



COMMON TERMINOLOGY

Adaptations	Features of an animal that enable it to survive in its environment.
Amphibian	An animal that can live on land and in water. They have moist skin through which they are capable of breathing. Frogs are the only amphibians found in Australia.
Bird	An animal that has four limbs- the front pair developed into wings. The bird's skin is covered in feathers and the female lays hard-shelled eggs.
Camouflage	A disguise that allows an animal to blend into its environment.
Carnivore	An animal that eats meat.
Conserve	To keep from harm or to protect.
Ectothermic	An animal whose body temperature changes with the temperature of the environment.
Endothermic	An animal whose body temperature remains the same despite the temperature of its environment.
Habitat	The place an animal lives in its environment.
Herbivore	An animal that eats plants e.g. herbs and grasses.
Joey	A baby marsupial.
Macropod	A marsupial that has strong legs and big feet e.g. kangaroos.
Mammal	An endothermic vertebrate with hair, that feeds its baby milk from a mammary gland.
Marsupial	A mammal who's young is born in an underdeveloped state after a short pregnancy. The young complete their development inside a permanent or temporary pouch.
Monotreme	A mammal that lays soft-shelled eggs and feeds its young on milk produced from mammary glands on its stomach E.g. short-beaked echidna and platypus.
Nocturnal	An animal that sleeps during the day and is active at night.
Omnivore	An animal that eats meat and plants.
Placental	An animal that keeps its baby inside their body until it is well developed, by means of a placenta.
Predator	An animal that hunts other animals for food.
Prey	An animal that is eaten by other animals for food.
Reptile	An ectothermic vertebrate with dry scales.
Vertebrate	An animal with a backbone.
Young	A baby animal.



CLASSROOM RESOURCES

Resources Overview

Resources provided have been designed to link with multiple strands from the Australian Curriculum and using the VAK (*Visual, Auditory, Kinaesthetic*) Model of learning. In conjunction, Anderson's Revised Taxonomy (adaption of the 1956 Bloom's Taxonomy) is used to encourage deep thinking and develop a profound understanding of the Lone Pine experience. The activities have a sequential flow and teachers may choose to follow the sequence, choose only a few of, or create variations of the activities based on the needs/abilities of their children. An overview of the activities is displayed below including variations for the level of junior, middle and senior primary where necessary.

THINKING LEVEL	TASK
Remember R	<u>3:2:1 RIQ</u> This strategy is a structure that assists students to process new information. It consists of 3 steps: <ol style="list-style-type: none">1. Preparing for a task: Students complete 3 Recalls, 2 Insights and 1 Question2. The Interview: In pairs students take turns at presenting their 3:2:1 RIQ and ask questions3. Class Recall: The teacher may ask for some of the more interesting recalls, insights and questions as a class. <p style="text-align: right;"><u>See page 10 for Methodology</u></p>
Understand U	<u>Cause – Effect Maps</u> This tool is very effective in assisting students to translate the content of a topic into cause-effect relationships. This process is ideal for consolidating the student's knowledge of the topic under investigation. It enables students to construct information in non-linear form. <p style="text-align: right;"><u>See page 11 for Methodology</u></p>
Apply A	<u>Application Strategies – Junior, Middle/Senior Primary</u> <p style="text-align: right;"><u>See page 12 for Methodology</u></p>
Analyse An	<u>Double Bubble Map</u> This is an excellent analytical tool to compare and contrast two characteristics of animals. The graphic layout of the double bubble map allows students more writing/drawing space. Students can work individually or in pairs. Two individual bubbles maps are connected with central bubbles listing similar characteristics. Decide on a topic E.g., "Animals at Lone Pine" then choose two objects to compare and contrast, e.g. snake and lizard. <p style="text-align: right;"><u>See page 13 for Methodology</u></p>
Evaluate E	<u>Human Continuum</u> This is an extremely versatile cooperative/cognitive strategy. Students are challenged to (literally) take a stand on an issue they understand. Throughout the exercise they may also begin to realise that while it is easy to have opinions in a "vacuum", it requires "scholarly" skills to process information and provide clear and concise arguments. The activity is a six step process. <p style="text-align: right;"><u>See page 14 for Methodology</u></p>
Design D	<u>Image Associated Ideas</u> As students are highly visual, this strategy is a useful tool to encourage divergent, convergent and creative thinking by extending their visual imagination. The purpose here is to generate ideas for a story writing task. <p style="text-align: right;"><u>See page 15 for Methodology</u></p>
Cooperate C	<u>Silent Card Shuffle</u> This strategy has several applications such as sequencing, classifying, matching and mapping. It employs all six levels of the Taxonomy and most of the Multiple Intelligences. In this instance it will be used as a matching activity where students will relate animals to their habitat and/or food and/or predators and/or covering and/or babies. <p style="text-align: right;"><u>See page 16 for Methodology</u></p>

R

3:2:1 RIQ: Methodology

Step 1: Planning for a Task

Before or after your visit to Lone Pine, alert students that they will complete a 3:2:1 RIQ.

3 Recalls: Students state 3 facts they can recall from class work completed to date or any other prior knowledge.

2 Insights: These can be interesting facts or observations.

1 Questions: This may include:

- I do not understand why...?
- How does this affect...?
- In the future, what will...?
- What is the relevance of ...?
- How does this relate to...?

This can be completed in scrapbooks, or electronically using paint or graphic programs.

Step 2: The Interview

Students are then allocated pairs and take turns presenting 3:2:1 RIQ. Encourage students to ask each other questions like:

- Do you mean...?
- Are you saying that...?
- What do you mean by...?

Also encourage students to discuss and perhaps even answer the questions posed by their peers.

It is important for the teacher to guide students on how to conduct a successful interview that promotes deep and rich conversations.

Step 3: Class Recall

The teacher may ask for some of the more interesting recalls, insights and questions as a class. If the activity has been completed on a program such as Kid Pix work can be displayed on a class/school website for viewing by others.

NOTE: *This strategy can act as an indicator for both students and teachers to ascertain the class's understanding, and therefore could be employed at regular intervals.*

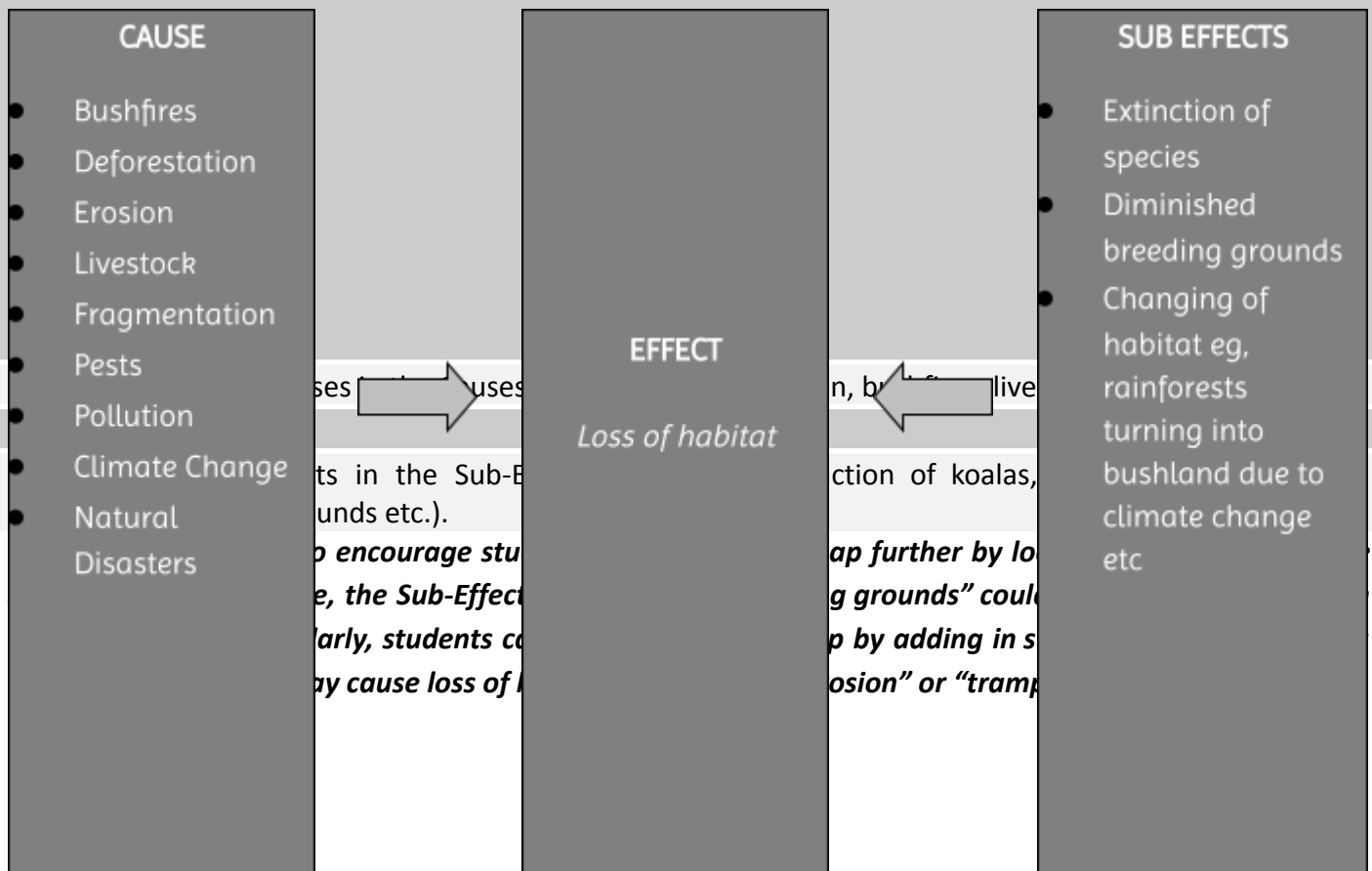
PROCESS

It is important for students to realise that there is no 'right' map. Each map will take a variety of shapes, depending on the students' focus, their depth of knowledge and their level of research of the topic.

STEP 1: Effects

Enter the effects (one or more) in the Effects boxes (e.g. loss of habitat).

STEP 2: Causes





JUNIOR PRIMARY ACTIVITY

Choose a Colour

Place squares of coloured paper on the floor. Use as many colours as you can. The idea is that the teacher states a topic like, “Going to Lone Pine” and children choose a colour that reminds them of something at Lone Pine. Go around the circle and ask each child to explain why they chose that particular colour, e.g., “I chose the green square because koalas eat green gum leaves” or “I chose yellow because the baby chickens were yellow” or “I chose blue because it was a beautiful, sunny day that day”.

Teachers may also like to change the topic E.g., “Our snake encounter” or “saving our backyards”.

MIDDLE/SENIOR PRIMARY ACTIVITY

POE (Predict, Observe, Explain)

A classic strategy made for investigative work. This strategy is both a developmental, or formative record of learning and a summative sample at the conclusion of a project or investigation.

PROCESS

Before you begin a group task, use the **POE** to think ahead about how your team will manage the challenge. Choose a topic E.g., Queensland’s Vanishing Wildlife.

STEP 1: Predict

Before an investigation, write down what you think will happen. Give a simple explanation for this prediction. E.g., Why do you think the Northern Hairy Nosed Wombat is endangered?

STEP 2: Observe

Write down your observations. Was it different to your prediction? E.g., You can visit the Queensland Museum’s website for the Northern Hairy Nosed Wombat investigation www.qmuseum.qld.gov.au

STEP 3: Explain

Here the teacher explains/reviews the concept and then students can enter their explanation for what happened.

STEP 4: Reporting

At the conclusion of the investigation, students report their findings back to the class. The class can listen to the conflicts and the many predictions and explanations. The teacher is now in a good position to judge how well the students understand the concept being investigated.

NOTE: It is important that students give a clear reason for their prediction. This explanation demonstrates their understanding of the topic. Other vanishing Queensland wildlife investigation topics can be the Mahogany Glider, Julia Creek Dunnart, Greater Bilby, Mary River Turtle. They can all be found on the Queensland Museum website.

An

DOUBLE BUBBLE MAP: Methodology

Step 1: Name Objects

Name the two objects to be compared, one in each of the largest bubbles (medium grey in colour).

Step 2: Contrast

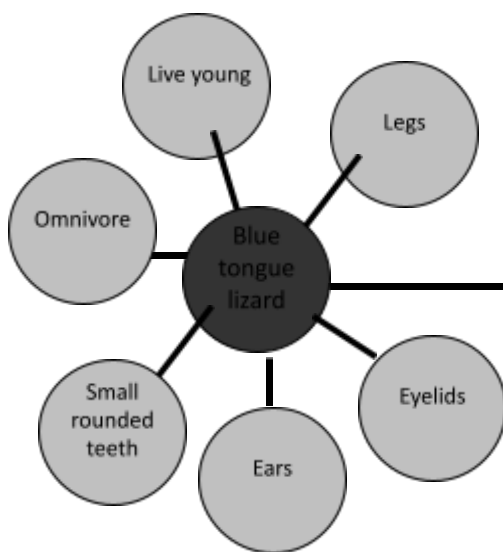
In the outer bubbles (light grey in colour), enter attributes of each subject/object/proposal under review – those that indicate differences from one another.

Step 3: Compare

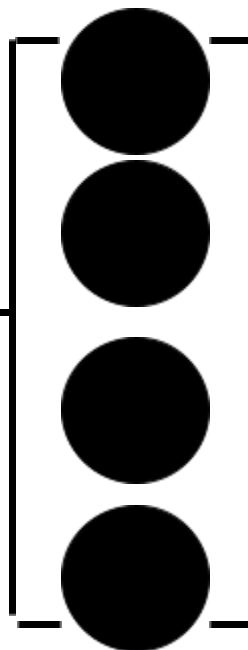
In the inner bubbles (black in colour), enter similar characteristics for the objects, subjects or proposals under review.

NOTE: *If using ICT's, students could make a multi-media product by incorporating video, graphics and podcasts. Students could also make the map interactive with hyperlinks to blogs, wikis and relevant websites. The Double Bubble Map can also be completed as individuals, but ideally, it works well when students complete it in pairs.*

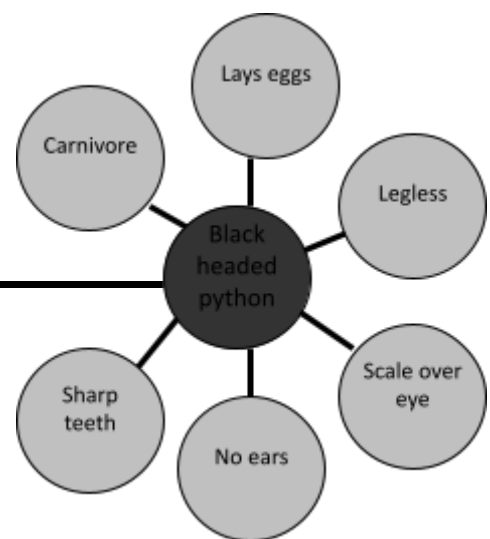
Features that are different



Shared Features



Features that are different



E

HUMAN CONTINUUM: Methodology

Step 1: Setting Up

Use masking tape to mark out a straight or curved line along the floor (approx. 10 metres). Add arrows at both ends to represent a continuum and the place markers e.g. A for Agree, D for Disagree – one at either end of the line. Clearly mark the midpoint of the continuum to represent the 'Undecided' position or the zone for those students who do not yet feel confident sharing their views.

Step 2: The Statement

The teacher makes a statement e.g. *If we stop all bushfires then the wild koala numbers will no longer be threatened*, for middle/senior primary. For junior primary; divide students into groups A and B. Group A are given pictures of native Australian animals from Lone Pine that they all recognise. Using the Human Continuum, arrange from the Most to Least

- Furry
- Scaly
- Slimy
- Feathery
- Smelly

Ask Group B if they agree. Swap groups.

Step 3: Agree or Disagree

Students who strongly agree with the statement should move to the end of the continuum marked 'A' while those who disagree move to the 'D' end. Their position in line indicates the strength of their belief in the statement.

Step 4: Reasons

Question the students briefly about their reasons for taking up the position they have chosen.

Step 5: Reflect any Changes

Begin to focus the issue by providing additional information or by narrowing the parameters of the original statement e.g. *What about roads through koala habitat?* Participants move again to reflect their changing views. (If time permits, check why some students changes positions and others didn't.)

Step 6: Narrowing the Parameters

The teacher, playing devil's advocate, continues to focus the issue by introducing more explicit detail that may personalise the argument for some students, e.g. *"What about trees that you might cut down?"* Students move or stay in position according to their response to new circumstances. Continue narrowing the parameters and perhaps introduce a surprise final element!

Value-add

Use a Human Continuum as an introduction to a topic. After students have researched and broadened their understanding of the topic, ask them to re-form the Human Continuum. Have they changed their Point of View/position? Why?

NOTE: Students may find it helpful to carry their notes and articles when they stand along the continuum so they can justify their opinions by providing supporting evidence. This strategy is useful as a pre-assessment strategy, as a discussion starter for investigating a new topic, as a formative assessment activity or as a culminating activity.

D

IMAGE ASSOCIATED IDEAS: Methodology

Step 1: Draw or show a random image/s

Draw or show a random image or multiple images. Websites such as www.gettyimages.com or www.fotosearch.com/photos-images/blurry.html have some vivid images that will provoke student interest. Or, you may like the students to bring some photographs from home to directly relate to them caring for their backyard, or planting native trees, recycling, planting a vegetable garden or placing logs for blue tongue lizards (teachers may like to set the taking of these photographs as a homework assignment).

Step 2: Write a general list

In small groups, students describe what they see and then ask the child who brought the photograph to explain the situation. Alternatively, students can generate a list of questions from the image. A Round Robin Strategy (see Appendix One) will assist students with this step. This is the divergent thinking strategy.

Step 3: Target new ideas or solutions

Students use the list or discussion ideas to target new ideas (convergent thinking).

For example: Students may like to use the photographs write a picture book demonstrating ways in which you can care for the native environment.

Variation

This strategy can also be used where students generate questions for inquiry research relating to their topic E.g., Australian Native Animals.



SILENT CARD SHUFFLE : Methodology

Process

Decide on material to be addressed, such as Diet in Native Australian Animals. In this activity, create cards representing different Australian Native Animals and what kind of food they eat. For example, carnivore, omnivore, herbivore. Cut up the cards and distribute one card to each student. The heading cards can be placed randomly around the room.

Step 1: Silent Card Classification

Students will be required to classify the cards under the correct heading. Students gather at their matching heading card. NO TALKING MAY OCCUR.

Step 2: Challenge, Justify and Refine.

When finished, and at a signal from the teacher, the group may talk, challenge each other and make changes if needed.

Step 3: Circle and Observe

Leaving one person behind as the Group Representative, the other students can visit other groups to note the efforts of their peers. They may ask the Group Representative questions and voice their objections but NO CHANGES may take place.

Step 4: Return and Refine

Students return to their Home group and, based on their observations and discussions, decide if they wish to make further changes.

Step 5: Teacher Debriefing

The teacher displays the 'answer' and students self-correct, discussing the changes as they do so. The teacher later debriefs.

NOTE: This strategy is obviously learner centred and allows teachers to assess levels of competency and understanding. It is a good activity for after lunch as it is tactile and involves a lot of movement. Other heading examples are: Feathers/Fur/Scales, Mammals/Amphibians/Reptiles/Birds, Herbivore/Omnivore/Carnivore



SCAFFOLDING FOR CREATIVE WRITING

NOTE: This will be a useful resource to use in preparation for the NAPLAN Writing Prompt Task. Most students will require the scaffolding of several cognitive and cooperative tools for the task. This separates the planning and creative thinking phase from the actual writing phase and will almost certainly lead to a better final product. Use this task and base it on your Lone Pine visit to link their experience even further. Often, writing tasks involve students thinking at the foundation level of Bloom's taxonomy without really using their imagination. For example, writing about their Lone Pine visit will often result in students simply stating what they did during the excursion (working at the 'Remembering' level). The process below provides students with a structure for analysing, evaluating and producing an in-depth creative writing piece ('Design').

Methodology

Process

Students generally arrive back from an excursion with lots of exciting things to talk about. Take advantage of this and organise the students to share their stories with the class.

Step 1: List in pairs

In pairs, ask students to list all the things they did during their visit.

Step 2: Reduce list

Using the **Elimination Draw** (see Appendix Two), students now reduce this list to the most interesting, funny or most annoying things that occurred to them. This can be completed in pairs, with one student assisting their partner through Socratic questioning:

- **Why exactly do you think this one is more important...?**
- **Are you saying that...?**
- **What exactly does this mean?**
- **Can you give me an example?**
- **Can you rephrase that, please?**

Step 3: Chose one event

Students chose one event and complete a **Y-Chart** (see Appendix Three).

Step 4: Write a story

With reference to their completed Y-Chart, students are now in a position to write a creative short story on their visit to Lone Pine. After about 10 minutes of writing, stop the task and ask students to share their work with another student.

This can be a straight rotation exercise or it can involve students providing feedback using a **Pros, Cons, Questions/Improvements** (see Appendix Four).

Step 5: Share the stories

Upon completion of the writing exercise, half the class share their stories by placing them on the classroom wall. Students stand next to their stories to allow questioning from the other half of the class. Once the stories have been shared, rotate.



APPENDIX ONE

ROUND ROBIN : Methodology

Process

Group students in three to four at a table, with one piece of paper and one scribe (if appropriate). All groups respond to the same topic such as “What do you see in John’s picture?”

Step 1: Brain Storming

At the given signal, each group begins their brainstorming while the scribe records their ideas. (Younger age groups may like to draw their ideas).

Step 2: Move Paper

After an allocated time (e.g. 90 seconds) the pieces of paper move one desk to the left. One member in each team reads the responses from the previous table and then continues to generate and record more ideas on the new piece of paper. They may not repeat what they have recorded previously.

Step 3: Move paper again

After 2 minutes, move the paper again to the left and repeat the process.

Step 4: Ranking or classification

After three or four rotations, the process enters a new phase. The teacher can ask each group to rank the best three or four ideas. Alternatively, teachers may like to ask them to identify the various answers in terms of classifications designed by teachers (or students) such as “the most practical.

NOTE: Students could select four or more categories and classify the responses to fit the categories. In doing so, students will have the materials to create a structured report, essay, poem or power point presentation.



APPENDIX TWO

ELIMINATION DRAW : Methodology

Process

This strategy helps to find the central characteristic, cause, reason, problem, solution, principle, value etc. of a topic under discussion.

Step 1: List characteristics

Make a list of characteristics and enter these on the draw such as for a tennis tournament. First idea at the top, second idea at the bottom, third idea a quarter of the way down etc.

Step 2: Consider options

Working on own or in pairs, consider the first two options using a basic T – Chart (Appendix Five) to enter information for consideration.

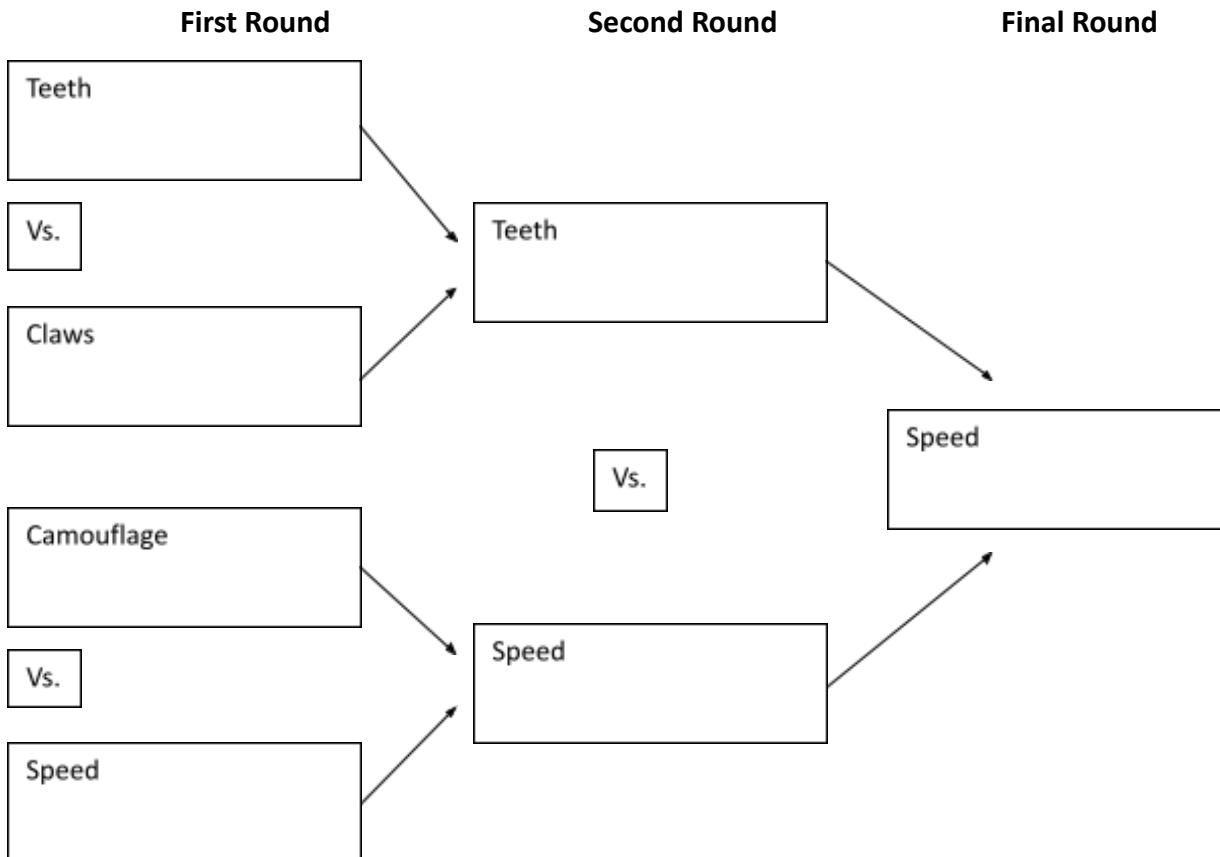
Step 3: Moving forward

The one with most attributes is likely to be moved forward. Repeat the process until round 2 is completed.

Step 4: Winner

Continue this process to decide the next rounds and continue until a winner is declared.

What is the best predator adaption?





APPENDIX THREE

Y-CHART : Methodology

Process

For greater flexibility in thinking, perspectives and insight beyond the obvious looks/sounds/feels structure, you can include opposites in each sector to create a more realistic and in-depth product.

Step 1: Looks like

Enter the positives and negatives for what can actually be seen.

Step 2: Sounds like

Repeat step one for sounds that can be heard (and the ones that can't be heard!). Enter positives and negatives of conversations involved (including imagined conversations).

Step 3: Feels like

All the positives and negatives of the physical and emotional feelings involved.

NOTE: You can decide on some categories and then classify the entries under these categories. This will give you material for a report, speech, bubble map or a visual report on the topic.





APPENDIX FOUR

PROS, CONS, QUESTIONS (PCQ) : Methodology

Process

This is a basic tool to encourage critical thinking when attempting to analyse any situation before deciding whether or not to support it. A simple table is drawn up to assist.

Step 1: P = Pros

Enter all the pros, advantages, positives etc.

Step 2: C = Cons

Enter all the cons, weaknesses, disadvantages etc.

Step 3: Q = Questions

Enter all the questions e.g. "What if...", "I wonder...", "It would be interesting to know whether...", possibilities, unusual questions, insights.

☺ PROS	☹ CONS	? QUESTIONS
●	●	●



APPENDIX FIVE

T-CHART : Methodology

Process

The T Chart is used to compare two or more objects, subjects or proposals.

Step 1: Subjects

Enter opposing headings e.g. “What I’ve Been Told” vs. “Fact” in the upper cells.

Step 2: Attributes

Beneath the “T”, enter all attributes for one subject,

Step 3: Attributes

Enter all attributes for the other.

Step 4: Other opposing characteristics

Some other opposing characteristics that could be applied: Fact/Opinion, True/False, Healthy/Unhealthy, Objective/Subjective, Advantages/Disadvantages etc.

What I’ve Been Told	Fact
Snakes... I’ve heard people say that all snakes are venomous and could kill you.	Only certain snakes are venomous. They are called elapids and colubrids. Even so, not all venomous snake bites could kill you, but they could still make you sick.
Koalas... My Grandma says that all koalas do is sleep and eat.	Koalas do mostly sleep and eat. They can sleep for up to 20 hours a day because the food they eat has very little energy in it. However, koalas can get quite a run up and they can even jump from branch to branch!!
Littering... Dad says that one person picking up rubbish isn’t going to make a difference, so I shouldn’t risk getting my hands all dirty by picking up litter I see on the ground.	