Title: A Weighty Matter

Content Standard C (Grades K-4): Plants and animals have life cycles that include being born, developing into adults, reproducing, and eventually dying. The details of this life cycle are different for different organisms.

Standard 2:

Indicator 4.2.4 Use numerical data to describe and compare objects and events.

Background:

People and elephants have a long childhood. During this developmental phase they learn a great deal. Elephants are obviously born with some instinctive behaviors but a lot of what they do as adults is learned behavior. The social environment or family unit in which elephants are raised can range in size from two to twenty-nine elephants. The family unit consists of adult females and their juvenile offspring. The adult females are all related, so a family can consist of mothers, daughters, grandmothers, sisters, aunts, nieces and cousins. Males born into the family leave after sexual maturity, whereas the females stay in the family.

Purpose: Students will be able to compare and contrast human development with elephant development.

Materials:

- Graph paper
- Statistics on the weight of the elephant at different developmental stages of their life. (Appendix A) (Appendix B)
- Statistics on the weight of a person at different developmental stages of their life. (See http://www.cdc.gov/growthcharts/)

Activity:

1. Graph data of the elephant. Put the age on the x-axis and the weight on the y-axis.
2. Graph data of a person on the same graph with the elephant. Put the age of the person on the x-axis and the weight on the y-axis.
3. Compare and contrast the developmental differences of a person and an elephant.

Extensions:

1. Calculate the ratio of the elephant weight at specific ages with the weight of a person at those same ages.
2. Discuss any correlations of these ratios.
3. Repeat graphing with male and female elephant weight/age statistics and male and female people weight/age statistics.
4. Discuss any correlation of these ratios.
5. Compare the weight of a person (adult male) per inch with that of an elephant (adult male).

Assessment:

1. Graphs of elephant weight/age and people weight/age.

Resources/teacher notes:

1. See appendix for statistics on elephant and human developmental stages.