**Developmental Chart**

**NOVA Activity  Life’s Greatest Miracle**

Human pregnancy lasts approximately 40 weeks. It can last anywhere between 36 and 42 weeks after fertilization and still be considered a normal timeframe.

**First Trimester**
An egg becomes fertilized when a sperm penetrates it, creating a zygote. For the first eight weeks, the developing baby is called an embryo. It looks like a tadpole. At about three weeks, the neural tube, which becomes the brain and spinal cord, is forming. At about four weeks, the heart begins to pump blood. Tiny limb buds appear, ankles and wrists are formed, and fingers and toes develop. During the first trimester, which lasts up to 10 weeks, all major body organs and systems are formed but not completely developed. This is a critical period for development of the heart, central nervous system, upper and lower limbs, eyes and ears, teeth and palate, and most organs. Any damage at this stage can result in major damage or deformity. At eight weeks, when most organs have formed, the embryo is called a fetus.

**Second Trimester**
The fetus moves, kicks, swallows, and can hear the mother’s voice. It begins to wake and sleep at regular intervals. The skin changes from a transparent pink to a wrinkled red, and is covered with soft, fine hair. By the end of the fourth month, the central nervous system is past its most vulnerable stage. As its development continues, though, it remains susceptible to functional defects throughout pregnancy. The eyes, teeth, and external genitalia continue to be susceptible to functional defects and lesser deformities throughout the second trimester, which lasts until about Week 30.

**Third Trimester**
Body growth slows down, while brain growth continues and the head grows larger during the third trimester. The fetus begins developing its own immune system. Rapid brain growth continues. The fetus can open and close its eyes, suck its thumb, kick, stretch, and cry. It responds to light and sound and, if born as early as the seventh month, would have a good chance of surviving.