

# Science Fair Project Ideas

## Physical Science: Force and Motion (5-6)

### Force and Motion

Does the surface type of a ramp affect how fast toy cars will travel down it?

Does the angle of a ramp affect how fast toy cars will travel down it?

Which grit of sandpaper will cause toy cars to go slowest down a ramp?

How much force is needed to push an object up ramps of different angles?

How does the amount of air pressure in bicycle tires change how hard it is to ride up a paved hill?

Does vegetable oil, soap, or petroleum jelly work best as a lubricant on a ramp?

How does pushing with different amounts of force affect a swing's movement?

Can a lever be used to overcome the inertia of large rocks?

Do longer or shorter levers lift larger loads?

How does changing the position of a fulcrum affect how high an object can be lifted?

Can a tablecloth be pulled from under objects on a table without disturbing the objects?

Does the brand of golf ball affect how far balls can travel when struck with equal force?

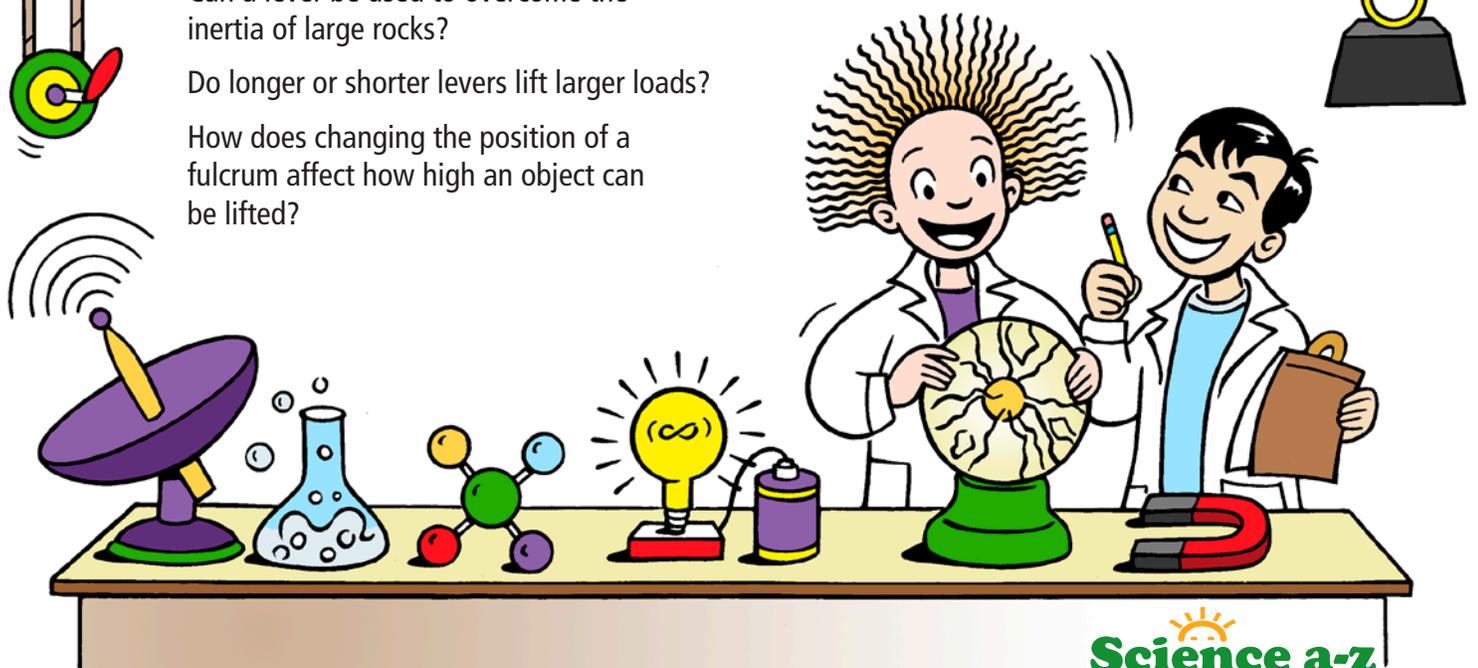
What has to happen for a person to experience free fall?

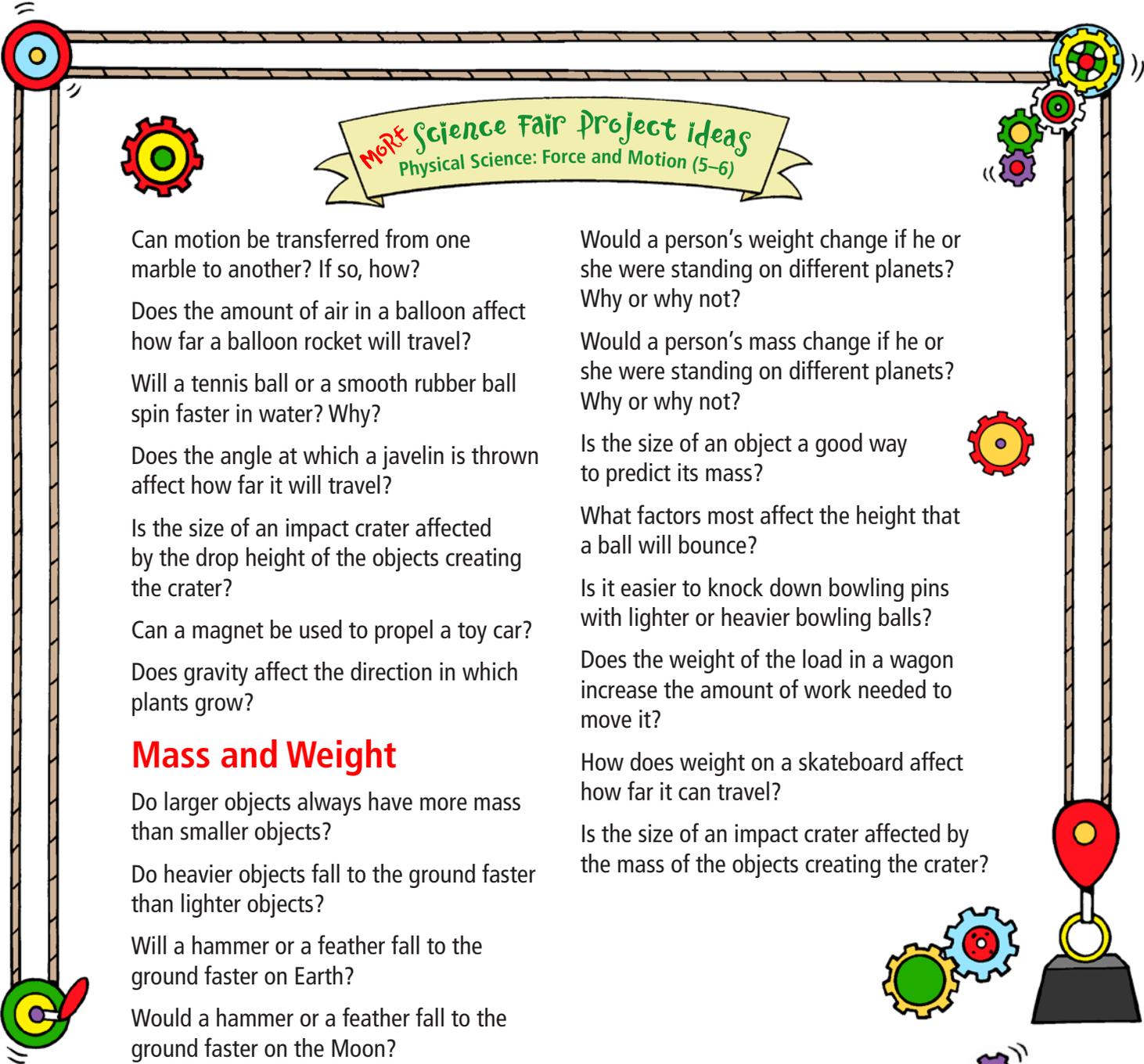
What has to happen in order to experience weightlessness on a roller coaster?

Is it possible to build a perpetual motion machine?

Does an object's potential energy affect its kinetic energy when the object is put into motion?

Will rubber bands fly farther if launched with more or less force?





**MORE Science Fair Project Ideas**  
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Can motion be transferred from one marble to another? If so, how?

Does the amount of air in a balloon affect how far a balloon rocket will travel?

Will a tennis ball or a smooth rubber ball spin faster in water? Why?

Does the angle at which a javelin is thrown affect how far it will travel?

Is the size of an impact crater affected by the drop height of the objects creating the crater?

Can a magnet be used to propel a toy car?

Does gravity affect the direction in which plants grow?

## Mass and Weight

Do larger objects always have more mass than smaller objects?

Do heavier objects fall to the ground faster than lighter objects?

Will a hammer or a feather fall to the ground faster on Earth?

Would a hammer or a feather fall to the ground faster on the Moon?

Would a person's weight change if he or she were standing on different planets? Why or why not?

Would a person's mass change if he or she were standing on different planets? Why or why not?

Is the size of an object a good way to predict its mass?

What factors most affect the height that a ball will bounce?

Is it easier to knock down bowling pins with lighter or heavier bowling balls?

Does the weight of the load in a wagon increase the amount of work needed to move it?

How does weight on a skateboard affect how far it can travel?

Is the size of an impact crater affected by the mass of the objects creating the crater?

