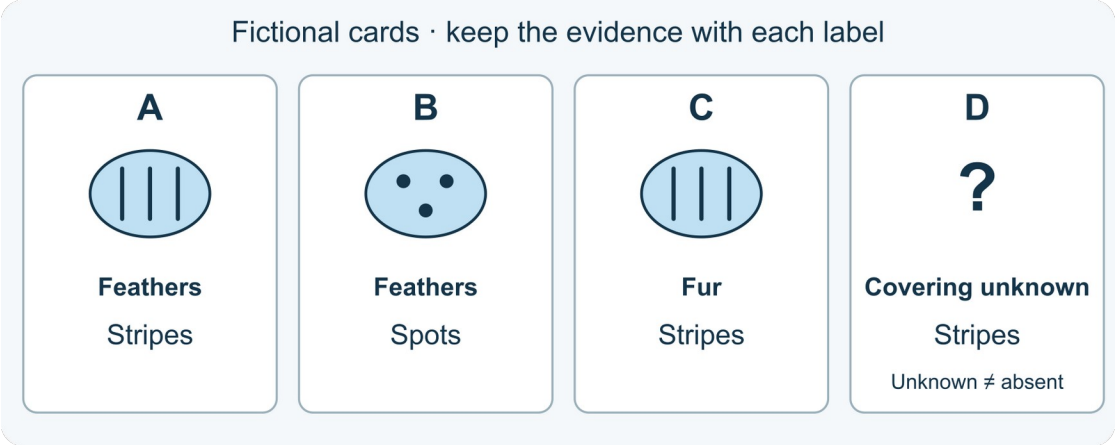
Sort animal clues without guessing

What happens when a grouping rule meets a missing detail?

Group four fictional animal cards by stated features, change the rule and keep unknown information visible.

Explore | 10-20 minutes, or one grouping | Paper and a pen or pencil, The four complete fictional card descriptions below; no wildlife observation needed

Start here Copy four labels, or use the supplied cards: A has feathers and stripes; B has feathers and spots; C has fur and stripes; D has stripes but its covering is hidden.



A known pattern can have an unknown covering

1 Keep the evidence attached

These are invented creatures described for a sorting model, not real species records. Record only what each description supplies. For D, ‘covering hidden’ means unknown, not ‘no covering’.

2 Choose one rule

First group by the stated covering: feathers, fur or unknown. Put A with B, C in fur and D in unknown. You can draw boxes, point or say the groups instead of making cards.

3 Change the question

Now group by stated pattern: stripes or spots. A, C and D go together for stripes; B has spots. This grouping answers a different question, so changing groups is not a contradiction.

4 Name a limit

Write one conclusion supported by the descriptions and one question they cannot answer, such as how the animals move. Do not fill a missing detail with a guess. You may design an additional fictional card if you want.

Four fictional cards two sensible groupings

The supplied model descriptions are complete: A = feathers, stripes; B = feathers, spots; C = fur, stripes; D = stripes, covering hidden. These labels are invented, not observations of actual animals.

• Covering rule: feathers A/B; fur C; unknown D.

• Pattern rule: stripes A/C/D; spots B.

• D can join the striped group while its covering remains unknown. One known feature does not supply a missing one.

What this example can show These convenient groups do not identify a species, establish evolutionary relationships or prove a feature's function. No animal contact or collection is part of this activity.

A different way

Use only A and D, have the labels read aloud, or direct another person to draw the groups. You can use the model without identifying a real animal.

If you want to go further

Create a fifth fictional card with a clearly labelled feature. Test whether both rules can place it, adding 'unknown' or 'another pattern' where needed instead of forcing a match.

Something to notice

Did I keep 'unknown' different from 'absent'?

Read or explore more

Horizon topic Zoology

https://launchhorizonhq.com/learn/zoology/

Horizon topic Animal Coverings

https://launchhorizonhq.com/learn/animal-coverings/

Horizon topic Classification Keys

https://launchhorizonhq.com/learn/classification-keys/

Australian Museum What is classification?

https://australian.museum/learn/species-identification/ask-an-expert/what-is-classification/

Science Learning Hub, University of Waikato Develop a classification system

https://www.sciencelearn.org.nz/resources/158-develop-a-classification-system