

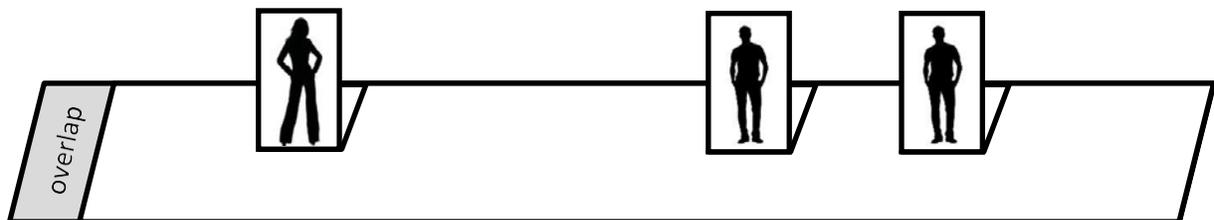
# Gravity on Earth

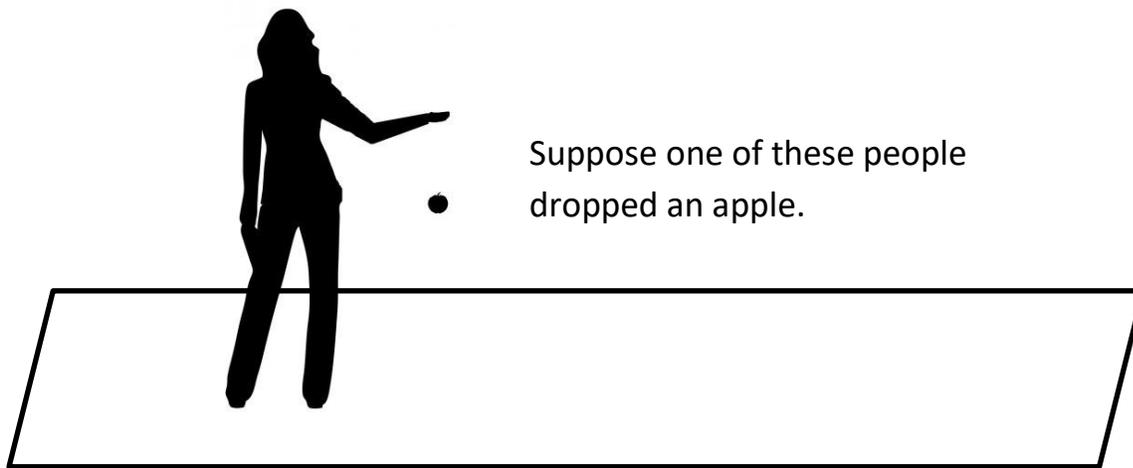
Gravity causes objects to pull on each other with forces. The gravitational force of the Earth pulling on an object is called that object's **weight**. All forces act in a direction. One can tell the direction of a force by seeing the way it causes objects to move.

**Question:** In what direction does the gravitational pull of the Earth act?

## Procedure:

- Form a group with two or three partners. Your teacher will give your group a sheet of paper, scissors, and a glue stick.
- Cut out one long strip for each student. Cut along the dotted lines.
- Cut out three little people for each student. Cut along the dotted lines.
- The Earth is a rather large planet. Let's imagine a planet that is very much smaller. Silly small. Only three people live on this silly, small planet.
- Fold the rectangles containing little people to look like this: 
- Use a glue stick to attach your three people to the surface of your silly small planet. They should face the same direction but you may place them anywhere along the strip.





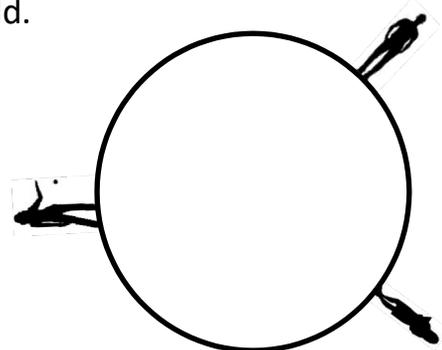
Suppose one of these people dropped an apple.

In what direction would it fall? Would the other people on this silly small planet agree about the direction? What force is pulling the apple? Write your thoughts in the space below:

Now share your thoughts with the other students in your group.

Of course, planets are not flat. So now bend your strip of paper into a circle and hold the ends together. Don't glue them, just hold.

In what direction would this apple fall? Would the other people on this silly small planet agree about the direction? What force is pulling the apple?

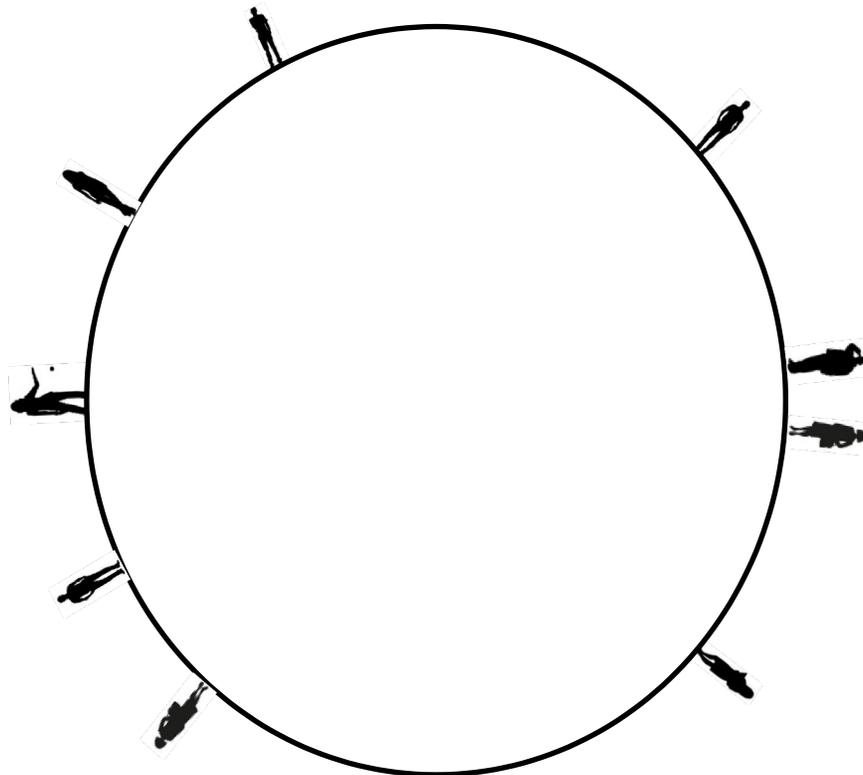


Write your thoughts in the space below:



Now share your thoughts with the other students in your group.

As a group, combine your strips into one larger ring. Use a glue stick to put some glue on the part that says “overlap”. It is still a silly small planet, but not quite as small as it was.



Talk with your partners and discuss the following questions. Then write your answers below.

In what ways is this ring a good model of the Earth?

In what ways is this *not* a good model of the Earth?



Think of some ways that each group could combine their model with others to form one model which is more like the Earth than what you currently have.

Once the class agrees on a model, work together to build it.