1. Baseline Full Prompt 1-shot

A biological strategy is a characteristic, mechanism, or process that an organism or ecosystem exhibits to accomplish a particular function within a particular context.

The main elements of a biological strategy are:

- The function of the organism, as in what is the organism trying to accomplish?

- The mechanism of the organism, describe how the organism does the function.

- The context of the organism performing the function. This could be a place, condition, or situation.

- The organism or ecosystem is performing the function.

- The part of the organism that is used to perform the function if it is stated in the text.

Make sure the biological strategy is composed of the function, mechanism, context, organism, and part of the organism.

Text: Building a home from foam-túngara frog foam nest architecture and three-phase construction process. frogs that build foam nests floating on water face the problems of over-dispersion of the secretions used and eggs being dangerously exposed at the foam : air interface. nest construction behaviour of tungara frogs, engystomops pustulosus, has features that may circumvent these problems. pairs build nests in periodic bursts of foam production and egg deposition, three discrete phases being discernible. the first is characterized by a bubble raft without egg deposition and an approximately linear increase in duration of mixing events with time. this phase may reduce initial over-dispersion of foam precursor materials until a critical concentration is achieved. the main building phase is marked by mixing events and start-to-start intervals being nearly constant in duration. during the final phase, mixing events do not change in duration but intervals between them increase in an exponential-like fashion. pairs joining a colonial nesting abbreviate their initial phase, presumably by exploiting a pioneer pair's bubble raft, thereby reducing energy and material expenditure, and time exposed to predators. finally, eggs are deposited only in the centre of nests with a continuously produced, approximately 1 cm deep egg-free cortex that protectively encloses hatched larvae in stranded nests.

Function: protect hatched larvae

Mechanism: building nests

Context: periodic bursts of foam production and egg deposition on water

Organism: Túngara frog

Part of: Nest

Strategy: Túngara frogs protectively enclose hatched larvae by building nests during periodic bursts of foam production and egg deposition on water

Text: {}

Function:

|  |  | Organism | Part Of | Function | Context | Mechanism | Strategy |  | DocLen |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. | W2130285640 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 2. | W2168114966 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 3. | W1589686983 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 4. | W1589686983 | 1 | 1 | 1 | 0 | 1 | 1 | 5/6 |  |
| 5. | W2052657884 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 6. | W2005779387 | 1 | 1 | 1 | 0 | 1 | 1 | 5/6 |  |
| 7. | W2152749757 | 1 | 1 | 1 | 0 | 1 | 0 | 4/6 |  |
| 8. | W2025490238 | 1 | 0 | 1 | 1 | 1 | 1 | 5/6 |  |
| 9. | W2112209842 | 1 | 1 | 1 | 0 | 1 | 1 | 5/6 |  |
| 10. | W2127657288 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 11. | W2024134236 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 12. | W2075613570 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 13. | W2071362227 | 1 | 1 | 1 | 1 | 0 | 0 | 4/6 |  |
| 14. | W1994029841 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 15. | W2051302904 | 1 | 1 | 1 | 1 | 1 | 0 | 5/6 |  |
|  |  | 15/15 | 14/15 | 15/15 | 11/15 | 14/15 | 13/15 |  |  |

1. Baseline + Mechanism → Mechanisms

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- The part of the organism that is used to perform the function if it is stated in the text.

Make sure the biological strategy is composed of the function, mechanisms, context, organism, and part of the organism.

Text: Building a home from foam-túngara frog foam nest architecture and three-phase construction process. frogs that build foam nests floating on water face the problems of over-dispersion of the secretions used and eggs being dangerously exposed at the foam : air interface. nest construction behaviour of tungara frogs, engystomops pustulosus, has features that may circumvent these problems. pairs build nests in periodic bursts of foam production and egg deposition, three discrete phases being discernible. the first is characterized by a bubble raft without egg deposition and an approximately linear increase in duration of mixing events with time. this phase may reduce initial over-dispersion of foam precursor materials until a critical concentration is achieved. the main building phase is marked by mixing events and start-to-start intervals being nearly constant in duration. during the final phase, mixing events do not change in duration but intervals between them increase in an exponential-like fashion. pairs joining a colonial nesting abbreviate their initial phase, presumably by exploiting a pioneer pair's bubble raft, thereby reducing energy and material expenditure, and time exposed to predators. finally, eggs are deposited only in the centre of nests with a continuously produced, approximately 1 cm deep egg-free cortex that protectively encloses hatched larvae in stranded nests.

Function: protect hatched larvae

Mechanisms: building nests

Context: periodic bursts of foam production and egg deposition on water

Organism: Túngara frog

Part of: Nest

Strategy: Túngara frogs protectively enclose hatched larvae by building nests during periodic bursts of foam production and egg deposition on water

Text: {}

Function:

|  |  | Organism | Part Of | Function | Context | Mechanism | Strategy |  | DocLen |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. | W2130285640 | 1 | 1 | 1 | 0 | 1 | 1 | 5/6 |  |
| 2. | W2168114966 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 3. | W1589686983 | 1 | 1 | 1 | 0 | 1 - **more accurate** | 1 | 5/6 |  |
| 4. | W1589686983 | 1 | 1 | 1 | 0 | 1 | 1 | 5/6 |  |
| 5. | W2052657884 | 1 | 0 | 1 | 1 | 1 - **less accurate** | 1 | 5/6 |  |
| 6. | W2005779387 | 1 | 1 | 1 - **more accurate** | 1 | 1 - **more accurate** | 1 | 6/6 |  |
| 7. | W2152749757 | 1 | 1 | 1 | 0 | 1 | 0 | 4/6 |  |
| 8. | W2025490238 | 1 | 0 | 1 | 0 | 1 - **more accurate** | 0 | 3/6 |  |
| 9. | W2112209842 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 10. | W2127657288 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 11. | W2024134236 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 12. | W2075613570 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 13. | W2071362227 | 1 | 1 | 1 | 1 | 0 | 0 | 4/6 |  |
| 14. | W1994029841 | 1 | 1 | 1 | 1 | 1 - **more accurate** | 1 | 6/6 |  |
| 15. | W2051302904 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
|  |  | 15/15 | 13/15 | 15/15 | 10/15 | 14/15 | 13/15 |  |  |

1. Baseline + Context → Environment + Context

A biological strategy is a characteristic, mechanism, or process that an organism or ecosystem exhibits to accomplish a particular function within a particular context.

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- The context of the organism performing the function. This could be a condition and/or situation.

- The environment in which the organism is performing the function. This could be a place or ecosystem.

- The organism or ecosystem is performing the function.

- The part of the organism that is used to perform the function if it is stated in the text.

Make sure the biological strategy is composed of the function, mechanism, context, environment, organism, and part of the organism.

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Function: protect hatched larvae

Mechanism: building nests

Context: periodic bursts of foam production and egg deposition

Environment: on water

Organism: Túngara frog

Part of: Nest

Strategy: Túngara frogs protectively enclose hatched larvae by building nests during periodic bursts of foam production and egg deposition on water

Text: {}

Function:

|  |  | Org. | Part. | Func. | Context | Mech. | Env. | Strat. |  | DocLen |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. | W2130285640 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7/7 |  |
| 2. | W2168114966 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7/7 |  |
| 3. | W1589686983 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7/7 |  |
| 4. | W1589686983 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 5/7 |  |
| 5. | W2052657884 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 4/7 |  |
| 6. | W2005779387 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7/7 |  |
| 7. | W2152749757 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7/7 |  |
| 8. | W2025490238 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7/7 |  |
| 9. | W2112209842 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 6/7 |  |
| 10. | W2127657288 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7/7 |  |
| 11. | W2024134236 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7/7 |  |
| 12. | W2075613570 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7/7 |  |
| 13. | W2071362227 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 5/7 |  |
| 14. | W1994029841 | - | - | 1 | 1 | 1 | - | 1 | 4/4 |  |
| 15. | W2051302904 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 5/7 |  |
|  |  | 14/14 | 13/14 | 15/15 | 12/15 | 14/15 | 12/15 | 13/15 |  |  |

1. Baseline + Context → Contexts

A biological strategy is a characteristic, mechanism, or process that an organism or ecosystem exhibits to accomplish a particular function within a particular context.

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Function: protect hatched larvae

Mechanism: building nests

Context(s): periodic bursts of foam production and egg deposition on water

Organism: Túngara frog

Part of: Nest

Strategy: Túngara frogs protectively enclose hatched larvae by building nests during periodic bursts of foam production and egg deposition on water

Text: {}

Function:

|  | New Context(s): | Organism | Part Of | Function | Context | Mechanism | Strategy |  | DocLen |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. | W2005779387 | 1 | 0 | 1 | 0 | 1 | 1 | 4/6 |  |
| 2. | W2152749757 | 1 | 1 | 1 | 0 | 1 | 1 | 5/6 |  |
| 3. | W2025490238 | 1 | 1 | 1 | 0 | 1 | 0 | 4/6 |  |
| 4. | W2112209842 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 5. | W2127657288 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 6. | W2024134236 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 7. | W2075613570 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
| 8. | W2071362227 | 1 | 1 | 1 | 1 | 0 | 0 | 4/6 |  |
| 9. | W1994029841 | 1 | 1 | 1 | 0 | 1 | 1 | 6/6 |  |
| 10. | W2051302904 | 1 | 1 | 1 | 1 | 1 | 1 | 6/6 |  |
|  |  | 10/10 | 9/10 | 10/10 | 6/10 | 9/10 | 8/10 |  |  |