

Name _____

Pick a Project

Project 4A

Long-Distance Running

Jogging is an activity that someone can do for most of her life.

Cross-country races are not run on tracks or roads. Instead, they are run on natural courses over surfaces like dirt or grass. In the NCAA championship races, the men run 10,000 meters (6.2 miles) and the women run 6,000 meters (3.7 miles). The fastest times in the 2017 races were 29 minutes in the men's race and 19 minutes 19.42 seconds in the women's race.

Many people like the challenge of running a marathon, which is a race that is 26.2 miles. There are even races, like ultra-marathons, that are much longer.

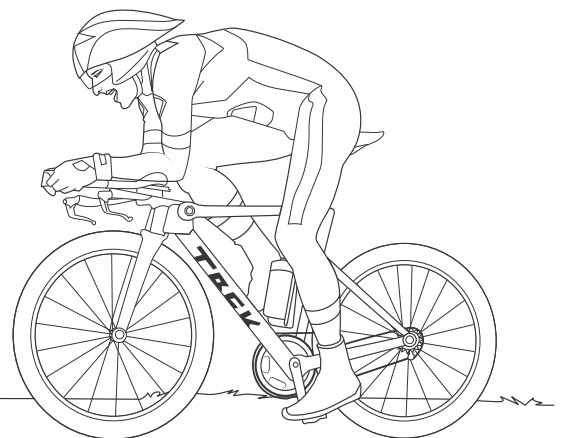


Your Project Plan an Exercise Program

A triathlon is a race that combines running, swimming, and bike riding. Research the distances that a competitor must complete in a triathlon. An Ironman Triathlon is an even longer triathlon. Research what it takes to complete an Ironman. Then, compare a triathlon to an Ironman Triathlon.

Once you have researched the distances, design an exercise plan that you can use to get into triathlon shape. Choose a number of miles to run, swim, and bike. Your distances should be noted in decimal form. Decide how many days each week you will do each exercise.

Make a journal that tells how many miles you will perform each exercise each day, each week (7 days), and each month (30 or 31 days).



Name _____

Pick a Project

Project 4B

Uniforms

Uniforms are worn throughout sports to designate those players on one team from those on another team.

Different sports require different pieces of the uniform. For example, softball players only need to wear helmets when they are batting or on base, but football players must wear helmets during the entire game.

Uniforms are not just for sports. Uniforms are worn in the military, in the police force, on airplanes, and maybe even in your school.



Your Project Budget a Team

Pick a team sport in which the players wear uniforms. Research the items that are part of the uniform.

Find the cost per item of each part of the uniform. Decide how many people on the team will need uniforms.

Make a table that gives each item, the number of items needed, the cost per unit, the total cost for that item, and the total cost.

Was it more or less money than you expected?



Name _____

Pick a Project

Project 4C

Apollo 11

The John F. Kennedy Space Center has been NASA's primary launch center for human spaceflight. The Kennedy Space Center was formed in 1962 on Merritt Island. You can tour the Kennedy Space Center, and maybe you have already.

President John F. Kennedy challenged the United States to put a man on the Moon before 1970. On July 20, 1969, Neil Armstrong of the Apollo 11 mission became the first man to step foot on the Moon. In all, twelve men have walked on the Moon.

For success, scientists needed to make sure that a rocket could get from Florida to the Moon and back to Earth.

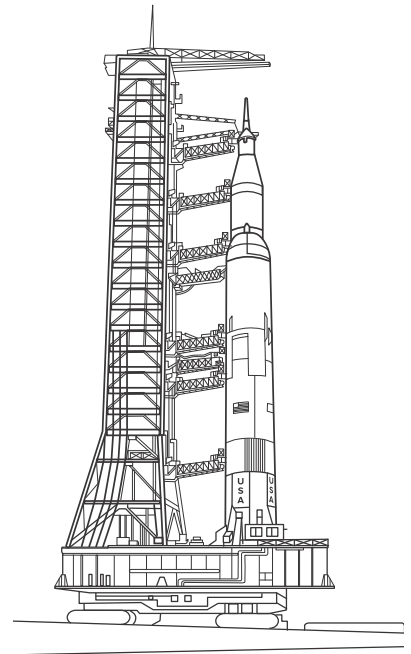


Your Project Make a Distance Poster

Research the Apollo 11 mission. Find the distance between Earth and the Moon and also the time it took for Apollo 11 to reach the Moon.

Find the speed in kilometers per second it needed to break through Earth's gravitational field. Then, calculate the distance the rocket can travel in 10^1 seconds, 10^2 seconds, 10^3 seconds, and so on.

Find the speed in miles per second that Apollo 11 traveled while in orbit. Then, calculate the distance the rocket can travel in 10^1 seconds, 10^2 seconds, 10^3 seconds, and so on.



Name _____

Pick a Project

Project 4D

Sales Tax

Sales tax is the amount of money the government charges in addition to the cost of items. The amount of sales tax paid depends on the cost of the item.

Different states use different percents for sales tax, and five states, Alaska, Delaware, Montana, New Hampshire, and Oregon, do not have any state sales tax. For example, in Iowa, the state sales tax is 0.06 of the cost of the item. Tax isn't paid on everything. Items that are not subject to sales tax include some groceries and medicine.



Individual counties and cities can add their own sales tax to the amount of the state sales tax. So, an item in one county can cost more than the same item in another county.

Your Project Make a Data Display

Suppose you are shopping with friends at a bookstore. Choose three items that cost less than \$10 that you would want to buy. The items should cost an amount that is a decimal. Research the cost of the items.

Find the sales tax on each of the items by multiplying the cost by 0.06. Round the product to the nearest cent. That is the sales tax. To find the total cost, add the sales tax to the item cost.

Make a double-bar graph that shows the cost of each item and the total cost including the sales tax.

