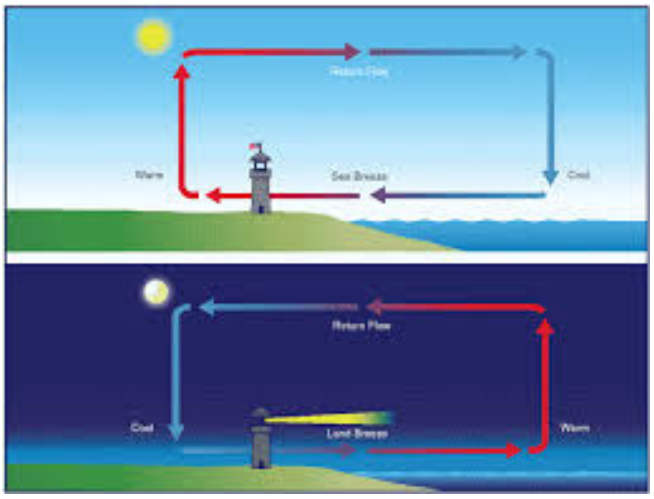
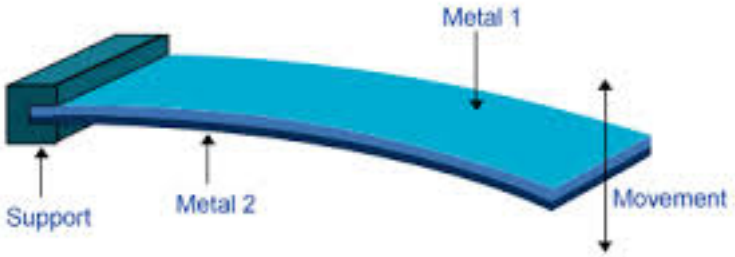
Heating

1) What are the four methods of heating?
2) Why is the boiling of a liquid not considered to be one of these 4 methods in question 1?
3) Why are frying pans made from metal and yet most frying pan handles made from plastic?
4) Why is the heating element of an electric kettle placed at the bottom of the device?
5) By which heating method do we feel the warmth of the sun's rays? Explain your answer.
6) The diagram below shows both onshore and offshore breezes. Explain, with reference to thermal energy transfer, how this is possible?



7) The diagram below shows a burning log fire.
   a) How does the log fire heat the room?
   b) Why does the fire get really hot when you move directly in front of it?

8) The diagram below shows a bimetallic strip
   a) Briefly explain how it works?



Bi-Metalic Strip

9) The diagram below shows a bridge expansion joint. What is the job of this expansion joint?

10) How does a double glazing window prevent heat loss through the window?

11) The snowman in the picture below is wearing well wrapped up in winter clothing. What will this clothing do to the rate at which the snowman melts?

12) The diagram below shows the structure of a thermos flask.

a) How does this flask prevent hot drinks losing thermal energy?

b) What would happen if you placed a cold drink into the flask?