

Above: In this photo, the students wanted me to watch their balloon "flinker" after they had tried several trials with different amounts of cotton balls.

Right: In this photo, the students were having a hard time figuring out how to keep the balloon from sinking. I was asking them questions to get them thinking about different combinations of materials they could use in order to reach their goal.

For this science lesson, I was teaching 3rd grade students about force and motion using a balloon experiment. We began by discussing the force of gravity and the role it plays in pulling objects toward the earth. The students were given a balloon and a cup attached by a string and had to add different amounts of cotton balls and/or candy hearts (it was Valentines Day) in order to move the balloon up or down. Their ultimate goal was to get the balloon and cup to "flinker": staying at the same spot in the air without floating to the ceiling or sinking to the floor.

The following GLCEs were covered during this lesson: **P.FM.03.22:** Identify the force that pulls objects towards the Earth. **P.FM.03.37:** Demonstrate how the change in motion of an object is related to the strength of the force acting upon the object and to the weight of the object.

P.FM.03.38: Demonstrate when an object does not move in response to a force, it is because another force is acting on it.S.IP.03.13: Plan and conduct simple and fair investigations.



I selected these photos because I think they really capture how involved the students were with the lesson. It was exciting for me to see how determined they were to figure out the best way to make the balloon "flinker" and I think they learned a lot about force and motion. I think these photos show my approach as a teacher is to help students, but not to do the experiment for them. In both of these photos I am observing and offering possible suggestions but letting the students really figure out the problem for themselves. For this science lesson, 3rd grade students were constructing different apparatuses to protect an egg, which they would ultimately drop off of a ledge. We began by discussing the force of gravity and the role it plays in pulling objects toward the earth. However, we spent the majority of the discussion time focusing on how different shapes and amounts of materials could affect the speed at which an object drops and the impact it would have when it lands. The students were given multiple materials (cotton balls, paper bags, straws, masking tape, etc.) to build their structures. After their structures were complete, the students went outside and dropped their eggs off of a short ledge.

The following GLCEs were covered during this lesson:

P.FM.03.22: Identify the force that pulls objects towards the Earth. **P.FM.00.34:** Observe how shape (for example: cone, cylinder, sphere) and mass of an object can affect motion.

S.IP.03.13: Plan and conduct simple and fair investigations.

I selected the photo on the right because it shows me working one-onone with a student when she had completed her egg drop. What this shows about me as a teacher is my hands-on approach to helping students get excited about science! I also included the photos below because they show the actual experiment taking place.







Above: In this photo, I am helping this student open her egg structure to find out if her egg survived the fall!

Left: These are the "before" and "after" photos for the egg drop at the end of the experiment. All three of the students' eggs survived! I was very impressed with their creativity; one of these students even constructed a parachute for his egg out of straws and a plastic bag.