**Project 1**

**Game:** Evolution or Evolution (The New Beginning)

**Objective:** Reinforce how predation does not have a 100% success rate.

**Materials Needed:** 2 twenty-side dice or 2 standard dice

**Activity:**

1. Play Evolution New Beginning by the publisher’s rules.

2. After finishing, ask the students:

How they felt the predator’s ability to consume predators and non-predators species emulate conditions in the wild?

If there are no concerns raised, ask

Are predators always successful in the wild? Does having the same abilities such as flight increase a predator’s ability to feed? Do land predators only consume land animals? Are there cases where predators consume prey with different abilities?

How can this feature be improved in the current game?

3. Play the game again with the following rule changes (the Predation Rules):

1. Once a predator population and/or species decides which non-predator species that it will consume, the chance phase occurs. The player of the non-predator species and predator species both roll a twenty-sided die.

2. See corresponding attack table to determine if predation attempt was successful.

All other rules remain as provided by publisher.

**Attack table for Twenty-side Dice**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Difference in die values (Predator-Prey)** | | |
| **Defensive/ Attack Traits** | **<1** | **1-14** | **>14** |
| Matched | Unsuccessful attack | Successful attack | successful attack |
| Unmatched | Unsuccessful attack | Unsuccessful attack | successful attack |

**Twenty-side dice examples:**

***Matched Predator and Prey Defensive and Attack Traits***

Predator rolls 12 and prey rolls 10 (12-10=2 which is greater than one). Successful predation event

Predator rolls 10 and prey rolls 15 (10-15=-5 which is less than one). Unsuccessful event

***Unmatched Predator and Prey Defensive and Attack Traits***

Predator rolls an 8 and prey rollls7 (8-7=1 which is less than 15). Unsuccessful event

**Attack table for Six-side Dice (standard dice)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Difference in die values (Predator-Prey)** | | |
| **Defensive/ Attack Traits** | **<1** | **1-3** | **>3** |
| Matched | Unsuccessful attack | Successful attack | successful attack |
| Unmatched | Unsuccessful attack | Unsuccessful attack | successful attack |

**Six-side dice examples:**

***Matched Predator and Prey Defensive and Attack Traits***

Predator rolls 5 and prey rolls 4 (5-4=1 which is greater than one). Successful predation event

Predator rolls 1 and prey rolls 3 (1-3=-2 which is less than one). Unsuccessful event

***Unmatched Predator and Prey Defensive and Attack Traits***

Predator rolls a 5 and prey rolls 2 (5-2=3 which is less than 4). Unsuccessful event