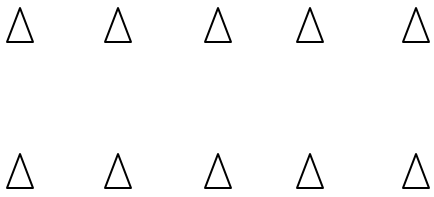
ATMOSPHERE CHALLENGE

Purpose: Students will match descriptions of the layers of the earth's atmosphere with the appropriate layer name and will put the layers in the proper order.

Science SOL: Interrelationships in Earth/Space Systems 4.6

Equipment/Materials Needed:
1. 10 pieces of colored cardstock (2 of 5 colors)
2. 1 set of atmosphere layer names and their definitions (provided) per pair of students
3. 5 cones

Advance Preparation:
1. Print the layer names and descriptions (examples provided) onto colored cardstock.
2. Cut out layers and descriptions so that there are 5 sets (one set on each color cardstock)
3. Set cones up in a relay format. 5 cones at one end of the playing area and 5 at the opposing end. Make sure that cones are lined up so students travel to their respective cones directly across from them.
4. Place layer cards and descriptions at furthest cones.



Description:
1. Put students into groups of 4-5 and line them up behind each cone across from cones with layers and descriptions.
2. Tell the students that when you say "go", one student from each group will travel (jump, skip, gallop, etc.) to their opposing cone, pick up one piece of paper, return to his/her group, and read the paper to their group and place it on the ground.
3. Tell the students to continue this process until all pieces of paper have been retrieved from their opposing cones.
4. Explain to students that they are to match the layer names with their descriptions, and to put the layers in the correct order, working from the inner most layer to the outer most layer.
5. When their group believes they have their layers correct, they are to participate in an assigned physical activity to show that they are ready to be checked for correctness.
6. Once all groups have been checked the activity is over or can be repeated for reinforcement.

Modifications/Variations:
1. If doing this exercise in the classroom, have students crabwalk or do some other exercise which uses fewer steps and requires less space as they travel.
2. Have students retrieve the all of the layers and their descriptions in order from innermost layer to outermost.
3. Write the layers and descriptions onto colored index cards if colored cardstock is unavailable.

Thermosphere	This layer is where the air particles are very far apart, but temperatures rise the higher you go.
Mesosphere	This layer's temperatures can reach -90 degrees Celsius (-130 degrees Fahrenheit)
Stratosphere	This layer has no weather. The temperature slowly warms from about -50 degrees Celsius to nearly 0 degrees Celsius as you go higher in this layer.
Troposphere	This layer is where weather forms. All life exists here. Most atmospheric gases are found hear. As you travel higher in this layer the temperature falls.