at school, covering:

- how we treat each other
- how we behave during lessons
- how we behave during playtime
- how we treat our things

They voted on six rules that they wanted to adopt.

### **The benefits of classroom principles**

There are many benefits to having well-established principles in your classroom.

A clear set of guidelines about what is good and unacceptable behaviour in the classroom helps you manage the class better. By capturing these as rules, you are able to refer to them if it's needed. However, for rules to be effective in a positive way, the students also need to understand why a particular rule exists.

These guidelines help the students understand what is expected of them. They know what appropriate behaviour is during lessons and during break time. They also have some idea of how to interact with each other and why.

A set of rules for behaviour makes it easier for you to organise the students when doing activities in the classroom. They will know when to listen, when to talk, how to respond to questions, and so on.

Having guidelines on behaviour means that the students will get into the habit of treating each other well. This makes for a peaceful and cooperative classroom.

By allowing the students to write their own rules and take responsibility for classroom activities, you will be encouraging them to take pride in their schooling. They are also more likely to follow those rules they have written themselves.

The above will all contribute towards a positive learning environment in your classroom. You will be able to spend more time on teaching and less time on controlling and organising the class. The students will listen better in class and concentrate on their activities. They will also learn to help each other and support themselves in their studies, which should result in higher achievement. They will feel better about themselves as people as they make progress in their learning and you will enjoy teaching them more.

## Activity 1

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This activity can help explain why we have particular rules, and how they benefit everyone.

Organise your students into groups. Ask them to identify five rules at home and five rules at school.

Get one example of a home rule and one example of a school rule from each group. Write them on the board.

Ask the groups to discuss:

- why they think we have each rule
- how each of the rules helps them

Discuss their ideas as a class. Prepare to ask questions that will help them think more about their answers.

Draw out the different principles behind rules, by questioning the class: e.g. safety; respect; helping others; helping ourselves. Ask them to link each rule with one principle.

Ask students to each write a paragraph about why we have rules. Make a display of these.

How suitable were their suggestions?

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## 2 Responsibility in the classroom

It is important for your students to understand that, like their teacher, they have responsibilities within the classroom.

Firstly, you must be a good role model. Show respect for your duties: be punctual; plan and attend lessons; mark homework etc. If you do not fulfil your responsibilities, you cannot expect the students to do so.

Secondly, involve them in maintaining standards in the classroom. This includes them:

- cleaning the chalkboard
- keeping the classroom clean and tidy
- looking after books and furniture, and so on

If they look after the classroom themselves, they will start to take pride in it.

Thirdly, involve them in organising their own learning through the activities that you give them. This includes them:

- demonstrating the difference between work time and play time
- organising group work and study sessions
- checking each other's work, and so on

The usual way to start doing this is by appointing students as monitors and group leaders, responsible for looking after different tasks. But they also need to understand what is needed for each task.

### Teaching Example 2

Mr Sambawa is a senior teacher with a large multigrade class. He has a group of monitors from the top grades who do small tasks around the classroom and also help the younger students. The monitors check their groups are ready at the beginning of each lesson, they look after the textbooks and they clean the chalkboard each day. They are very useful indeed.

On Friday, the class clean-up day, Mr Sambawa asks his monitors to work with their groups from the lower grades to list which areas need action. Each group makes one suggestion, which is written on the board.

Each group volunteers to take one activity and, supervised by the monitor, work on it each Friday break time until the end of term.

At the end of the week, each group explains to the class what they have done and where they have put things. They also give the class suggestions for next week to make the tasks easier or help solve problems.

At the end of term, they review each group's progress and vote as a class for the best achievement.

### Activity 2

Plan how you will introduce monitors to help in class.

- Introduce the idea of monitors to the whole class. Explain how a system of monitors will work, and how it will benefit everyone.
- With your class, discuss and write a list of all the classroom tasks that need to be done at the beginning, middle and end of each day.
- Identify which tasks have to be done by you, and which could be done by the students.
- As a class, decide how many monitors are needed and then think of a way to select the monitors. You could change monitors every week so that everyone gets a turn and develops responsibility for others.
- Appoint the first set of monitors and explain their tasks. At the end of the first week, review their work with them and with the class.
- Ask them to suggest new tasks they could do.

Once the monitor system has been running for a little while, take some time to think about how it is working:

**What impact does having monitors have on the behaviour and work of your class?**

**Do the students like the system?**

**Does it need to be reviewed – and perhaps modified – by the class?**

**Using monitors**

As a teacher, you can use students to help you with the day-to-day management of your classroom. There are numerous simple tasks that you can ask them to perform on your behalf, and this serves two benefits.

- It allows you to spend more time preparing and delivering good teaching, rather than managing and tidying up the classroom.
- It gives the students small areas of responsibility, which encourages them to take pride in their schooling.

There are a few issues you need to think about when selecting monitors. You want students who will do their tasks well, and who will be willing to help you and others.

You also want students who are responsible and interact well with others. Sometimes, students might see being a monitor as a position of power over others, and they might misuse it. It is important to help them understand that they have to carry out the role responsibly, and you will be a role model in this. All students should be given a chance to take on such roles. If you only choose the same students each time, others will feel less valued. You will need to provide guidance and support to the monitors. Some will need more support than others in the early stages.

You will need to think clearly about each of the jobs before you give them out. If there is not a regular daily task to do, the students will get bored and neglect it. There needs to be a clear purpose for the task as well, rather than something to fill time. Finally, you will also need to provide clear instructions.

It is important to share the jobs around and give each student a turn. If some students are not involved, they will stop taking an interest and may even start disrupting classes to get the attention that is going to the monitors.

If possible, let students choose the jobs they could do to help. You can also hold regular classroom meetings where students can suggest different tasks.

Finally, you will also need to monitor and support them. Give praise where you can and give guidance where it is necessary.

### 3 Developing rules

In this section, you will use students' ideas about good principles of behaviour to help them develop their own classroom rules.

Helping students make a set of rules for the classroom is one way to strengthen participation and responsibility, especially if they write the rules themselves. Establishing their own rules will help them understand what is expected.

There are two sets of rules to think about. The first are social rules. These cover the ways people interact with each other and behave towards each other.

The second are study rules. These cover how students behave during lesson time and what they can do to help everyone study and learn. By organising students to work in groups, you will allow them to share ideas and gain respect for each other more.

It is important that the rules apply to the teacher as well as the students. You need to be a good example for your students. If you respect them in the classroom, they will learn to respect you.

#### Teaching Example 3

Ms Okon asked her Primary 3 class to think about the principles of behaviour they had identified earlier and how these might help them develop their own classroom rules.

She asked students to think about their different responsibilities. What things could they do to help each other fulfil those responsibilities?

They first talked together in pairs, and then as a class. Finally, in small groups, she asked them to write sentences using: 'We should ...'

She went around each group and asked them to read one sentence and explain why they had written it. For example: 'We should be quiet in class because it helps us listen better'.

If students suggested negatives, for example 'Don't talk in class', together they changed it to something positive: 'We should try to listen carefully to each other'.

She was very pleased with their responses, and collected their sentences in. The next day, they reviewed them all again and chose eight. Ms Okon then wrote these on the chalkboard and the students copied them into their books for reference.

#### Activity 3

- Discuss with your class why we need class rules for behaviour and for study. Discuss why they – and not you – will write the rules.
- Let the students, in groups, discuss their suggestions for social rules and study rules. Ask them to write five rules for each, using positive sentences.
- Collect each group's suggestions on social rules and write them on the board. Ask them to explain to the class why they are important.

- Organise a vote: ask each student to choose six to eight rules from the board. Too many is unnecessary if you have good rules. Read out each rule, and count the number of hands up for each rule. Write the numbers down and identify the most popular.
- Do the same for study rules.
- Organise the class to make a poster of the written rules. Display it by the door of the classroom to remind everyone as they come in.

Monitor how they work over a term and review the rules if necessary. How would you and they modify them?

### Asking children to agree rules

I would like to share some stories that happened in my classroom. In the first few days of school, one of our activities is to get together and talk about the classroom and playground rules. In the beginning, I told the children the rules and we talked about them. I wondered if they are too small (4–5 years old), to come up with the rules but last year I decided to let them generate the rules. To my surprise, it went OK, and my children were even stricter than me, and generated more rules. My class really enjoyed this activity and they follow the rules they have generated themselves voluntarily.

Using the children's misbehaviour/mistakes to teach them how to behave well is a good theory. When a child misbehaves in our classroom or during outdoor activities I frequently try to make use of the opportunity to talk about it with the children during class meeting later that day. We talk about what happened and I ask the children to find a solution, not a punishment for the problem. It's true that sometimes my children do suggest silly ideas, but gradually, more often than not, my kids find a good solution to the conflict.

As expected, it takes time and persistence from the teacher, especially with little ones, to show the way and make the kids understand that they have the power to decide how to solve conflict on their own peacefully, but it is extremely rewarding in the end.

Thank you,  
Zsuzsanna  
Nigeria

Adapted from <http://posdis.org>

<http://www.tessafrica.net>

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