

Science Strand 6: Composition and Structure of the Universe and the Motion of Objects Within It.

CLE: 6.1. The Universe has observable properties and structure.

Health Profession: Paramedic

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References:

Rose, D. (2008). *The Moons Effect on Natural Childbirth*. Ezine Articles. Retrieved on 1-28-08 from <http://ezinearticles.com/?The-Moons-Effect-on-Natural-Childbirth&id+70253>

Unknown, (2008). *Paramedic: Overview of Education for Paramedics*. Educational Portal. Retrieved on 2-20-08.form. <http://education-portal.com/index.html>

Objectives:

At the completion of this presentation the high school student will be able to:

- 1. Explain how the moon phases affect other organisms on earth.**
- 2. Demonstrate the effect that the moon cycle has on pregnant women.**
- 3. Identify the importance of this information as it relates to science and paramedics.**

Background Summary of Information as Related to Paramedics and the CLE:

The cycles of the moon have an impact on the cycle of labor with pregnant women. The cycles of the moon as it relates to the rupturing of the amniotic membrane in pregnant women. During a full moon more women go into labor or experience “Braxton-Hicks” contractions (also known as false labor), then on any other given night and therefore the paramedics are busier and heavier staffed as well as the maternity units.” The theory is that the moon’s gravitational pull effects the amniotic fluid in much the same way as it effects the water in the sea, rivers and even the water that is otherwise found in our bodies.”

Scenario:

Sara is a 27 year old female who is 36 weeks pregnant and her due date is not for another 2 weeks, it is a full moon outside and she starts experiencing contractions (which she perceives to be Braxton-Hicks because she had gone into false labor just 3 days before) but the contractions are becoming closer and closer together, her back is aching extremely and she is experiencing nausea and cramping. Shortly after, her water breaks and she is going into labor and there is not enough time to make to the hospital so they call the ambulance. The paramedics arrive and will be transporting her to the hospital.

Q: Why do you think the full moon causes women to go into labor?

A: because during a full moon the gravitational pull is stronger and it has been said to put more force on a woman's amniotic fluid sac causing her water to break and her to go into labor.

Q: Why is it important for paramedics to be aware of this?

A: paramedics need to be aware of this so they can have ample supplies available and ready for the increased number of women in labor and to also be mentally prepared for what to expect on a night with a full moon.

Q: Who else should be aware of this?

A: pregnant women should be aware of this as well as all nurses and doctors, anyone that is involved with maternity nursing.

Role Play: Have 2-4 students come up to the front of the room. Give them a balloon and have them fill it up with water and place a magnet in the balloon and have the other student fill up another water balloon and put 3 to 4 magnets in it. Then use another magnet on the outside of the water balloon to show the gravitational pull during the other phases of the moon and hold 3 magnets on the outside of the balloon with the 3 magnets inside it to show how much stronger the force of gravity is during a full moon. This relates back to my CLE because women's water breaking is an observable sign of how the structure of the universe and the motion of its objects affect living organisms. (This activity did not come from a book or a website I just thought of it to help demonstrate the difference on gravitational pull for the different cycles of the moon.)

Supplies needed: 10 -20 magnets and 4 balloons

Criteria for being a paramedic:

A paramedic is an emergency medical technician who provides emergency care to a patient as he or she is being taken to the hospital. Paramedics can give more advanced care than EMT-1 and EMT-2 professionals because they have more extensive training. In order to become a paramedic, students must complete lower level emergency technician training and then enroll into a specialized paramedic program.

During these levels of training, students may take these courses:

Emergency Medical Services, Disaster Preparedness, CPR for Health Care Provider, Basic EKG Interpretation, Pre-Hospital Pharmacology, Comparative EMS Systems, Basic Trauma Life Support, and Paramedic IV

