Expansion and contraction

1. What happens to the metal making up the bridge joints in hot weather?

2. When you apply heat to solid particles, what happens to their vibrations?

3. How does the size of the particles change?

4. Does the amount of space each particle takes up get larger or smaller?

5. If all the particles in a solid metal take up this amount of space, what would happen to the metal?

6. What is the opposite of expansion?

7. Give the name of a piece of equipment, commonly used in a science lab, which works as a result of a liquid expanding and contracting when it is given more or less heat energy.

8. Why does the balloon inflate when the gas is heated?