

THE MIRACLE OF LIFE

Volume 59 / High School

Developed with Catherine Lader,
Retired FCS Teacher & FCCLA Advisor

**National FCS
Standards**

12.2.2 Analyze the influences of social, economic, and technological forces on individual growth and development.



Objectives:

Students will...

- Document growth and development of embryo and fetus during nine months of pregnancy
- Investigate community-based organizations and agencies that support healthy prenatal growth and development

Materials List:

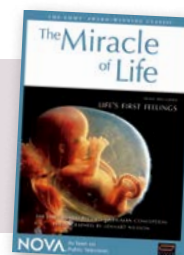
- Human Reproduction and Development Kit (WA25812)
- Fetal Development TearPad™ (WA28966)
- The Miracle of Life student handouts
- White Board
- Dry-Erase Markers
- Laptop
- Internet
- LCD Projector
- Assorted Human Physiology/Parenting Resources

Introduction (10-15 minutes)

List on white board: zygote, embryo, placenta, fetus, and newborn. Pose the question, “What do we know about each term?” Divide the class in half. One group will collect information about each term and the second group will complete matching activity. Share the available resources to do the Intro Matching Activity – Human Reproduction and Development Kit (transparencies and student handouts) and Fetal Development TearPad™. When the class reconvenes as a large group, students share their findings. (Answers for Intro Matching Activity: 1-D, 2-F, 3-A, 4-E, 5-B, 6-G, 7-C)

Optional Activity (60 minutes)

View *The Miracle of Life* DVD that takes you on an incredible voyage through the human body as new life begins.





Activity 1 (40-45 minutes)

In this activity, students will discover more differences between an embryo and a fetus. They will visualize the process of growth from fertilization through birth and write a narrative of this growth and development as if they were the embryo/fetus (describing all the changes as they occur). The narrative will include five different time frames (e.g. 13-weeks) and the physical changes, growth, sensitivities (e.g. sound), body functions (e.g. breathing), and patterns that emerge (e.g. sleep periods). Include at least two sketches and label. Refer to handout Narrative Peer Review as an overview of information to include.

Activity 2 (10 minutes)

Pose the following questions: Based on your narrative writing, when are crucial times during prenatal development? What information have you collected to support your responses? This lesson also will focus on community-based resources available to prospective parents that support healthy prenatal growth and development. For example, have students look at the March of Dimes website. Review the home page and helpful links using a laptop, the Internet, and an LCD projector. Once the student has completed their narrative, they will start the At-A-Glance activity handout.



Conclusion (5 minutes)

Have each student exchange their narrative (including labeled sketches) with a classmate. Prior to the next class, read partner's narrative and use the Narrative Peer Review to comment on their work. Discuss with classmate next class period.



Lesson Extension

Plan a service project to benefit a community-based organization that supports healthy prenatal growth. Submit as an FCCLA Community Service Program or STAR Events: Advocacy or Leadership.

Conduct the peer review with your partner in four steps.

1. Individually read each other's narrative and make initial comments in pencil on this form.
2. Formulate questions to ask your partner for further clarification.
3. Meet with your partner, discuss questions, and discuss means to improve their narrative.
4. Finalize ratings and comments on the form.

Rating Scale: S = satisfactory
 U = unsatisfactory
 N = needs more work/effort

Time frame of development used in narrative. (example: 13 weeks)

Developmental Characteristics (listed below)					
Physical Changes					
Sensitivities (e.g. sound)					
Body Functions (e.g. breathing)					
Patterns that Emerge (e.g. sleep periods)					
Sketches Provide Detail					
Written from Embryo/Fetus Perspective					
Other:					

The author provided the most detail about...

The narrative confused the reader when...

By asking questions of my partner I was able to clarify...

I would recommend...

Use resources available in the classroom to complete the matching activity below.

Be prepared to share your findings with the class.

- | | |
|---|-------------------|
| _____ 1. Fetus is 10½" from crown to heel and weighs nearly 12½ oz. | A. 7-8 weeks |
| _____ 2. Fetus measures 18½" long and weighs 5½ pounds. | B. 13 weeks |
| _____ 3. Elbows begin to form and bend. | C. 19 weeks |
| _____ 4. The head is in proportion with the body. | D. 5 months |
| _____ 5. The chin no longer rests on the chest. | E. 7 months |
| _____ 6. The body is composed of about 60-75% water and 15% fat. | F. 35-36 weeks |
| _____ 7. The scalp hair sprouts and teeth buds begin to form. | G. Full-term baby |

Student will identify three organizations, agencies, and/or healthcare providers that support healthy development of the embryo/fetus during pregnancy. Provide website address for each one. Determine which organization/agency you want to investigate using the lower half of this page.

Organization/Agency, etc.	Website Address

List the website you are investigating: _____

What is the mission/purpose of the organization/agency?

How does their work contribute to healthy prenatal development?

How do prospective parents connect with their services?

Describe current research and/or initiatives that are underway.
(e.g., March of Dimes Folic Acid Study of U.S. Women of Childbearing Age)

How is the organization/agency funded?

Other pertinent information: