Science, Life Skills and Innovations in American Automobile Racing
Extension Activities

These extension activities provide additional opportunities for the eager learner curious about topics related to science and auto racing.

Sports and Safety

Begin by asking the students to list the sports equipment they use for an organized sport, such as football or soccer, and for individual sports, such as bicycling, skateboarding or snowboarding. Ask the students to discuss why both athletes and race car driver need safety equipment.

Innovations Paper

Ask the students to write a paper on the innovations in their family car. They should mention as many innovative products as they can that are used both inside and outside the car. Have the students write about or draw new innovations they would design for a future automobile.

Design a Car

Have students design and build cars. The cars should be no longer than 10 inches. They can use old CDs or DVDs as wheels, and the rest of the car may be made of any reasonable material, such as LEGO® bricks, other construction sets or balsa wood. Test each car's speed. Build a racing ramp from a 12-foot length of 10-inch-wide board. Place one end of the board on the floor and the other end of the board on a box or other item that is 12 to 24 inches tall. Use a marker to place a starting line at the top end of the board and a finish line near the end of the board. Time the cars going down the ramp over the set distance. You might also build a second ramp and race the cars side by side in a drag race.

Pit Crew Teamwork Activity

Auto racing pit crew members must learn to work quickly as a team to refuel a race car, put on new tires and make other repairs. Encourage the teamwork skills needed in pit crews by dividing the class into groups or crews of four or five. Give each crew the same number of LEGO bricks or other blocks that are all the same size. The students must work together to build the tallest possible tower out of the blocks in 15, 20 or 30 seconds. Each crew member must take a turn, stacking blocks in exactly the same order each time. No student may stack more than 2 blocks before all other crew members have placed a block. Rotate so that each member gets a turn. Assess which crew cooperates the best, building the highest tower in the least amount of time.

Pit Crew Timing

Auto racing pit crew members must learn to work quickly to refuel a race car, put on new tires and make other repairs. This activity will simulate how fast students can work. The challenge is the same as in the previous activity – to build the tallest possible tower out of the blocks in 15, 20 or 30 seconds – but here each student should be given 10 identical LEGO bricks or other building blocks, and students should compete individually to build their tower in the least amount of time.

Explore more about automobile racing innovations using OnInnovation.com.