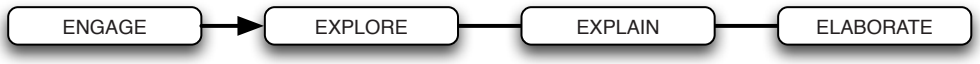
sequence overview

Structural adaptation



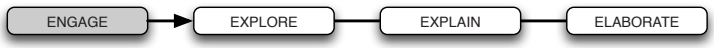
Background

The SPICE resources for this sequence can be drawn together into a learning pathway for students to develop an understanding of some structural adaptations of organisms, and the function of these adaptations in the organism's environment. The pathway is structured around a constructivist model based on the 5-E approach to learning where teachers can:

- **Engage** students' interest and minds in the concept of structural adaptations by playing the card game, *Teeth, tails and talons!*
- Provide opportunities for students to **Explore** structural adaptations of three featured organisms and how these aid survival in challenging environments.
- **Explain** the relationship between structural adaptations and function.
- **Elaborate** on these concepts by application of knowledge to different contexts, and extend understanding by reviewing current scientific research on three featured organisms.
- **Evaluate** students' progress through the pathway.

This pathway is designed for students of Year 11 Biology, but may also address the Australian Curriculum *Biological sciences* and *Science as a Human Endeavour* strands in Year 5, at the discretion of the teacher. The card game, presentation, video and podcasts are suitable for Year 5. However the fact sheets and worksheets are written specifically for secondary students. The teachers guide in each resource contains further information on the use of resources.

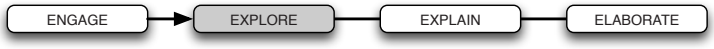
Learning pathway



Structural adaptation 1: Teeth, tails and talons

Teeth, tails and talons comprises a teachers guide, card game and procedure sheet.

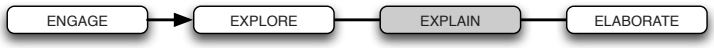
This resource encourages students to consider structural features of Australian animals by building card sets that match physical features with the correct animal. See the teachers guide for detailed information on the purpose and use of this resource



Structural adaptation 2: Featured creatures

Featured creatures comprises a teachers guide, presentation and student fact sheet.

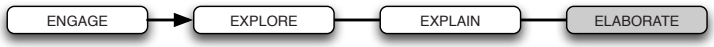
Students are introduced to three featured organisms. They investigate environmental conditions where these organisms are found and explore structural adaptations these organisms require to survive. See the teachers guide for detailed information on the purpose and use of this resource.



Structural adaptation 3: Structure and function

Structure and function comprises a teachers guide, video and three student worksheets.

The video, *Adaptations in action*, presents structural adaptations of three featured organisms and explains functions of these adaptations in relation to environment. Students use worksheets to investigate additional structural adaptations of these organisms. See the teachers guide for detailed information on the purpose and use of this resource.



Structural adaptation 4: Researching adaptations

Researching adaptations comprises a teachers guide, three podcast interviews with scientists from The University of Western Australia and a worksheet.

This activity encourages students to expand their knowledge about structural adaptations of three featured organisms, and their understanding of the relationship between structural adaptations and function. The resource is also useful for exploration of scientific methodology and research practices. See the teachers guide for detailed information on the purpose and use of this resource.

Acknowledgements

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