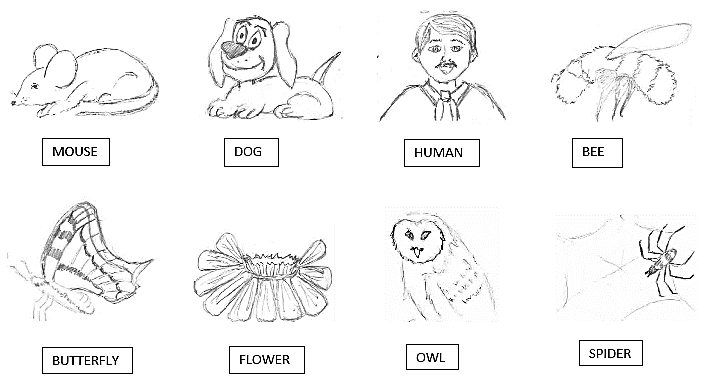
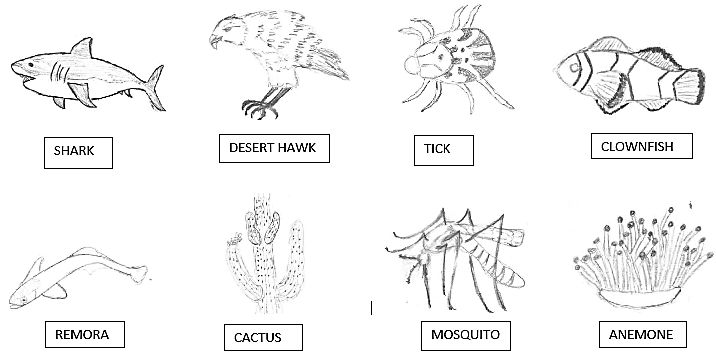
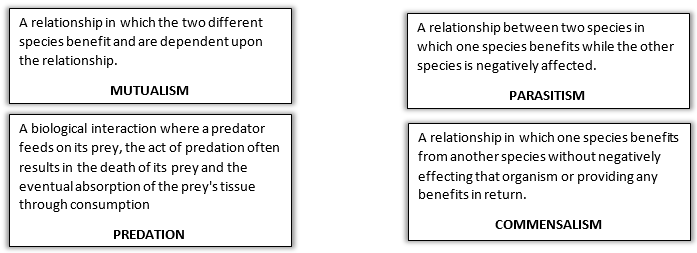
**Blackline Master #1 Organism Mixer Cards**

|  |  |
| --- | --- |
| Photo Credit: <https://pixabay.com/en/anemone-sea-life-scuba-diving-white-329559/> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **Photo Credit:** <http://commons.wikimedia.org/wiki/File:718smiley.png>  **SEA ANEMONE** |
| Photo Credit: <https://commons.wikimedia.org/wiki/File:Key_Deer_on_Deer_Key.jpg> | Clipart - Emoticons: Crying face  Photo Credit: <https://pixabay.com/en/emoticon-cry-sad-tear-expression-25519/>  **DEER** |
| Photo Credit: [https://commons.wikimedia.org/wiki/File:Bison\_bison\_Wichita\_Mountain\_Oklahoma.jpg](https://commons.wikimedia.org/wiki/File:Bison_bison_Wichita_Mountain_Oklahoma.jpg%20) | **Photo Credit:** <https://pixabay.com/en/emoticon-smile-symbol-expression-25513/>  **BISON** |
| Photo Credit: <https://commons.wikimedia.org/wiki/File:Shining_Bronze-Cuckoo_Dayboro.JPG> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **Photo Credit:** <http://commons.wikimedia.org/wiki/File:718smiley.png>  **CUCKOO** |
| Photo Credit: <https://commons.wikimedia.org/wiki/File:Clownfish_in_blue_water.jpg> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **Photo Credit:** <http://commons.wikimedia.org/wiki/File:718smiley.png>  **CLOWNFISH** |
| Photo Credit: <https://en.wikipedia.org/wiki/Caribbean_hermit_crab> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **Photo Credit:** <http://commons.wikimedia.org/wiki/File:718smiley.png>  **HERMIT CRAB** |
| Photo Credit: <http://dora.missouri.edu/mouse/> | Clipart - Emoticons: Crying face  Photo Credit: <https://pixabay.com/en/emoticon-cry-sad-tear-expression-25519/>  **MOUSE** |
| Photo Credit: <http://www.sharksider.com/category/blog/> | **Photo Credit:** <https://pixabay.com/en/emoticon-smile-symbol-expression-25513/>  **SHARK** |
| Photo Credit: <http://globe-views.com/dreams/ostrich.htm> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **Photo Credit:** <http://commons.wikimedia.org/wiki/File:718smiley.png>  **OSTRICH** |
| Photo Credit: <https://commons.wikimedia.org/wiki/File:Great-horned_Owl_RWD_at_CRC2.jpg> | Angry, Smiley Face, Expression, Emotion, Eyes, Cartoon  **Photo Credit:** [**https://pixabay.com/en/angry-smiley-face-expression-312241/**](https://pixabay.com/en/angry-smiley-face-expression-312241/)  **OWL** |
| Photo Credit: <https://commons.wikimedia.org/wiki/File:Brown-recluse-2-edit.jpg> | Angry, Smiley Face, Expression, Emotion, Eyes, Cartoon  **Photo Credit:** [**https://pixabay.com/en/angry-smiley-face-expression-312241/**](https://pixabay.com/en/angry-smiley-face-expression-312241/)  **SPIDER** |
| File:Lion d'Afrique.jpg  Photo Credit: <https://commons.wikimedia.org/wiki/File:Lion_d'Afrique.jpg> | Angry, Smiley Face, Expression, Emotion, Eyes, Cartoon  **Photo Credit:** [**https://pixabay.com/en/angry-smiley-face-expression-312241/**](https://pixabay.com/en/angry-smiley-face-expression-312241/)  **LION** |
| Photo Credit: <https://commons.wikimedia.org/wiki/File:Dog_tick_5148.jpg> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **Photo Credit:** <http://commons.wikimedia.org/wiki/File:718smiley.png>  **TICK** |
| Photo Credit: <https://commons.wikimedia.org/wiki/File:Grizzly_bear_brown_bear.jpg> | Angry, Smiley Face, Expression, Emotion, Eyes, Cartoon  **Photo Credit:** [**https://pixabay.com/en/angry-smiley-face-expression-312241/**](https://pixabay.com/en/angry-smiley-face-expression-312241/)  **BEAR** |
| Photo Credit: <http://www.orkin.com/other/fleas/what-do-fleas-look-like/> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **Photo Credit:** <http://commons.wikimedia.org/wiki/File:718smiley.png>  **FLEA** |
| Photo Credit: <https://commons.wikimedia.org/wiki/File:Limenitis_archippus_Cramer.jpg> | http://upload.wikimedia.org/wikipedia/commons/thumb/3/3c/Sert_-_dead_smile.svg/1000px-Sert_-_dead_smile.svg.png  Photo Credit: <http://commons.wikimedia.org/wiki/File:Sert_-_dead_smile.svg>  **BUTTERFLY** |
| Photo Credit: <https://en.wikipedia.org/wiki/Screaming_cowbird> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **Photo Credit:** <http://commons.wikimedia.org/wiki/File:718smiley.png>  **COWBIRD** |
| Photo Credit: <https://commons.wikimedia.org/wiki/File:Grant%27s_Gazelle_taxobox.jpg> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **Photo Credit:** <http://commons.wikimedia.org/wiki/File:718smiley.png>  **GAZELLE** |
| Photo Credit: <https://pixabay.com/en/photos/mistletoe/> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **Photo Credit:** <http://commons.wikimedia.org/wiki/File:718smiley.png>  **MISTLETOE** |
| Photo Credit: <https://en.wikipedia.org/wiki/Ornate_shrew> | http://upload.wikimedia.org/wikipedia/commons/thumb/3/3c/Sert_-_dead_smile.svg/1000px-Sert_-_dead_smile.svg.png  Photo Credit: <http://commons.wikimedia.org/wiki/File:Sert_-_dead_smile.svg>  **SHREW** |
| Photo Credit: <https://commons.wikimedia.org/wiki/File:Snail_shell_Resolute_Track_Casuarina_forest,_around_25_mm_long2.JPGClo> | **Photo Credit:** <https://pixabay.com/en/emoticon-smile-symbol-expression-25513/>  **SNAIL SHELL** |
| Photo Credit: <https://en.wikipedia.org/wiki/Juvenile_fish> | http://upload.wikimedia.org/wikipedia/commons/thumb/3/3c/Sert_-_dead_smile.svg/1000px-Sert_-_dead_smile.svg.png  Photo Credit: <http://commons.wikimedia.org/wiki/File:Sert_-_dead_smile.svg>  **SALMON** |
| Photo Credit: <https://en.wikipedia.org/wiki/Remora> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **Photo Credit:** <http://commons.wikimedia.org/wiki/File:718smiley.png>  **REMORA** |
| Photo Credit: <https://commons.wikimedia.org/wiki/File:Picea_pungens_tree.jpg> | Clipart - Emoticons: Crying face  Photo Credit: <https://pixabay.com/en/emoticon-cry-sad-tear-expression-25519/>  **SPRUCE TREE** |
| Photo Credit: <https://en.wikipedia.org/wiki/Warbler> | Clipart - Emoticons: Crying face  Photo Credit: <https://pixabay.com/en/emoticon-cry-sad-tear-expression-25519/>  **WARBLER** |
| Photo Credit: <https://commons.wikimedia.org/wiki/File:Common_zebra.jpg> | http://upload.wikimedia.org/wikipedia/commons/thumb/3/3c/Sert_-_dead_smile.svg/1000px-Sert_-_dead_smile.svg.png  Photo Credit: <http://commons.wikimedia.org/wiki/File:Sert_-_dead_smile.svg>  **ZEBRA** |

**Blackline Master #2 Organism Cutouts and Definition Sheet**







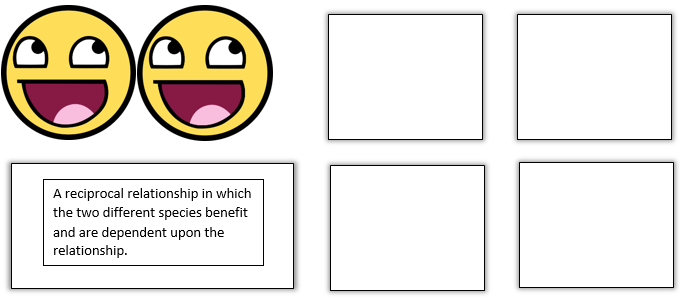
**Blackline Master #3**

Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_\_\_\_\_\_

**Frenemies, Bros and Killers: A Lesson in Relationships of Living Things**

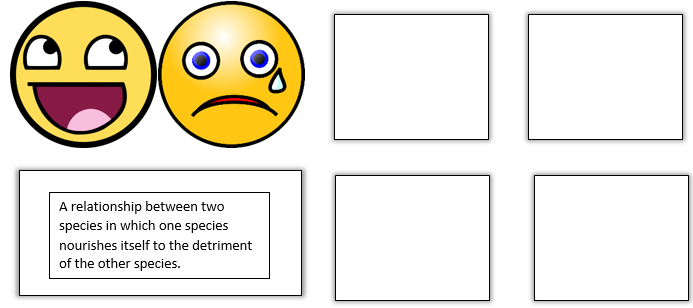
**Student Activity Sheet**

Instructions: Open up your envelope and choose the matching organisms that have a relationship with the organisms pictured, that are represented by the emoticons featured for each. Glue the organisms and the definitions into the corresponding boxes.



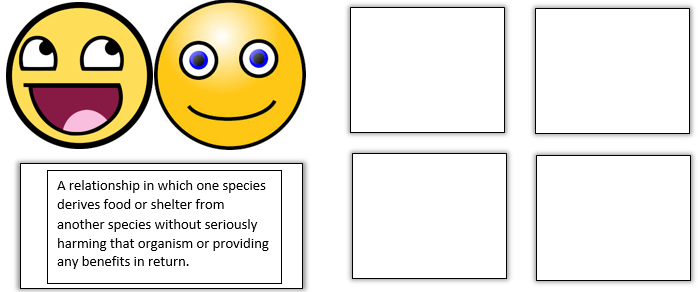
Sentences explaining the organism’s relationship in your own words (hint: use the definition as help): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



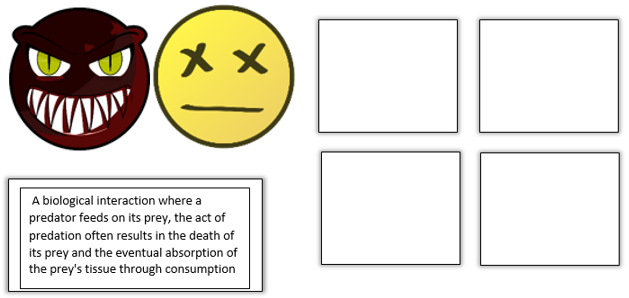
Sentences explaining the organism’s relationship in your own words (hint: use the definition as help): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Sentences explaining the organism’s relationship in your own words (hint: use the definition as help): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



Sentences explaining the organism’s relationship in your own words (hint: use the definition as help): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Blackline Master #4**

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Check for Understanding: A Lesson in Relationships of Living Things (Symbiosis)**

1. Ladybugs crawl up to aphids and eat them. Which interaction is being displayed between the population of ladybugs and the population of aphids? **SC.7.L.17.2**

**A.** predation

**B.** parasitism

**C.** mutualism

**D.** commensalism

2. Jane went for a walk on the farm. First, she saw a mosquito land on her arm and bite her. Second, she

saw a hawk capture a mouse. Last, she noticed a bird riding on the back of a cow and eating the bugs

off it. What is the order of the relationships Jane saw at the farm? **SC.7.L.17.2**

**A.** competition, predation, parasitism

**B.** parasitism, competition, mutualism

**C.** parasitism, predation, mutualism

**D.** predation, competition, parasitism

3. Cleaner fish feed on parasites in a shark's mouth and gills. This benefits the cleaner fish because they get a meal. This benefits the shark because it gets rid of parasites. Which of the following best describes the relationship between the cleaner fish and the shark? **SC.7.L.17.2**

A. Competition

B. Mutualism

C. Commensalism

D. Parasitism

4. A (+) means benefit, a (-) means harmed, (0) means unaffected, (X) means dead, draw the correct symbol that represents the relationship and give an example of organisms that interact. **SC.7.L.17.2**

A. Mutualism + and Example:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B. Commensalism + and Example:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C. Parasitism + and Example:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

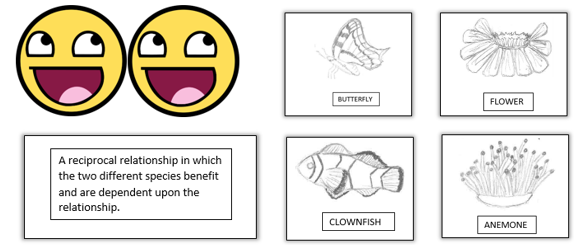
D. Predation + and Example:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Blackline Master #5: Answer Keys**

**Frenemies, Bros and Killers: A Lesson in Relationships of Living Things**

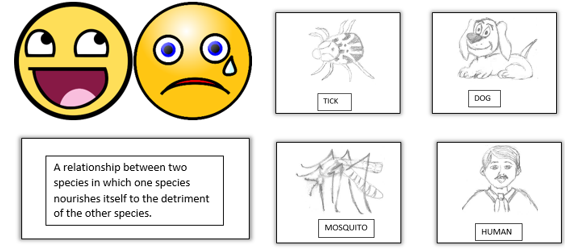
**Student Activity Sheet – ANSWER KEY**

Instructions: Open up your envelope and choose the matching organisms that have a relationship with the organisms pictured, that are represented by the emoticons featured for each. Glue the organisms and the definitions into the corresponding boxes.

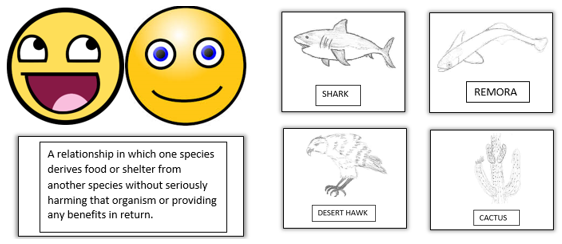


*\*\*\*Butterfly could also be the bee\*\*\**

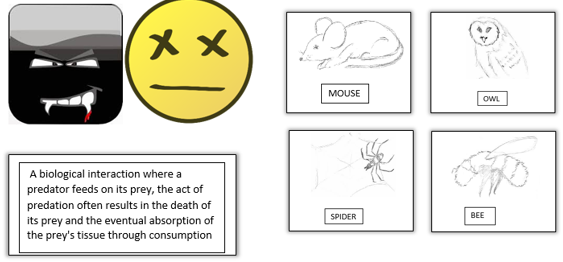
Sentences explaining the organism’s relationship in your own words (hint: use the definition as help): *student responses will vary but their definition should be in their own words and be related to the definition of MUTUALISM.*



Sentences explaining the organism’s relationship in your own words (hint: use the definition as help): *student responses will vary but their definition should be in their own words and be related to the definition of PARASITISM.*



Sentences explaining the organism’s relationship in your own words (hint: use the definition as help): *student responses will vary but their definition should be in their own words and be related to the definition of COMMENSALISM.*



*\*\*\*Bee could also be the butterfly\*\*\**

Sentences explaining the organism’s relationship in your own words (hint: use the definition as help): *student responses will vary but their definition should be in their own words and be related to the definition of PREDATION.*

**Possible Student Responses to Organism Mixer Activity**

|  |  |
| --- | --- |
| https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **CLOWNFISH**  Photo Credit: <https://commons.wikimedia.org/wiki/File:Clownfish_in_blue_water.jpg> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **SEA ANEMONE**  Photo Credit: <https://pixabay.com/en/anemone-sea-life-scuba-diving-white-329559/> |
| **Mutualism** | |
| https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **TICK**  Photo Credit: <https://commons.wikimedia.org/wiki/File:Dog_tick_5148.jpg> | Clipart - Emoticons: Crying face  **DEER**  Photo Credit: <https://commons.wikimedia.org/wiki/File:Key_Deer_on_Deer_Key.jpg> |
| **Parasitism** | |
| https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **COWBIRD**  Photo Credit: <https://en.wikipedia.org/wiki/Screaming_cowbird> | **BISON**  Photo Credit: [https://commons.wikimedia.org/wiki/File:Bison\_bison\_Wichita\_Mountain\_Oklahoma.jpg](https://commons.wikimedia.org/wiki/File:Bison_bison_Wichita_Mountain_Oklahoma.jpg%20) |
| **Commensalism** | |
| Clipart - Emoticons: Crying face  **WARBLER**  Photo Credit: <https://en.wikipedia.org/wiki/Warbler> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **CUCKOO**  Photo Credit: <https://commons.wikimedia.org/wiki/File:Shining_Bronze-Cuckoo_Dayboro.JPG> |
| **Parasitism** | |
| **SNAIL SHELL**  Photo Credit: <https://commons.wikimedia.org/wiki/File:Snail_shell_Resolute_Track_Casuarina_forest,_around_25_mm_long2.JPGClo> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **HERMIT CRAB**  Photo Credit: <https://en.wikipedia.org/wiki/Caribbean_hermit_crab> |
| **Commensalism** | |
| **OWL**  Photo Credit: <https://commons.wikimedia.org/wiki/File:Great-horned_Owl_RWD_at_CRC2.jpg> | http://upload.wikimedia.org/wikipedia/commons/thumb/3/3c/Sert_-_dead_smile.svg/1000px-Sert_-_dead_smile.svg.png  **SHREW**  Photo Credit: <https://en.wikipedia.org/wiki/Ornate_shrew> |
| **Predation** | |
| https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **REMORA**  Photo Credit: <https://en.wikipedia.org/wiki/Remora> | **SHARK**  Photo Credit: <http://www.sharksider.com/category/blog/> |
| **Commensalism** | |
| https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **GAZELLE**  Photo Credit: <https://commons.wikimedia.org/wiki/File:Grant%27s_Gazelle_taxobox.jpg> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **OSTRICH**  Photo Credit: <http://globe-views.com/dreams/ostrich.htm> |
| **Mutualism** | |

|  |  |
| --- | --- |
| http://upload.wikimedia.org/wikipedia/commons/thumb/3/3c/Sert_-_dead_smile.svg/1000px-Sert_-_dead_smile.svg.png  **BUTTERFLY**  Photo Credit: <https://commons.wikimedia.org/wiki/File:Limenitis_archippus_Cramer.jpg> | **SPIDER**  Photo Credit: <https://commons.wikimedia.org/wiki/File:Brown-recluse-2-edit.jpg> |
| **Predation** | |
| http://upload.wikimedia.org/wikipedia/commons/thumb/3/3c/Sert_-_dead_smile.svg/1000px-Sert_-_dead_smile.svg.png  **ZEBRA**  Photo Credit: <https://commons.wikimedia.org/wiki/File:Common_zebra.jpg> | File:Lion d'Afrique.jpg  **LION**  Photo Credit: <https://commons.wikimedia.org/wiki/File:Lion_d'Afrique.jpg> |
| **Predation** | |
| http://upload.wikimedia.org/wikipedia/commons/thumb/3/3c/Sert_-_dead_smile.svg/1000px-Sert_-_dead_smile.svg.png  **SALMON**  Photo Credit: <https://en.wikipedia.org/wiki/Juvenile_fish> | **BEAR**  Photo Credit: <https://commons.wikimedia.org/wiki/File:Grizzly_bear_brown_bear.jpg> |
| **Predation** | |
| Clipart - Emoticons: Crying face  **MOUSE**  Photo Credit: <http://dora.missouri.edu/mouse/> | https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **FLEA**  Photo Credit: <http://www.orkin.com/other/fleas/what-do-fleas-look-like/> |
| **Parasitism** | |

|  |  |
| --- | --- |
| https://farm4.staticflickr.com/3427/3846490658_4258d01f4d_o_d.png  **MISTLETOE**  Photo Credit: <https://pixabay.com/en/photos/mistletoe/> | Clipart - Emoticons: Crying face  **SPRUCE TREE**  Photo Credit: <https://commons.wikimedia.org/wiki/File:Picea_pungens_tree.jpg> |
| **Parasitism** | |

**Check for Understanding: A Lesson in Relationships of Living Things (Symbiosis) –**

**ANSWER KEY**

1. Ladybugs crawl up to aphids and eat them. Which interaction is being displayed between the population of ladybugs and the population of aphids? **SC.7.L.17.2**

**A.** predation

**B.** parasitism

**C.** mutualism

**D.** commensalism

2. Jane went for a walk on the farm. First, she saw a mosquito land on her arm and bite her. Second, she

saw a hawk capture a mouse. Last, she noticed a bird riding on the back of a cow and eating the bugs

off it. What is the order of the relationships Jane saw at the farm? **SC.7.L.17.2**

**A.** competition, predation, parasitism

**B.** parasitism, competition, mutualism

**C.** parasitism, predation, mutualism

**D.** predation, competition, parasitism

3. Cleaner fish feed on parasites in a shark's mouth and gills. This benefits the cleaner fish because they get a meal. This benefits the shark because it gets rid of parasites. Which of the following best describes the relationship between the cleaner fish and the shark? **SC.7.L.17.2**

A. Competition

B. Mutualism

C. Commensalism

D. Parasitism

4. A (+) means benefit, a (—) means harmed, (0) means unaffected, (X) means dead, draw the correct symbol that represents the relationship and give an example of organisms that interact. **SC.7.L.17.2**

A. Mutualism + and + Example: bee/butterfly and flower, clownfish and sea anemone

B. Commensalism + and 0 Example: shark and remora, desert hawk and cactus

C. Parasitism + and - Example: mosquito and human, mistletoe and spruce tree

D. Predation + and X Example: lion and zebra, spider and butterfly/bee