Teaching Activity

Classifying dangerous animals

Science understanding - Biological sciences, 120-129
Science inquiry - Processing, modelling and analysing, 120-129
Curriculum code: AC9S7U01, AC9S7I04, ACSIS129, ACSSU111 Select state curriculum

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Key concepts and skills

- Understanding that animals can be grouped based on the common features
- Identifying similar features in a group of animals

Common errors and misconceptions

- Choosing features to identify a species that could vary within a species e.g., colour
- Choosing features to identify a species that may change over their lifetime e.g., size
- Failing to consider internal features

Before you begin

- Distribute copies of the Classifying dangerous animals worksheet to students
- If working on paper: A3-sized page, scissors, glue

Activities

Learning intention

To identify some of Australia's dangerous animals based on their internal and external features.

Tuning in

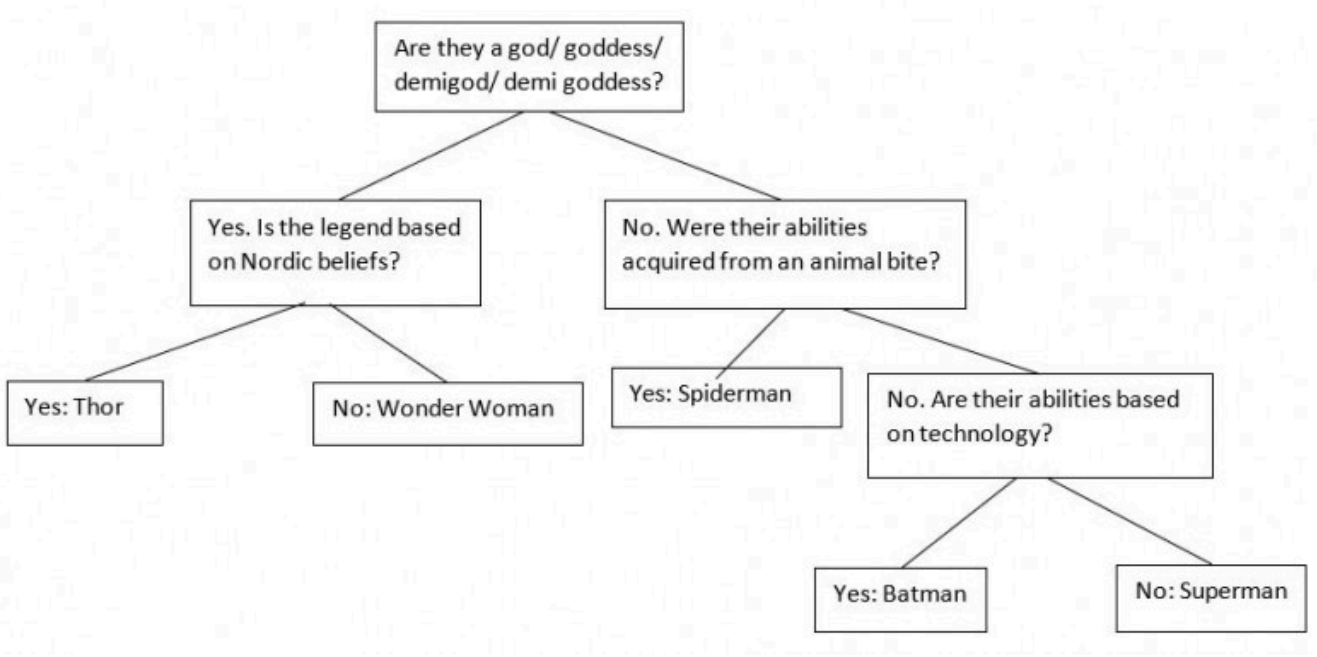
Ask

students to think of 5 superheroes (e.g., Superman, Batman, Spiderman, Wonder Woman, Thor).

Discuss

how these superheroes could be grouped, e.g., by abilities, how they acquired their powers, or if they are a 'god' or not. Place into a rough dichotomous key, such as the following example.

Show



Need help?

Discuss

the fact that Australia has a range of animals that can be considered dangerous to humans. Ask students to give some examples of these animals are and why they are dangerous.

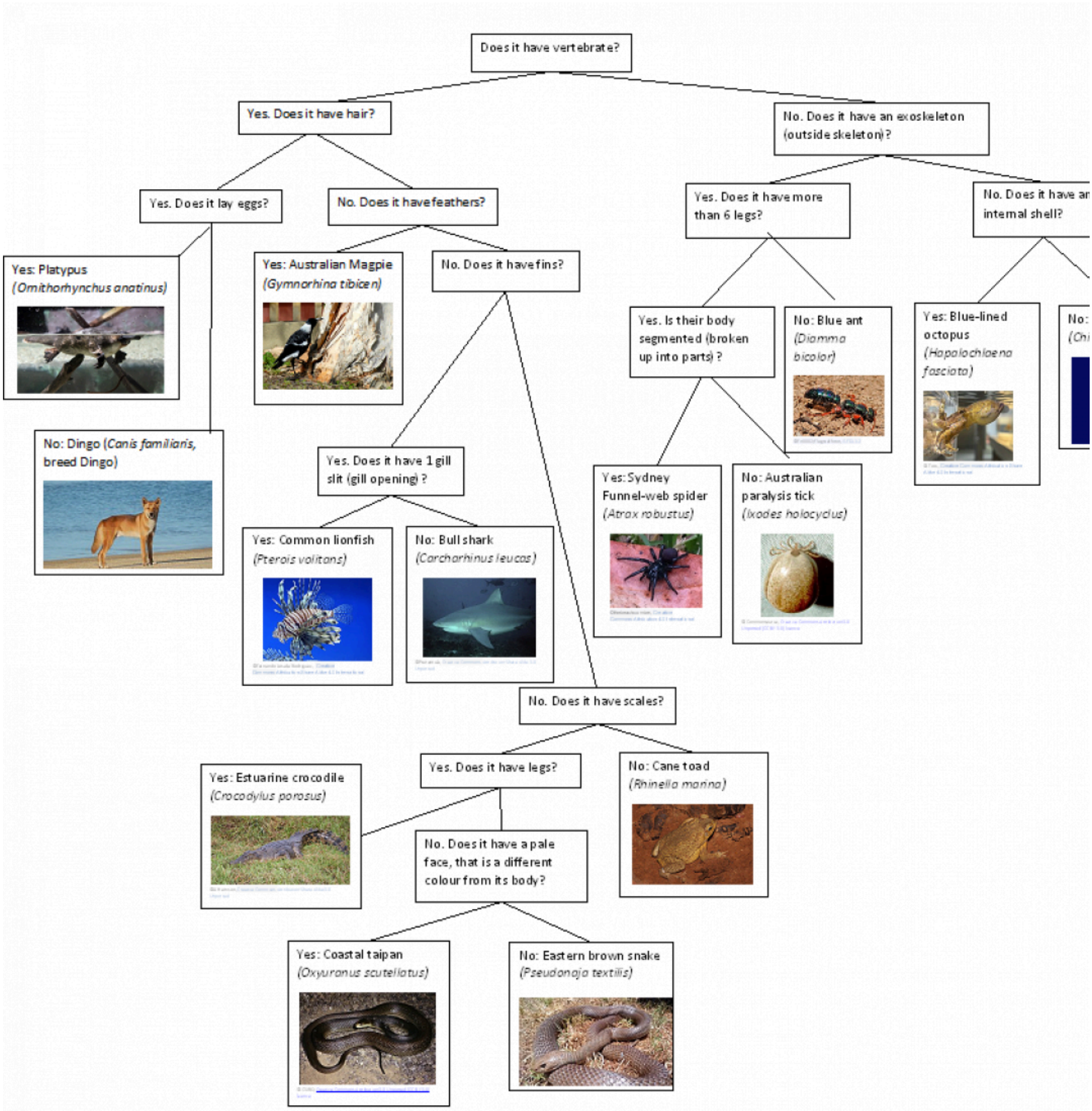
Ask

students to look at the animals on the Classifying dangerous animals worksheet. Working individually or in pairs, ask students to either make the dichotomous key on a computer or by cutting out the pictures and stick them to a larger A3 piece of paper.

Advise students to find one characteristic they could use to divide the whole group of animals into two approximately equal halves. This would become their first question. Repeat this process for each smaller group until they end up with only one animal left in a group.

See the following example of how these could be divided. **Note:** you may need to prepare a template for students who need more support.

Show



Ask

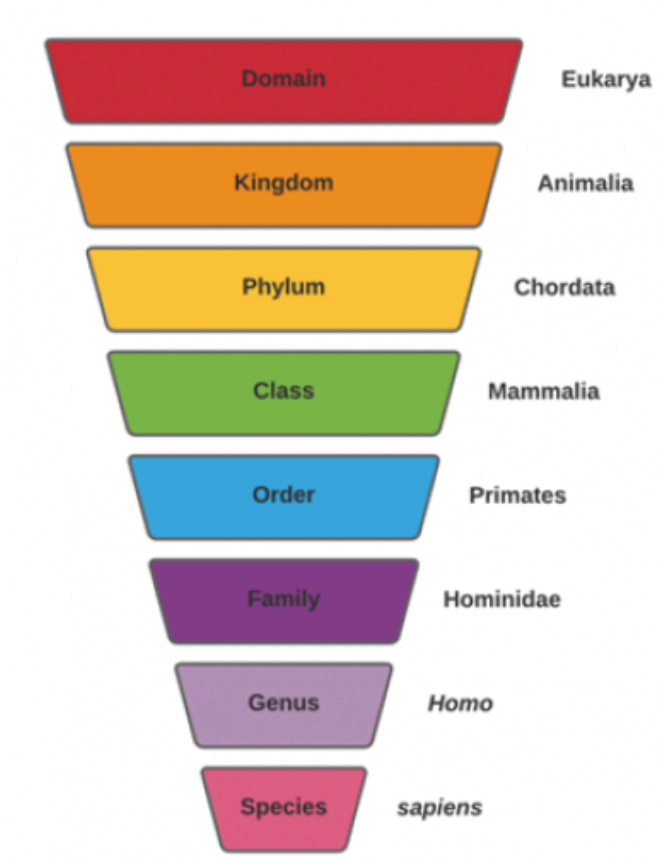
students to look at their neighbours' keys when they have finished to check that their neighbours' keys work to classify the animals.

Discuss

how students created their keys. Did students do the key in the same way? Have students explain why they did it in their chosen way.

Show

Taxonomic order diagram with the example of *Homo sapiens*:



Ask

Do the steps in the student's dichotomous key match the taxonomic order shown in the diagram? Explain why or why not.

Note: students may need to look up the classification of f animals to determine this.

Extension

- The Australian Museum website has fact sheets on these dangerous animals. Go to https://australian.museum/learn/animals/dangerous-animals/, ask students to look up these animals, and see if they could group them on the basis of how they are dangerous to humans.

Prerequisites

- Foundational knowledge of classifying animals
- Understands what a dichotomous key is
- Understands the difference between vertebrates and invertebrates

Related activities at the level

- Dinocephalosaurus: analysing a scientific argument about fossils

Related annotated questions

- Uses an identification key to correctly identify a spider based on web-building characteristics
- Classifies once-living things from non-living objects and living things