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| --- | --- |
| Cooperative Hunting Behaviour | Marks |
| Explains the term cooperative hunting | 3 |
| *Predatory animals hunting prey [1]* |  |
| *Working together with other members of the same species [1]* |  |
| *Individuals typically have roles to play in the hunt [1]* |  |
| Explains the costs and benefits of cooperative hunting | 4 |
| *Benefit - Increases success rate of the hunt, reduced individual energy expenditure, take larger prey [2]* |  |
| *Costs – reduced energy intake through sharing prey, individuals may choose to cheat. [2]* |  |
| Explains the cooperative hunting strategy | 4 |
| - *Wolves - Intimidate, Chase, Isolate. [3]* |  |
| *OR* |  |
| - *Lions - Stealth approach, fast attack (kill if possible), drive to ambush [3]* |  |
| Explains the role of the individual in the hunt | 9 |
| Lions - Answers may include: |  |
| - *Wings who circle the flanks of the prey, prevent escape and channel prey towards ambush. [3]* |  |
| - *Centres who approach as close as possible before attacking, will kill if possible, otherwise chase [3]* |  |
| *- Ambush awaits prey to be driven towards them, will join the chase if necessary. [3]* |  |
| *OR* |  |
| Wolves - Answers may include: | 9 |
| - *Younger wolves flank the outside, intimidating prey items, harrowing the herd. [3]* |  |
| *- Faster individuals chase/harrow the herd, trying to split the herd into smaller groups/individuals/young animals. [3]* |  |
| *- Larger individuals attempt to bite the legs, throat and snout of the isolated prey item to bring it down. [3]* |  |
| Compares and Lions or Gray Wolves to an additional species | 4 |
| Research Notes | 6 |
| *Research notes relate to the question being answered [2]* |  |
| *Research notes are summarised, large sections not copied verbatim [2]* |  |
| *Length of research notes – number of pages. [2]* |  |
| References | 6 |
| *One mark per website referenced in the notes [6]* |  |
| APA Formatting | 3 |
| *½ mark for each reference in APA format. [3]* |  |
| TOTAL | **39** |
| Symbiosis | **Marks** |
| Explains the term symbiotic relationship: | 4 |
| *Close biological interaction between two separate species. [1]* |  |
| *Symbiotic relationships can be facultative (do not need to associate all the time) or obligate (depend on each other for survival) [2]* |  |
| *Examples of symbiotic relationships – mutualism, commensalism, parasitism, predation. [1]* |  |
| Defines the terms parasitism, commensalism, mutualism and predation: | 4 |
| *Mutualism – interaction where each individual in the relationship benefits [1]* |  |
| *Predation – interaction where one individual gains nutrients at the expense of the others life. [1]* |  |
| *Parasitism – interaction where one individual gains nutrients at the expense of the other, often without killing the host. [1]* |  |
| *Commensalism – interaction where one individual benefits and the other is not affected. [1]* |  |
| Compares similarities between predation and parasitism: | 2 |
| *In each interaction one individual benefits, the other is harmed/killed [2]* |  |
| Contrasts between predation and parasitism | 2 |
| *Predation kills one of the individuals; parasitism keeps the host alive (in most cases). [2]* |  |
| Compares similarities between commensalism and mutualism: | 2 |
| *No net loss for any individual, at least one individual in both interaction benefits. [2]* |  |
| Contrasts between commensalism and mutualism: | 2 |
| *Mutualism benefits both individuals. One individual is unaffected neither harmed or benefited in commensalism [2]* |  |
| Describes an example for commensalism | 2 |
| *Provides and describes an example of commensalism [2]* |  |
| Describes an example for mutualism | 2 |
| *Provides and describes an example of mutualism [2]* |  |
| Describes an example of predation | 2 |
| *Provides and describes an example of predation [2]* |  |
| Describes an example of parasitism | 2 |
| *Provides and describes an example of parasitism [2]* |  |
| Research Notes: | 6 |
| *Research notes relate to the question being answered [2]* |  |
| *Research notes are summarised, large sections not copied verbatim [2]* |  |
| *Length of research notes – number of pages. [2]* |  |
| References: | 6 |
| *One mark per website referenced in the notes [6]* |  |
| APA Formatting | 3 |
| *½ mark for each reference in APA format. [3]* |  |
| TOTAL | **39** |