Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: 1 2 3 4 5 6 7

**Cooperative and Group Behaviors: Field Notebook**

**The behavior of species is described as the actions they take to find food, avoid death, find a mate, protect their young, build a home or nest, communicate with others and protect their territory. Many species will come together in groups to accomplish these objectives. Sometimes the groups are purposeful in their actions and sometimes just being in a larger group provides benefits.**

|  |  |
| --- | --- |
| **Cooperative Behavior**: Intentional Behavior that helps out members of the group. Examples below: | **Group Behavior**- Has benefits just by being with others, but is not as intentional in actions. Examples below: |
| **Hunting**- working together to capture prey | **Flocking**- Being in a large group of birds for protection |
| **Migrating**- working together to go somewhere for warmth and to find more food | **Schooling**- Being in a large group of fish for protection |
| **Swarming**- working together to find food/migrate | **Herding**- Being in a large group of mammals for protection |

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 **Starlings (View the first 2 minutes max)**<https://www.youtube.com/watch?v=A6nvvFkbRkY>

*Observation:* What is remarkable about the starlings' behavior is that, despite all appearances, there is no choreographer and, as far as we know, no leader. Each individual bird is just following local rules. The numbers of individual birds in these flocks can run into thousands, yet they almost literally never collide. These aerial spectacles are often caused by a falcon near the edge of the flock. It turns out that the beauty of a murmuration’s movements often arises purely out of defense, as the starlings strive to put distance between themselves and the predator.

 **Which type of behavior is this: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **(cooperative or group) (specific type)**

*How does this strategy benefit an individual?*

*How does this strategy benefit the species (think reproduction and survival)?*

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**Elephants (2:15)** <https://www.youtube.com/watch?v=d-GdNAnVweE>

*Observation:* A group of elephants are helping a calf that has collapsed on the roadway. Many elephants come to the rescue to attempt to encourage and get the calf up and moving again.

 **Which type of behavior is this: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **(cooperative or group) (specific type)**

*How does this strategy benefit an individual?*

*How does this strategy benefit the species (think reproduction and survival)?*

*How do humans exhibit this type of behavior?*

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**Eastern Garter Snake in Ohio, United States (view first 1:20 of video)**

<http://www.arkive.org/common-garter-snake/thamnophis-sirtalis/video-00.html>

*Observation:* As temperature drops in late October, the metabolism of the cold-blooded Eastern garter snake slows, and the snakes prepare to hibernate. Hundreds of these animals travel great distances to group together to hibernate for the season, by returning to the same animal burrow they had used the previous year. They formed a dense mass that will insulate the inner snakes from winter temperatures.

**Which type of behavior is this: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **(cooperative or group) (specific type)**

*How does this strategy benefit an individual snake?*

*How does this strategy benefit the species (think reproduction and survival)?*

*Can you identify another species that demonstrates a similar group behavior?*

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**Orcas Feeding (View the first 2 minutes of the 4:34 video)** <https://www.youtube.com/watch?v=M-FhiTTRQcA>

*Observation:* A group of orcas work together to hunt fish. First, the orcas swim around and under the shoal (school) of herring. The orcas circle and corralled the fish into a small area. By working together, the orcas are able to scoop masses of fish into their mouths.

**Which type of behavior are the Orcas exhibiting: \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **(cooperative or group) (specific type)**

**Which type of behavior are the Fish exhibiting: \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **(cooperative or group) (specific type)**

|  |  |  |
| --- | --- | --- |
|  | *Orca* | *Fish* |
| *How does this strategy benefit the individual?* |  |  |
| *How does this strategy benefit the species?* |  |  |

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**Locusts** <https://www.youtube.com/watch?v=vc-63FN9Bbw> (0:45 min)

*Observation:* Locusts in North Africa moves in search of food. A single swarm can cover 400 square miles and may contain 40 billion individuals. They fly in perfect formation, and synchronize their wing beats. They can cover 150 miles in a single day. Each day a single swarm can consume food that would feed a half a billion people.

**Which type of behavior is this: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **(cooperative or group) (specific type)**

*How does this strategy benefit an individual locust?*

*How does this strategy benefit the species (think reproduction and survival)?*

*Identify another species that demonstrates a similar behavior.*

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**Azteca Ants in Brazil (0:53 video)** <https://www.youtube.com/watch?v=kAN7t6wl2AA>

*Observation:* The ants live in nests that are high in trees, six to ten meters above the ground. The ants foraged for food between 7 and 8 AM, using a group strategy to ambush (surprise attack) other insects. The ants spaced themselves evenly around the bottom edge of a leaf, so that only their open mouths could be seen from above the leaf. When an insect landed on the center of the leaf, the ants made only slight movements. When the insect moved toward the edge of the leaf, then all ants attacked at the same time, holding the prey down and stinging it. The ants were able to catch and eventually consume a moth that was more than twice as long as an individual ant**.**

**Which type of behavior is this: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **(cooperative or group) (specific type)**

*How does this strategy benefit an individual ant?*

*How does this strategy benefit the species (think reproduction and survival)?*

*How might the ants need to communicate with each other in order to carry out this group strategy?*

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**Wildebeest**<https://www.youtube.com/watch?v=whixkUJbdO8> (1:42 min) OR <https://www.youtube.com/watch?v=HYM6LqDJLiM> (2:41 min)

*Observation:* A member of the antelope family, the Wildebeest displays two types of behaviors as they travel hundreds of kilometers in groups to new locations in search of of new grasslands and savannas to forage for food.

 **Which type of behavior does traveling represent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **(cooperative or group) (specific type)**

*How does this strategy benefit an individual?*

*How does this strategy benefit the species (think reproduction and survival)?*

**Which type of behavior do massive amounts of wildebeest together represent:**

 **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **(cooperative or group) (specific type)**

*How does this strategy benefit an individual?*

*How does this strategy benefit the species (think reproduction and survival)?*