

**In-class Exercise to accompany discussion of *The End of War*,  
Ch. 2 “The Nature of Human Aggression” by Paul K. Chappell**

(This exercise can also be used to accompany the Peace Literacy Lesson Plan 1 for **Understanding and Healing Aggression** available at [peaceliteracy.org/curriculum](http://peaceliteracy.org/curriculum))

**Posturing/Warning Aggression vs. Hostile Aggression: Wild Animals**

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OR For more biographical info, visit [peaceliteracy.org/about](http://peaceliteracy.org/about)

**Activity Type**

- Simulation

**Duration**

- 2 Class Periods

**Setting**

- Classroom

**Materials**

- 8 sets of 4 Warning and Hostile Aggression Cubes. (A template for constructing the cubes – six sided dice – is appended to the end of this document). A set of 4 cubes includes:
  - 1 Warning Aggression Bear Cube
  - 1 Warning Aggression Wolf Cube
  - 1 Alternate Reality Bear Cube
  - 1 Alternate Reality Wolf Cube
- 8 pennies
- Worksheet #1 “Warning and Hostile Aggression” (as below)
- Worksheet #2 Discussion Questions 1-4 (as below)
- Worksheet #3 Discussion Questions 5-9 (as below)
- Classroom Data Table (as below)
- Exit ticket for each student (template at end of document)

**Objectives**

- Students will simulate the effects of warning aggression and hostile aggression on a population; collect data; analyze the data; and draw a conclusion

**Essential Questions:**

- Determine the effects of warning aggression versus hostile aggression on a population.
- Distinguish the difference between warning and hostile aggression.

## Activity Instructions for Warning and Hostile Aggression:

- Step 1:** After posting the two objectives for the lesson, provide each student with a copy of the “Warning and Hostile Aggression” worksheet.
- Step 2:** Provide each group of 3-5 students with a set of Warning and Hostile Aggression Cubes and a penny.
- Step 3:** Roughly half the students in each group need to simulate the wolves, and the other students need to simulate the bears.
- Step 4:** Each “wolf” needs to roll the warning aggression (posturing) wolf cube and record the results of each roll in his/her data table. Each “bear” needs to roll the warning aggression (posturing) bear cube and record the results of each roll in his/her data table.
- Step 5:** If a “wolf” or “bear” survives 10 rolls of the warning aggression (posturing) cube, continue tallying the number of rolls of the cube required before the animal dies.
- Step 6:** Have students use the number of rolls of the cube to calculate the simulated lifespan of their wolf or bear. ( $\# \text{ rolls} \times 3 = \# \text{ days of simulated lifespan}$ ).
- Step 7:** Have students repeat the process using the alternate reality cubes where every encounter/confrontation between a wolf and a bear results in a physical fight (hostile aggression).
- Step 8:** Have students record the lifespan of the animal they chose (wolf or bear) for the posturing scenario and for the alternate reality fighting scenario.
- Step 9:** Working in their groups, have students discuss and answer Warning and Hostile Aggression questions 1-10, and then share their answers with the class.
- Step 10:** Have students respond to the two essential questions for the lesson on the Exit Ticket.

# Worksheet #1: Warning and Hostile Aggression

Name \_\_\_\_\_

## Part I: Warning Aggression through Posturing

Wolves and bears are top predators found in the same ecosystem. At times, the two species come into contact with one another. This results in a confrontation. Working in groups of 3-5, decide which students will be wolves, and which students will be bears. Roll the warning aggression cube to determine the events in your animal's life. Each person in your group needs to roll the assigned animal cube, and every person should have a turn before repeating the process. Record the events for your animal in the data table below.

<b>Animal: Wolf or Bear</b>	<b>Animal's Life Events: feeding, no food, minor injury, major injury, death (If your animal dies, you give up your turn in the group.)</b>	<b>Number of hypothetical days since the start of the simulation (# Days)</b>
1 <sup>st</sup> roll		3
2 <sup>nd</sup> roll		6
3 <sup>rd</sup> roll		9
4 <sup>th</sup> roll		12
5 <sup>th</sup> roll		15
6 <sup>th</sup> roll		18
7 <sup>th</sup> roll		21
8 <sup>th</sup> roll		24
9 <sup>th</sup> roll		27
10 <sup>th</sup> roll		30

If the bears and the wolves have one confrontation every three days, how long will they survive with these posturing cubes? If your animal (wolf or bear) is still alive after 10 rolls of the cube, continue rolling the cube over and over again to determine how many rolls of the cube your animal will be able to survive. Use tally marks to record the number of rolls your animal is able to survive. (# rolls = \_\_\_\_\_)

# rolls \_\_\_\_\_ X 3 days = \_\_\_\_\_ days in simulated lifespan.

## Part II: An Alternate Reality of Hostile Aggression (Fighting)

Roll the alternate reality bear and wolf cubes to determine the events in your animal's life in the alternate reality where posturing does not exist. Each person in your group needs to roll the assigned animal cube, and every person should have a turn before repeating the process. Record the events for your animal in the data table below.

<b>Animal: Wolf or Bear</b>	<b>Animal's Life Events: minor injury, major injury, death</b> (If your animal survives for 10 rolls of the cube, assume it eats every other time it has a minor injury. If your animal dies, you give up your turn in the group.)	<b>Number of hypothetical days since the start of the simulation (# Days)</b>
1 <sup>st</sup> roll		3
2 <sup>nd</sup> roll		6
3 <sup>rd</sup> roll		9
4 <sup>th</sup> roll		12
5 <sup>th</sup> roll		15
6 <sup>th</sup> roll		18
7 <sup>th</sup> roll		21
8 <sup>th</sup> roll		24
9 <sup>th</sup> roll		27
10 <sup>th</sup> roll		30

If the bears and the wolves have one confrontation every three days, how long will they survive in the alternate reality of the fighting cubes where posturing does not exist?

If your animal (wolf or bear) is still alive after 10 rolls of the cube, continue rolling the cube over and over again to determine how many rolls of the cube your animal will be able to survive. Use tally marks to record the number of rolls your animal is able to survive. (# rolls = \_\_\_\_\_)

# rolls \_\_\_\_\_ X 3 days = \_\_\_\_\_ days in simulated lifespan

In the class data tables for the posturing cubes and for the fighting cubes, record the lifespan in days for your animal (wolf or bear).

**Discussion Questions 1-4**

Use the information from the class data tables to answer questions 1-4.

1. Find the average life span of a wolf living in a posturing world.  
Add together the number of days in the lifespan of each wolf, and then divide the total by the number of wolves in the scenario.
  
2. Find the average life span of a bear living in a posturing world.  
Add together the number of days in the lifespan of each bear, and then divide the total by the number of bears in the scenario.
  
3. Find the average life span of a wolf living in the alternate reality of the fighting world. Add together the number of days in the lifespan of each wolf, and then divide the total by the number of wolves in the scenario.
  
4. Find the average life span of a bear living in the alternate reality of the fighting world. Add together the number of days in the lifespan of each bear, and then divide the total by the number of bears in the scenario.

Class Data Table for <b>Warning and Hostile Aggression</b>			
Warning Aggression		Hostile Aggression	
Wolf Lifespan (# days)	Bear Lifespan (# days)	Wolf Lifespan (# days)	Bear Lifespan (# days)
Total Days____	Total Wolves____	Total Days____	Total Wolves____
		Total Days____	Total Bears____

**Discussion Questions 5-9 for Warning and Hostile Aggression**

5. How do the life spans of the bears and wolves differ between the posturing scenario and the fighting scenario?
  
  
  
  
  
  
  
  
  
  
6. Explain the differences between warning aggression (posturing) and hostile aggression (fighting). Use examples to explain your answer.
  
  
  
  
  
  
  
  
  
  
7. What does warning aggression (posturing) look like in humans?
  
  
  
  
  
  
  
  
  
  
8. Why do you think the behavior of posturing evolved in animals?
  
  
  
  
  
  
  
  
  
  
9. How does warning aggression (posturing) affect the number of organisms in a population?

## Templates for Exit Tickets:

Name \_\_\_\_\_ Date \_\_\_\_-\_\_\_\_-\_\_\_\_ P \_\_\_\_

### Exit Ticket

Determine the effects of warning aggression versus hostile aggression on a population.

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Distinguish the difference between warning and hostile aggression.

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Name \_\_\_\_\_ Date \_\_\_\_-\_\_\_\_-\_\_\_\_ P \_\_\_\_

### Exit Ticket

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Name \_\_\_\_\_ Date \_\_\_\_-\_\_\_\_-\_\_\_\_ P \_\_\_\_

### Exit Ticket

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Name \_\_\_\_\_ Date \_\_\_\_-\_\_\_\_-\_\_\_\_ P \_\_\_\_

### Exit Ticket

Determine the effects of warning aggression versus hostile aggression on a population.

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Distinguish the difference between warning and hostile aggression.

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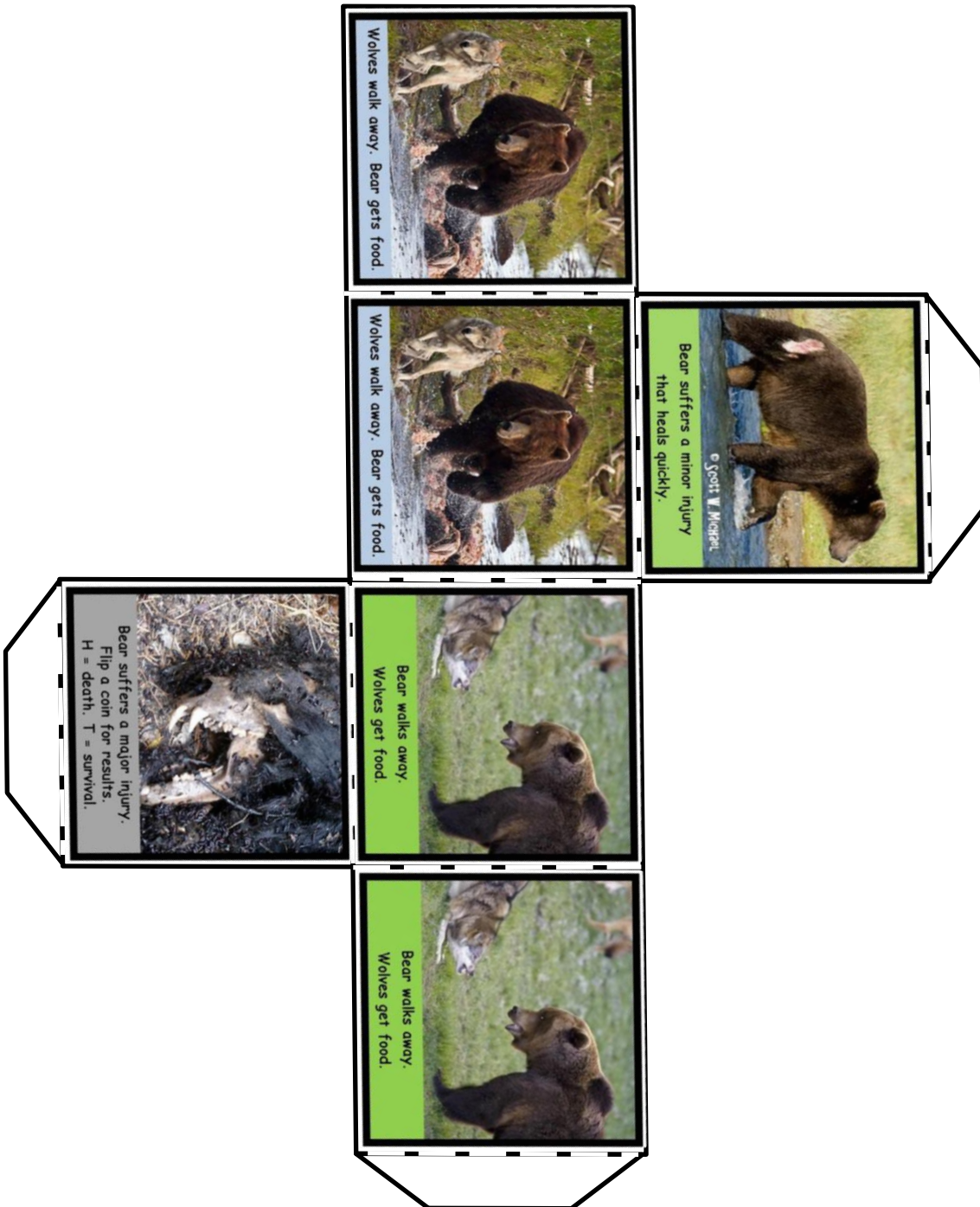
## Templates for constructing the 6-sided Warning and Hostile Aggression Cubes



Finished cube should look like this.



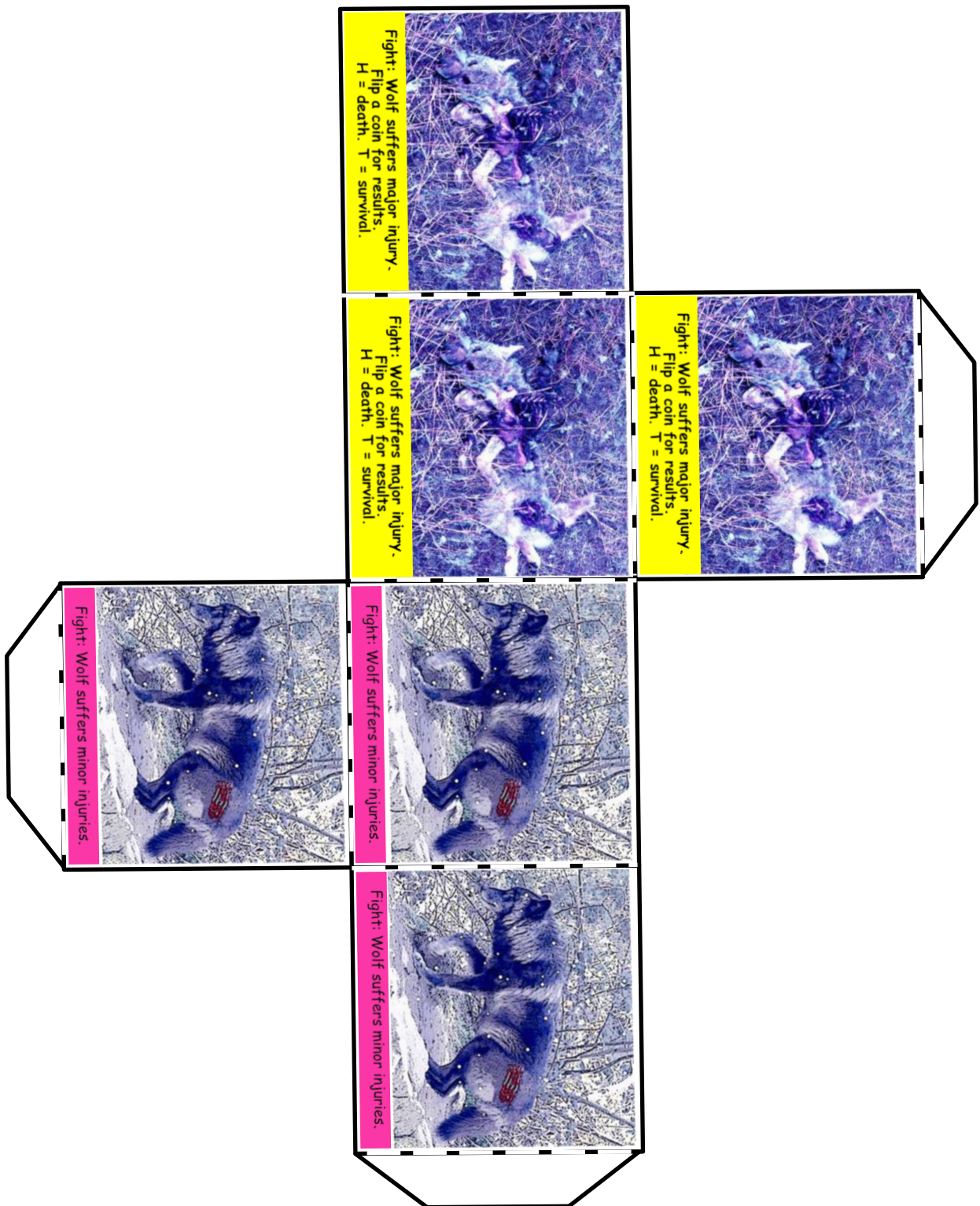
## Warning Aggression Bear Cube



## Hostile Aggression Bear Cube



## Hostile Aggression Wolf Cube





## Warning Aggression Wolf Cube

