

## Do These Properties Matter?

**Introduction:** Science can be such a fascinating topic for young students. They love to experiment and discover new things. This activity is actually a culminating “field day” to celebrate their newly gained knowledge of properties of matter.

**Grade Level and Subject:** 3rd Grade Science and P.E.

**TEKS:** Science – 7B  
P.E. – 1A, 1B, 1D, 2B, 3A, 3C, 6B, 7A, 7B, 7C

**Materials:** Two playground balls, 4 broomsticks (or similar equipment), approximately 20 balloons, several small paper cups, 2 plastic soda bottles, 2 buckets

**Resource:** *201 Games for the Elementary Physical Education Program* by Jerry D. Poppen. ISBN: 0-13-042061-1

**Activity:** This exercise is actually three activities that can be arranged and completed at one time. As the teacher will have taught the students, matter comes in three properties: solids, liquids, and gases. Once the teacher feels the students have mastered this concept, the fun can begin! Each of the activities will be described in sequential order; however, the teacher can set them up, and the students can rotate from activity to activity. The students should be divided equally into groups no larger than four students for maximum enjoyment of each activity. The students are to stay at each property “station” until the teacher gives the signal to change.

**The Solid Station.** The teacher, before the students begin the activity, should choose a start line and a finish line. These lines should be about 25-30 feet apart. The students should pair up in groups of two and begin the activity by standing at the starting line facing each other, with their hands clasped behind their backs. A playground ball should be placed between them and held in place by the students’ chests. When the signal is given, the students should work together to get their “solid” to the finish line. The only time the students can touch the ball with their hands is if the ball drops. Then one student may bend down, pick it up, and place it back in its starting position. That player then clasps his or her hands again behind his or her back. The race continues until the first team gets across the finish line with the ball. The teams can continue racing until it is time to move to another station.

**The Gas Station.** The teacher should have in place a start line and a finish line before beginning the activity. These lines should be about 30-40 feet apart. Broomsticks and balloons are also used in this activity. Each child should have a broomstick and balloon and be ready to start the activity by standing on the start line with both pieces of equipment. When the teacher gives the signal, the students sweep their air-filled balloons toward the goal. If grass might be a problem, have the students start the activity by batting the balloons in the air. The first student to get his or

her “air” to the finish line wins. Play continues until the teacher gives the signal to move to another station. (Be sure to have extra balloons handy to replace any broken balloons.)

**The Liquid Station.** Once again, the teacher should designate a start line and finish line about 50 feet apart. The equipment needed for this activity includes paper cups, plastic soda bottles, and a bucket of water for each team. The students should be divided into teams of two players. An empty soda bottle will be placed on the finish line for each team, while a bucket of water will be placed on the start line for each team. At a signal from the teacher, the students should fill their paper cups with “liquid” from the bucket, race down to the soda bottle, and pour the water into the soda bottle. Each student should then race back to the bucket, fill the paper cups again, and run to fill the soda bottle. Play continues until the teacher gives the signal. The soda bottles are then compared to see which bottle holds the most water. The team with the most water in the bottle wins, and play resumes until the students are to move to another activity.

**Evaluation:** During these activities, the teacher should monitor each game closely for safety reasons.



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