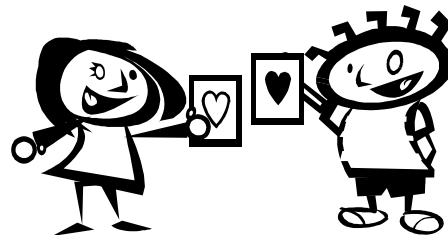


Activity Sheet for use with Endemics of Namibia Poster

Grade 6 Natural Science
& Health Education



Matching Pairs

Prerequisites: knowledge about variations among animals

Materials: paper to write on, pictures or drawings of endemic species, glue, cardboard, scissors

Activity:

Using the endemic species from the poster, or other endemic species, draw up a list as follows:

<u>Name</u>	<u>Description</u>
Golden mole	This animal is nocturnal and burrows in dunes to find its food. It has no eyes, but is a great hunter.
Sand diving lizard	This animal has a shovel shaped mouth which helps it push under the sand.
Tok-tokkie beetle	This fast moving animal is specially adapted for living in the desert.
Tilapia guinasana	This animal lives in an underground lake.
Etc...	

You can also use pictures of the animals. In addition, you can adjust the level by making the descriptions more complex or by using scientific names instead of common names.

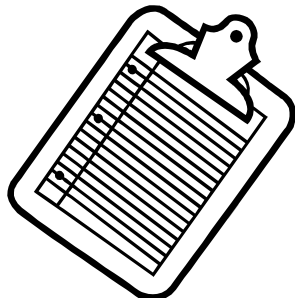
There are several activities you can do with your lists and pictures:

1. Create a worksheet - mix up the names of animals and ask learners to match them to their descriptions.
2. Cards: Paste names, descriptions and photos onto cardboard, cut up and ask learners to find matching sets.
3. Play in small groups. Turn description cards upside down in a stack. Place picture cards or name cards face up on the table. One learner takes the first description card and reads the sentence. The first person to choose the correct picture or name takes the pair of cards. See who can collect the most cards.
4. You can adapt these activities for many other topics. Alternatively, you can ask the learners to cut out and paste the elements onto cardboard themselves, making their own game.

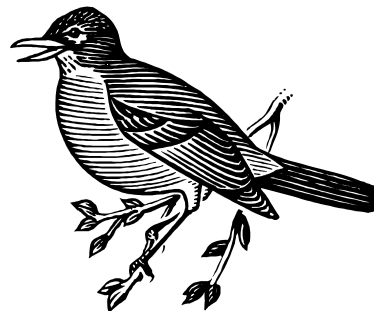
(This activity is adapted from *Cape Flats Floral Treasures: A Teacher's Guide to Active Learning in Cape Town Schools*, 2001.)

Activity Sheet for use with Endemics of Namibia Poster

Grade 9 Life Science



Report on Endemics



Prerequisites: understanding of biodiversity and how it is related to environmental conditions.

Materials: reference materials, access to library, poster

Activity:

Discuss as a whole class the need to conserve biodiversity. Endemic species play a key role in biodiversity. However, the majority of Namibia's endemic species are distributed outside of National Parks and state protected areas (see map).

Divide the class up into 6 groups (plants, mammals, birds, insects, arachnids, fish, amphibians, reptiles). Each group should determine:

- The level of endemism – how many endemic species of their group are there in Namibia? What proportion is this of the total number of species?
- What are the 'hotspots' of endemism for the group (location and biome type)? Why might these areas be hotspots? What areas are low in endemic species? Why might these areas be low in endemic species?
- Are these 'hotspots' conserved in National Parks or state protected areas?
- If not, what areas should be considered when planning areas for conservation or protection? Ask them to draw a map. What issues do you have to take into consideration when planning conservation areas? What other activities could help conserve these endemic species in Namibia?

Ask each group to present their findings to the class and then compile the information in a written report.



All Levels



Pitfall Traps

Prerequisites: understanding of biodiversity and how it is related to environmental conditions

Materials: plastic containers with lids (margarine, ice cream, etc.), magnifying glasses, small stones, tweezers, bait

Activity:

This activity can be adapted for various levels. Pitfall traps are useful in capturing insects that crawl along the ground. They might also trap small mammals, amphibians or reptiles.

Divide the class up into small groups. Provide each group with materials to set up a pitfall trap. Traps should be set in places where there is little human traffic or chance of disturbance.

To set up the trap learners should:

- Dig a hole the same size as the container. Place the container in the hole – the top of the container should be level with the ground.
- Place 4 small stones around the edge of the pitfall trap and then set the lid on top. Secure the lid in place by adding another stone or two on top, but ensure that there is enough space for insects to crawl under the edges.

Determine a time period to leave the traps – 24 hours is good. Tell learners to carefully open the traps when checking them. Once they have counted, identified and completed the experiment, get learners to release the animals!

Variations:

Add bait to the traps – different groups can use different types (meat, apple, cheese, peanut butter, etc.) and learners can compare what was caught. Or let each group set multiple traps with different bait.

Depending upon the level of learners you can vary the amount of follow-up work which is done. Below are several suggestions – you need not do all at the same time.

- Lower Levels: Count the number of animals caught, identify and count the various types of organisms caught (insects, arachnids, etc.).
- Higher Levels: Determine what type of animals different baits attract. Compare results with other groups. What types of animals would be easily caught in pitfall traps and which might be able to avoid them? How would you design the experiment next time to catch more animals in a 24 hour period? Can learners identify any endemic species? Might the animals caught depend upon the time of year? Ask students to design the experiment themselves – what are the objectives, what are their expectations? In different regions, would learners expect to find different animals in the traps?

(This activity is adapted from an activity from the St. Claire County, Illinois Regional Office of Education.)

