

# Kid Stuff: Wolf Pups and Human Babies

## Teacher Notes

**Grade:** 4 to 7

**Subject:** Mathematics

**Group Size:** Whole class

**Duration:** Two 50-minute periods or one block-scheduled class

**Skills:** Comparing and contrasting, analyzing data, graphing, estimating, predicting, making generalizations, reading for information for a writing assignment

**Vocabulary:** Pup, carnivore, regurgitate, mammal, litter, cache, den, rendezvous site, survival needs, gestation period

## OBJECTIVES:

Upon completion of this lesson students should be able to:

- Identify the common survival needs of wolf pups and human babies
- Illustrate, compute and graph (on paper or on the computer) the differences between wolf pups and human babies at various stages of development

## READING ASSIGNMENT:

4. Pack Life and Communication

## MATERIALS:

- **Basic Data on Wolf Pup Growth**
- **Wolves and Humans Growth Worksheet**
- Students' baby records (weights recorded at pediatric checkups during the first year of life)
- Graph paper and drawing paper
- Computers and instructions for graphing (if the lesson is to be done as a technology activity)

## BACKGROUND:

There are many similarities between human babies and wolf babies or pups. Both are mammals, born from their mothers' bodies. At birth, both are helpless and need the care of their parents to survive. Wolf pups and human babies depend in their early infancy on their mothers' milk. The fathers of both participate actively in the care and nurturing of the young. Wolves often have extended families just as humans do – aunts and uncles who babysit and bring treats to the kids! Both wolves and humans are protective of their children. The young are the focus of family life and guiding the young to responsible adulthood is the top priority of pack and family.

## PROCEDURES:

NOTE: If computers are being used, explain and demonstrate how to create graphs on the computer before doing this lesson or as a component of this lesson.

## Preliminary Discussion

- Discuss the following questions and

highlighted vocabulary words with your class:

How much does a wolf pup weigh when it is born? (about one pound)

What is the size of the average litter? (four to six pups, although litters can be as small as one and as large as nine)

When are wolf pups usually born? (in late spring)

What is the gestation period for wolf pups? (63 days)

Where are wolf pups usually born? (in a den)

How many litters does a pack have each year? (one)

How old are the pups when their eyes open? (two weeks)

What color are their eyes when they first open? (blue)

What is a rendezvous site? (A rendezvous site is a sheltered area near water where the pups are moved as soon as they are able to travel. At the site they continue their growth and development, reaching almost full adult size by early autumn so they are ready to travel with adults and survive the coming winter.)

What do pups eat once they are weaned from their mother's milk? (Wolves are carnivores. Pups are

dependent on the adults for meat which the adults regurgitate for them after returning from a hunt. Food is also cached for youngsters if the prey animal is large and there is excess meat. As the pups become larger and more agile and their predatory instincts develop, they begin to kill small rodents.)

When do pups reach full size? (usually by one year of age, certainly by two)

What color are wolf pups? (Even in the same litter they can range in color from white to black to a combination of tan and gray and black.)

### **Graphing Exercise**

- Hand out the Basic Data on Wolf Pup Growth a few days beforehand and have students check their own baby records and record their weights at the roughly the same periods. (Parents or caregivers who do not have this information on hand, can check with their pediatricians or make estimates based on birth weight and memory.)
- Have students complete the Wolves and Humans Growth Worksheet, using the Basic Data and their baby record information, then graph weight gain per week for male wolf pups, female wolf pups and humans during the first year of life. They can do this on graph paper or the computer. More advanced students can do enhanced graphs on the computer.

- Have students compute the following:
  - A. How much weight did the wolf pup gain at each interval, from birth to two months, from two months to four months, etc.?
  - B. How much weight did you gain during the same intervals?
  - C. How many times more weight than you did the wolf pup gain during each interval?
- Lead a class discussion on similarities and differences between wolf pups and human children. Wolves usually reach full size by one year. Most human babies are barely walking by then and do not reach adult size until their late teens.
- Talk about life span. Wolves in the wild live an average of seven years. In captivity, they may live to be 13 or 14 as domestic dogs do. Humans, on the other hand, can live well into their 70s and 80s and even longer.
- Ask the class to think about basic survival needs. What does the human baby need to survive? What does the wolf pup need? Could a human baby survive with wolves? (This is an ideal opportunity to relay the Roman myth of Romulus and Remus, the twins raised by wolves.) What basic wolf behavior does not develop when wolves are raised by humans? (the ability to hunt) If a human could be raised by wolves, what basic human

“traits” would not develop?  
(principally language – a very interesting topic for discussion)

### **EXTENSION ACTIVITIES:**

Have students make posters featuring their graphs and pictures of themselves and wolf pups at various stages of development. With a little research in some of the books or websites listed in the **Additional Resources** section of this manual, students can find photographs of wolf pups at various stages of development from shortly after birth to early adulthood (if photographs taken from the Internet are used, sources should be cited on the pictures just as quotations from printed matter would be cited).

# **Basic Data on Wolf Pup Growth**

The following data are from captive wolf pups because it is extremely difficult to weigh and measure wolf pups in the wild. The three distinct growth periods, however, are based on the observation of wolves in the wild by biologist L. David Mech. Wild wolves probably do not grow as quickly as their well-fed and cared for captive counterparts. Indeed, many wild pups do not even survive the first six months of life.

## **Period of Maximum Growth**

**0 to 14 weeks**

Average increase is 2.6 pounds per week for females, 3.3 pounds per week for males.

## **Period of Rapid Growth**

**4 to 27 weeks**

Average increase is 1.3 pounds per week for both males and females

## **Period of Slow Growth**

**27 to 52 weeks** Average increase is .07 pound per week for females, and 0.4 for males. Wolves are full grown by 52 weeks, although they may continue to gain weight as yearlings.

# Wolves and Humans Growth Worksheet

	<u>WOLVES</u>		<u>HUMANS</u>
	Males	Females	
<u>BIRTH</u> – <u>first growth stage</u> Blind, deaf	1 pound	1 pound	_____
<u>2 WEEKS</u> learn to hear milk teeth emerge begin eating bits of meat	gained ___ lbs. <i>weight</i> ___ lbs.	gained ___ lbs. <i>weight</i> ___ lbs.	_____
<u>4 WEEKS</u> ears stand erect venture outside den play, wrestle, fight	gained ___ lbs. <i>weight</i> ___ lbs.	gained ___ lbs. <i>weight</i> ___ lbs.	_____
<u>6 WEEKS</u> eat more solid food rapid growth venture a mile from den	gained ___ lbs. <i>weight</i> ___ lbs.	gained ___ lbs. <i>weight</i> ___ lbs.	_____
<u>9 WEEKS</u> bodies maturing hair around noses weaned moved to rendezvous site	gained ___ lbs. <i>weight</i> ___ lbs.	gained ___ lbs. <i>weight</i> ___ lbs.	_____
	<i>Notice the increase in weight through the summer months between ages 9 and 18 weeks. The pack feeds the rapidly-growing pups so they will be strong enough to travel with the pack and survive the coming winter.</i>		
<u>14 WEEKS-</u> <u>end of first growth stage</u>	gained ___ lbs. <i>weight</i> ___ lbs.	gained ___ lbs. <i>weight</i> ___ lbs.	_____
<u>18 WEEKS</u>	gained ___ lbs. <i>weight</i> ___ lbs.	gained ___ lbs. <i>weight</i> ___ lbs.	_____
<u>22 WEEKS</u>	gained ___ lbs. <i>weight</i> ___ lbs.	gained ___ lbs. <i>weight</i> ___ lbs.	_____
<u>27 WEEKS-</u>	gained ___ lbs.	gained ___ lbs.	

end of second growth stage      *weight* \_\_\_ *lbs.*      *weight* \_\_\_ *lbs.*      \_\_\_\_\_

36 WEEKS      gained \_\_\_ *lbs.*      gained \_\_\_ *lbs.*  
*weight* \_\_\_ *lbs.*      *weight* \_\_\_ *lbs.*      \_\_\_\_\_

44 WEEKS      gained \_\_\_ *lbs.*      gained \_\_\_ *lbs.*  
*weight* \_\_\_ *lbs.*      *weight* \_\_\_ *lbs.*      \_\_\_\_\_

52 WEEKS      gained \_\_\_ *lbs.*      gained \_\_\_ *lbs.*

**TOTAL WEIGHT**      \_\_\_\_\_ *lbs.*      \_\_\_\_\_ *lbs.*      \_\_\_\_\_