Room for One: The Danger of Twin Foals

BY ONE THIRD GRADE STUDENT

Project Selection

Last year, I completed a science fair project that explored how UV light helps mares go into estrus (heat) to prepare for breeding. My family and I bred our horse, and now we have a healthy colt and a happy mare.

During the pregnancy, I asked the veterinarian if the mare was having twins. She said no and explained that twin pregnancies in horses are very risky and usually do not have good outcomes for the mare and the foals. She told me that if a mare is carrying twins, one foal should be removed, or the pregnancy may not continue because it is unsafe.

Although there are “old wives' tales” of mares safely giving birth to twins, the veterinarian explained that this is very rare and not supported by modern veterinary medicine.

I did not understand why twin pregnancies were so dangerous for horses, so I wanted to learn more. The topic of how the uterus size affects fetal development, what nutrients are necessary for survival during gestation and how reproductive systems evolve to match the species needs are important topics in the animal science category.

Problem Statement

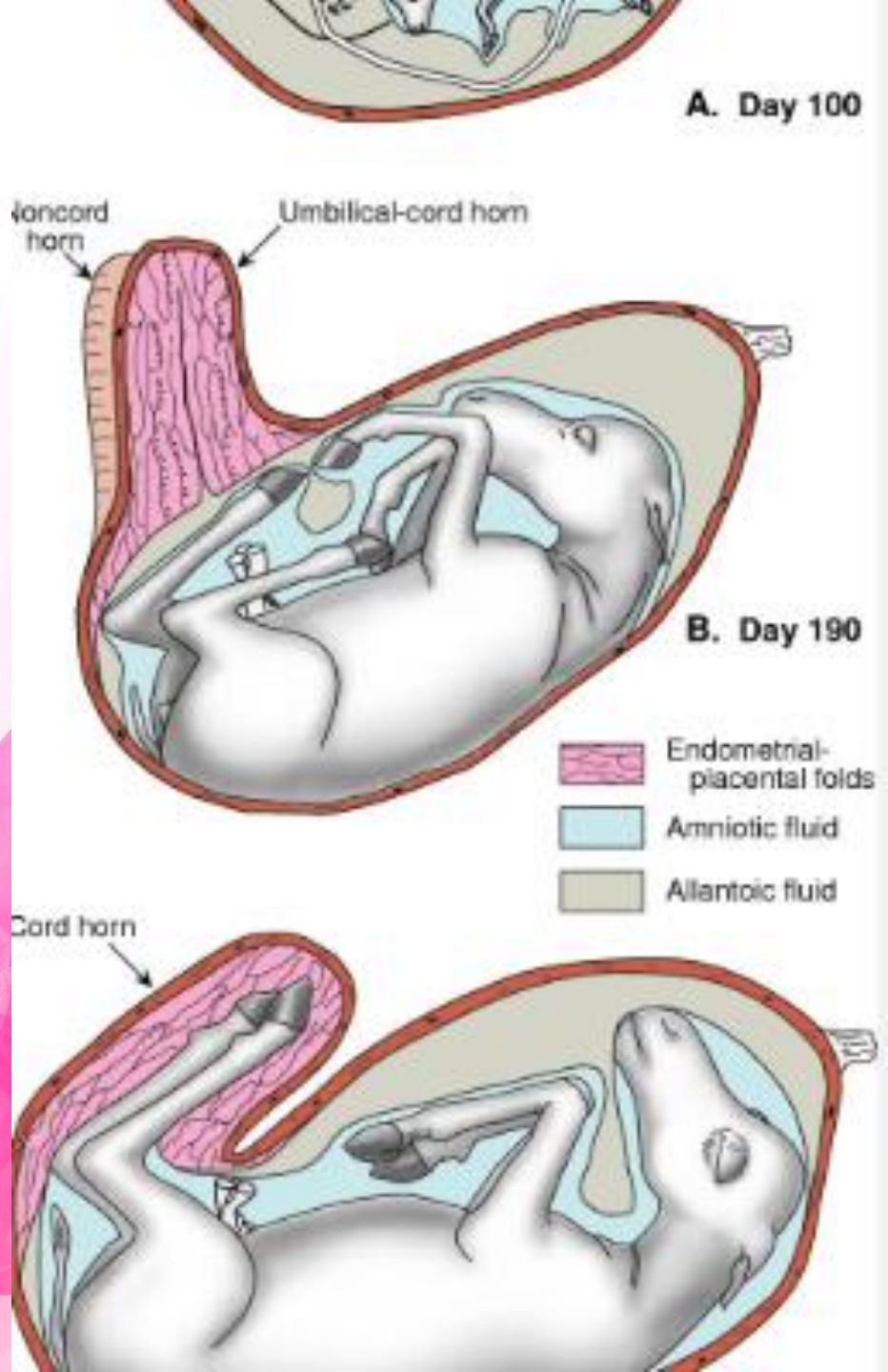
WHY IS IT DIFFICULT FOR A MARE TO CARRY TWIN FOALS DURING PREGNANCY COMPARED TO JUST ONE FOAL?

Research Question:
How does the size of a mare's uterus affect her ability to carry one foal versus twins?

This Research project will include a model to explore the following:

How does uterus size change as pregnancy progresses compared to the size of the fetus?

Can a model show why one uterus may not be big enough for two foals?



Hypothesis

IF A MARE'S UTERUS IS DESIGNED TO CARRY ONE FOAL, THEN CARRYING TWINS WILL BE DIFFICULT AND RISKY TO THE MARE BECAUSE THERE IS NOT ENOUGH ROOM FOR BOTH FOALS TO GROW.

Design: Growing Ballon Model

This project uses models and research to understand why twin pregnancies are dangerous for the mare.

Exploration of Possible Solutions: I thought of different ways to show how big a mare's uterus is during pregnancy.

- I could draw a picture of the uterus.
- I could use clay to make a model.
- I could use balloons to show how the uterus stretches as the foal grows.

I chose balloons because they can stretch like a real uterus and are easy to measure.

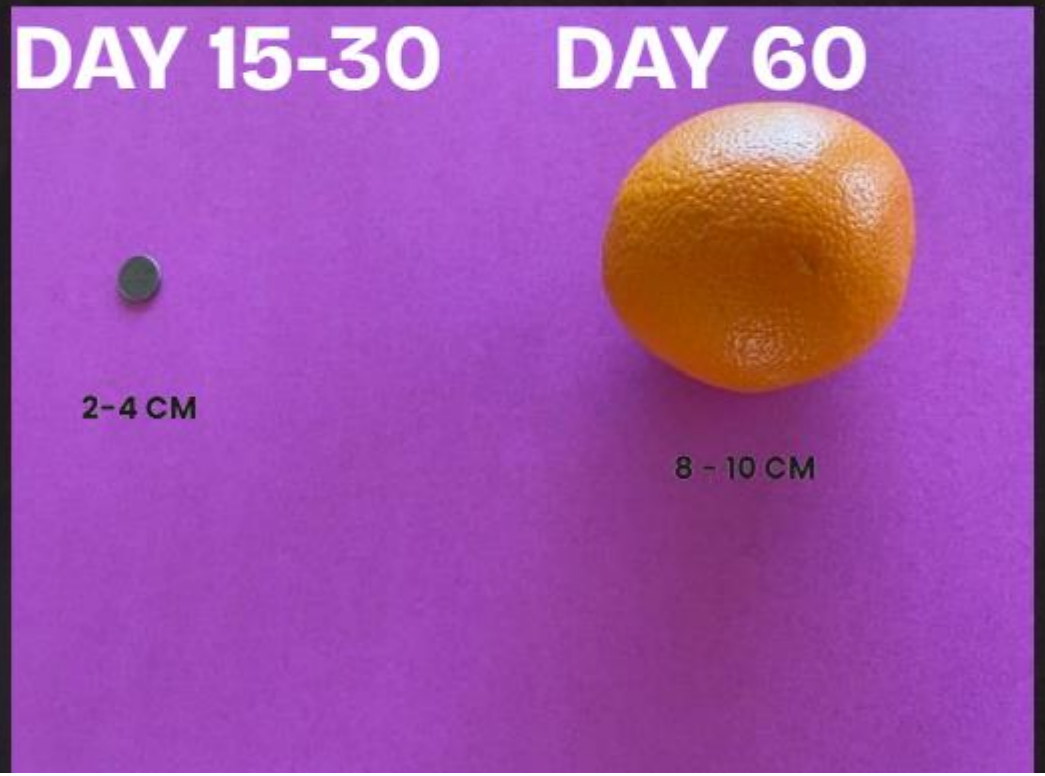
Materials

- 10 balloons
- Measuring tape, measuring string, ruler
- Two poster boards
- Science journal, pen/pencil
- Laptop and WiFi to research gestational information

How to Do It

- Research length of uterus and fetal size during these points:
  - 15-30 days
  - 60 days
  - 150 days
- 11 months/Birth
- Inflate each balloon to a different size to represent uterus growth.
  - Use a ruler or string to measure the length of the ballons (uterus).
- Arrange ballons on the poster board and compare the length of the uterus to the size of the foal during 4 points of pregnancy.

SIZE OF THE HORSE'S UTERUS

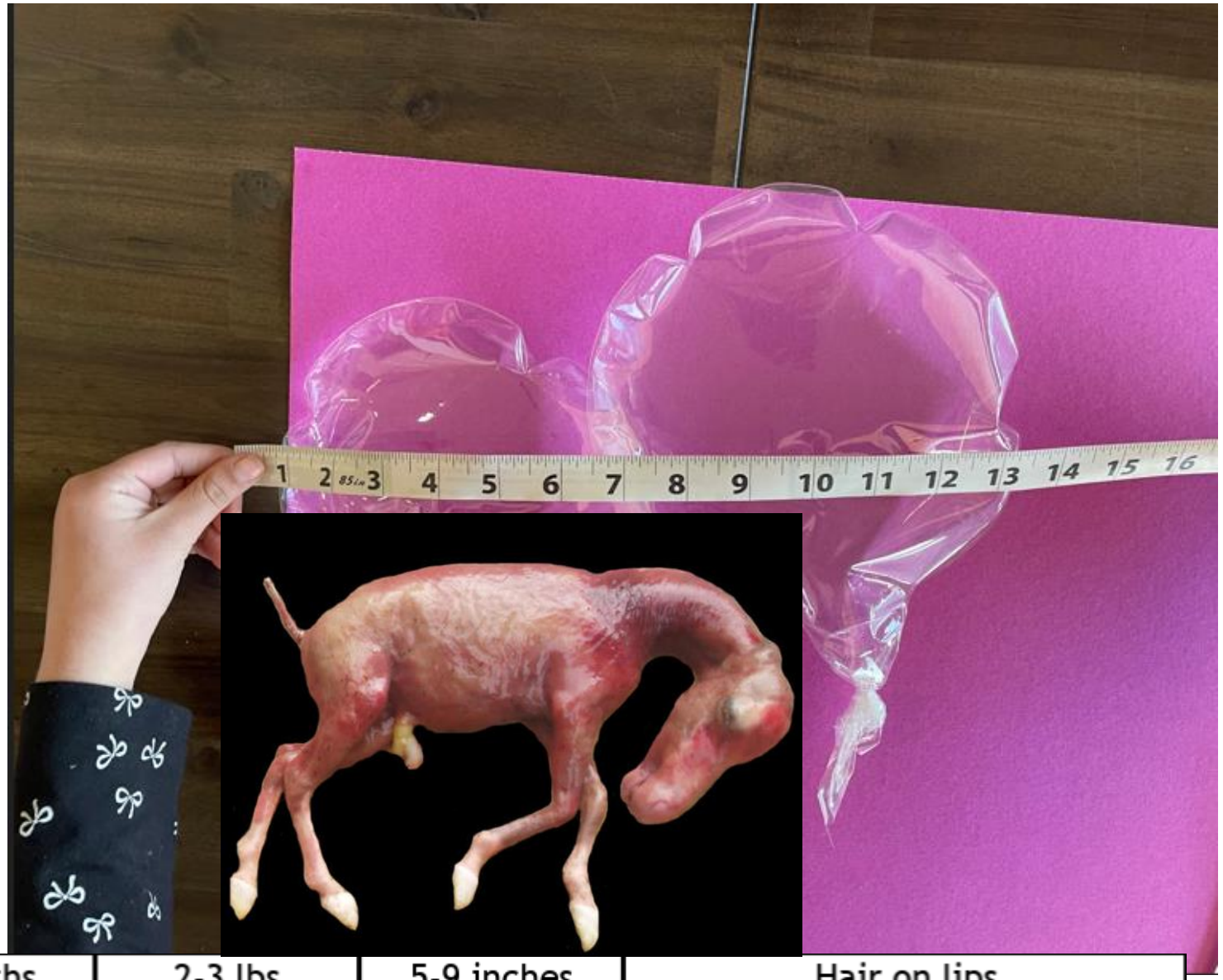


SIZE OF THE HORSE'S UTERUS

90 DAYS

- [x] 7 inches
- [x] Weight of fetus: 2 - 4 ounces
- [x] Fetal length: 3 - 6 inches

150 days: Size of the uterus is 1.148 feet (14 inches)



Period of Gestation	Weight of Fetus	Fetal Length	Other
4 months	2-3 lbs	5-9 inches	Hair on lips

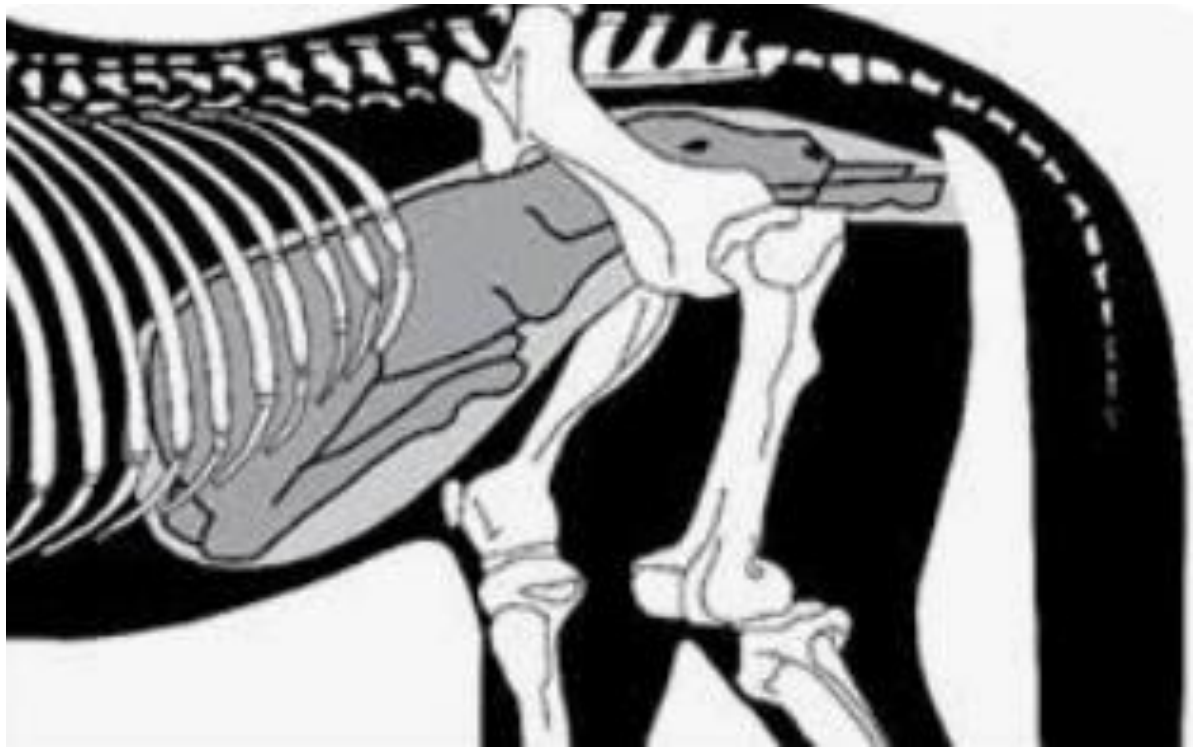
10 months: Uterus is 28-52 inches in length

Period of Gestation	Weight of Fetus	Fetal Length	Other
10 months	55-99 lbs	28-52 inches	Mane and tail developed

11 months: Uterus is 30 – 58 inches long

Period of Gestation	Weight of Fetus	Fetal Length	Other
11 months	66-132 lbs	30-58 inches	Normal hair coat

Observations



I learned that a mare's uterus stretches as a foal grows, just like a balloon stretches when air is added. **The uterus of the mare is not designed to support two fetuses.**

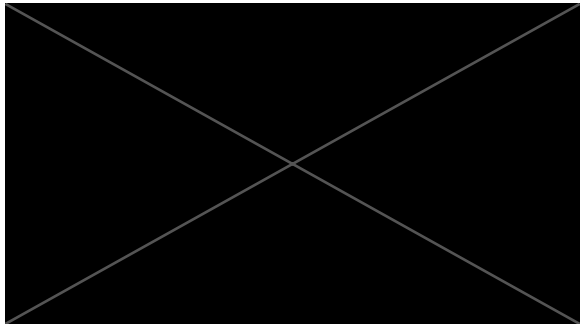
I used an engineering model to represent something real that is hard to see inside the body.

The balloon model helps explain space, size, and limits, which are important science concepts.

By comparing the size of the uterus to the size of the foal, I showed how limited space and resources can affect survival if there were two foals.

I followed the engineering design process by identifying a problem, choosing materials, building a model, testing it, and improving my understanding.

My mare safely giving birth in April of 2024



My research model is similar to what I observed when my mare gave birth to a healthy colt. At just a few hours old, he is standing next to his mom and is almost the length of her body (58 inches) and over 100 pounds.

I now understand that twin pregnancies usually end in natural abortion or, if allowed to proceed, often cause severely difficult birth that endangers the mare's life.

References

Gestation Table: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://static1.squarespace.com/static/5357442be4b0240356d4d2e7/t/53745165e4b0a4617ea626f9/1400131941369/gestation_table_and_fetus_size.pdf

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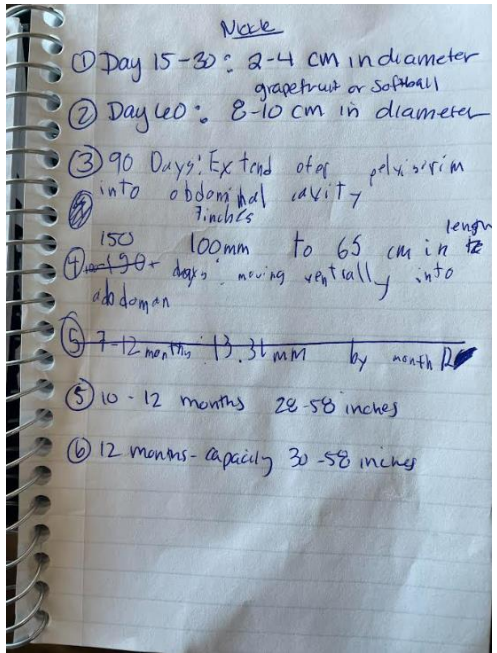
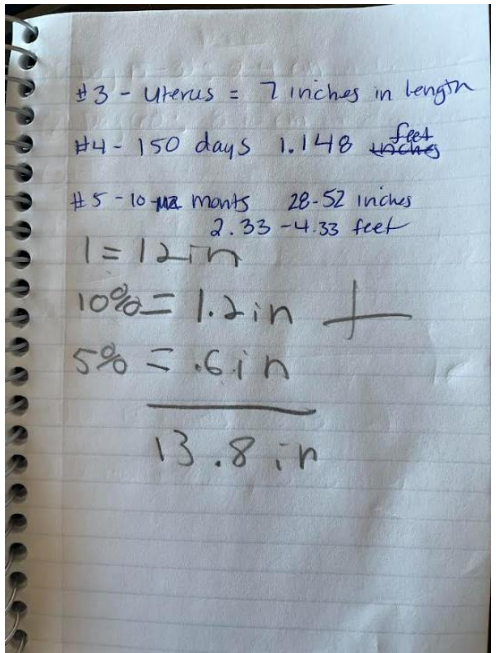
Scone Equine Hospital. *Horses giving birth to twins — risks*. Scone Equine Hospital. Retrieved December 1, 2025, from https://www.sconeequinehospital.com.au/risk-information/twins/ — information about the risks and complications associated with twin pregnancies in horses, including common outcomes and veterinary practices.

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