

Classifying Animals

Level: S1

Topic: Sorting things into groups (Section 2.4 of Unit 2)

Introduction:

This set of ELA materials is designed as supplementary materials for those schools which select Section 2.4 of Unit 2 to be taught in English. Students have learned the five vertebrate groups and their characteristics in English. The materials are designed for students to learn through reading. They aim to help students to classify vertebrates into groups and to enhance students' understanding of the features of the vertebrates.

There are two ELAs in this set of materials:

ELA1 Classifying Animals

ELA2 The Platypus

They can be implemented separately in two separate lessons or in a double lesson.

Acknowledgement

This set of materials was produced jointly by the teachers of T.W.G.Hs Li Ka Shing College and the ELA research team.

ELA1 Lesson Plan – Classifying Animals

Description: This ELA covers Section 2.4 of Unit 2 of the CDC Science syllabus. Students have learned about the five groups of vertebrates and the features of each group. In this lesson, they are asked to read three short passages, each about an animal. Based on the readings, students should classify the animals concerned into their groups. They have to apply what they know about each group of the vertebrates in order to complete the task.

Content Objectives: After completing the activity, students should be able to:

- classify vertebrates into fish, amphibians, reptiles, birds and mammals
- state the major features of each vertebrate groups

Language Objectives: After completing the activity, students should be able to:

- understand and use the English terms for animal classification (e.g., *pythons, reptiles, scales, lay, shelled eggs, birds, feathers, hooked beak, mammals*);
- read and comprehend three short texts about three kinds of vertebrates (*reptiles, birds and mammals*), and extract relevant information from the text to a classification task
- provide supporting reasons in answering questions about classification, e.g.,
 - *Pythons are reptiles because their bodies are covered with hard and dry scales and they lay shelled eggs.*
 - *Dodos were birds because their bodies were covered with white and grey feathers and they laid shelled eggs/ had a long, hooked beak.*
 - *Big-eared bats are mammals because their bodies are covered with hair and they feed their young with their own milk.*

Activities:

1. Revision – whole-class activity (10 min)
2. Reading comprehension and worksheet completion – individual work (20 min)

Materials: Worksheet; Slides containing pictures of the animals under study

Steps:

Revision – whole-class activity (10 min)

1. Using questions, the teacher reviews with the class the names of the five groups of vertebrates and their features.

Reading comprehension and worksheet completion – Individual work (20 min)

2. The teacher distributes the worksheet to the class and tells them that they are going to read a few short passages about different animals and to classify the animals based on the information provided by the passages.
3. Depending on students' ability, the teacher may work with the class on the first passage as an example:
 - Students read the passage first and tell the teacher which group of vertebrates group they think pythons belong to.
 - The teacher writes the answer, *reptiles*, on the worksheet, which is shown on a visualizer.
 - The teacher asks the class to point out which part of the passage contains information that is specific to the group, *reptiles*, and underlines the phrases/sentences on the worksheet.
 - Working with the class, the teacher writes the remaining answers about pythons on the worksheet.
4. The teacher asks students to complete the worksheet about the remaining two animals. Students should first underline the information in the passage that is specific to the group which the vertebrate belongs to and then write the answer in the space provided.
5. The teacher should encourage students to compare answers with their neighbours when they finish the worksheet and check whether their answers are grammatically correct.
6. The teacher checks the answers with the class and explains any difficult words.
7. The teacher shows the pictures of the three animals using a slide projector.

Classifying Animals

First, read the descriptions of the following animals.

Then, write down which group of vertebrates (fish, amphibians, reptiles, birds or mammals) they belong to and give **two reasons** for each classification.

Pythons can grow up to 10 m long. Most of them can live in very dry places because their bodies are covered with hard and dry scales. They can hunt in darkness, such as places inside a cave, by detecting (探測) anything that is hotter than the surroundings.

The color of their bodies varies from brown to yellowish green, which helps them to hide in their habitat (the place

Dodos lived on islands in the Indian Ocean. They were very large animals, which stood about a [metre](#) tall and weighed about 20 [kilograms](#). They lived on fruit and laid shelled eggs on the ground.

Their bodies were covered with white and grey feathers. They had a long, hooked beak and thick yellow legs. They could not fly because their bones were too weak to support flight.

Pythons are _____ because

(i) their bodies _____

_____ and

(ii) they _____

Dodos were _____ because

(i) _____

_____ and

(ii) _____

Big-eared bats are animals with their hands developing into wings, so that they can fly. Most of them eat insects but others feed on fruit and pollen (花粉). Their bodies are always dark in colour and covered with hair. Mother bats usually only give birth to one small bat per year. They feed their young with their own milk

Big-eared bats are _____ because

(i) _____ and

(ii) _____

Classifying Animals

Answers

First, read the descriptions of the following animals.

Then, write down which group of vertebrates (fish, amphibians, reptiles, birds or mammals) they belong to and give **two reasons** for each classification.

Pythons can grow up to 10 m long. Most of them can live in very dry places because their bodies are covered with hard and dry scales. They can hunt in darkness, such as places inside a cave, by detecting (探測) anything that is hotter than the surroundings.

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Dodos lived on islands in the Indian Ocean. They were very large animals, which stood about a metre tall and weighed about 20 kilograms. They lived on fruit and laid shelled eggs on the ground.

Their bodies were covered with white and grey feathers. They had a long, hooked beak and thick yellow legs. They could not fly because their bones were too weak to support flight.

Pythons are reptiles because

- (i) their bodies are covered with hard and dry scales and
- (ii) they lay shelled eggs.

Dodos were birds because

- (i) their bodies were covered with white and grey feathers and
- (ii) they laid shelled eggs/ had a long, hooked beak.

Big-eared bats are animals with their hands developing into wings, so that they can fly. Most of them eat insects but others feed on fruit and pollen (花粉). Their bodies are always dark in colour and covered with hair. Mother bats usually only give birth to one small bat per year. They feed their young with their own milk.

Big-eared bats are mammals because

- (i) their bodies are covered with hair and
- (ii) they feed their young with their own milk.

ELA2 Lesson Plan – The Platypus

Description: This ELA is an extension of Section 2.4 of Unit 2 of the CDC Science syllabus. Students are asked to comprehend a passage about the platypus and answer questions about its classification and living habits. Because of the uniqueness of the animal, students have to judge which features found in the animal are more important for classification.

Content Objectives: After completing the activity, students should be able to classify the platypus as a mammal, with reasons.

Language Objectives: After completing the activity, students should be able to:

- understand and use the English terms related to the characteristics of the platypus (e.g., *vertebrate, mammal, fur, feed, babies, milk, feed on, insects, worms, snails, front feet, paddles, habitat, stream, river*);
- comprehend a passage about the platypus and extract information from the passage for describing the characteristics of the platypus, e.g.,
 - *A platypus is a vertebrate.*
 - *It is a mammal because it has fur and feeds its babies with milk.*
 - *It feeds mostly on insects, worms and snails.*
 - *It uses its front legs to swim in water.*
 - *Its front feet can be used as paddles in water.*
 - *Its habitat is a stream or a river.*

Activities:

1. Revision – whole class activity (5 min)
2. Reading comprehension and worksheet completion – pair work (20 min)

Materials: Worksheet, Slides containing pictures of the platypus and video links, Computer with an Internet connection

Steps:

Introduction – Whole class activity (5 min)

1. Using a slide projector, the teacher displays a few pictures showing a platypus, and asks students to guess, based on the pictures shown, which vertebrate group a platypus belongs to.

2. Students may guess that the animal is a reptile, bird or mammal. The teacher does not provide feedback at that moment. He/she informs students that they will read a passage about the platypus and they can check if their guess is correct based on the passage.

Reading comprehension and worksheet completion – Pair work (20 min)

3. The teacher distributes the worksheet and tells the class to learn more about the platypus from the passage and answer the questions that follow.
4. The teacher asks students to discuss the answers with their neighbours and crosscheck each other's answers for any grammatical mistakes.
5. The teacher checks the answers with the class. He/she should highlight that the platypus belongs to a special type of mammal, the egg-laying mammal, but it still possesses the special features of a mammal, i.e., the body covered with hair and the young fed with milk.
6. The teacher rounds up the lesson by playing video clips that show a platypus swimming and searching for food.

The Platypus 鴨嘴獸

The platypus is found in the streams and rivers of Australia. It spends some time in water and some time on land. It digs burrows (洞穴) in the river bank and lives in a burrow. It has thick brown fur and a broad flattened tail. It can grow to a length of 50 to 60 cm.

The mouth part of a platypus looks like a *duck bill* (鴨嘴), but is covered with soft skin, which can detect (探測) the weak *electric fields* (電場) produced by small animals in water. Its front feet are webbed (有蹼) and can be used as paddles (槳) in water. When swimming, its eyes and ears are closed, and the bill sweeps from side to side looking for any electric fields. It feeds mostly on insects, worms and snails that are found in the river bed.



A swimming platypus.

Credit: State of Queensland
(Department of Environment and
Resource Management)

The female platypus lays eggs in its burrow. After the babies come out of the eggs, the mother feeds them with its milk. After four months, the young no longer need their mother's milk and begin to find food by themselves.

Questions:

Answer the following questions about the platypus in complete sentences.

1. (a) Which type of vertebrate is a platypus?

- (b) What features does a platypus have, that are found only in that type of vertebrate?

2. What kinds of food does it eat?

3. How does it move in water?

4. What is its habitat (生境)?

The Platypus 鴨嘴獸

Answers

The platypus is found in the streams and rivers of Australia. It spends some time in water and some time on land. It digs burrows (洞穴) in the river bank and lives in a burrow. It has thick brown fur and a broad flattened tail. It can grow to a length of 50 to 60 cm.

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Questions:

Answer the following questions about the platypus in complete sentences.

1. (a) Which type of vertebrate is a platypus?

It is a mammal.

- (b) What features does a platypus have, that are found only in that type of vertebrate?

It has fur and feeds its babies with milk.

2. What kinds of food does it eat?

It feeds mostly on insects, worms and snails.

3. How does it move in water?

It uses its front legs to swim in water/ The front feet can be used as paddles in water.

4. What is its habitat (生境)?

Its habitat is a stream or a river.


PowerPoint Slides: Classifying Animals

Classifying Animals

ELA Research Team, OUHK
July 2009

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Python 蟒



Credit: Tigerpython, available at http://en.wikipedia.org/wiki/File:Python_molurus_molurus_2.jpg

2

Dodo 渡渡鳥



Credit: Ballista, available at http://en.wikipedia.org/wiki/File:Dodo_1.JPG

3

Big-eared bat 大耳蝠



Credit: Mnolf, available at http://commons.wikimedia.org/wiki/File:Plecotus_auritus_01.jpg

4

PowerPoint Slides: Platypus

Platypus

ELA Research Team, OUHK
July 2009

1


Platypus



2

Credit: State of Queensland (Department of Environment and Resource Management)

Platypus



3

Credit: Stefan Kraft, available at <http://commons.wikimedia.org/wiki/File:Platypus.jpg>

Platypus at Sydney Aquarium

- <http://www.youtube.com/watch?v=oSYfKMAx6KY>
- <http://www.youtube.com/watch?v=ZSaD5sjT77w>

4

Platypus looking for food at Mossman Gorge

- <http://www.youtube.com/watch?v=yXUk67UekJ4>

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