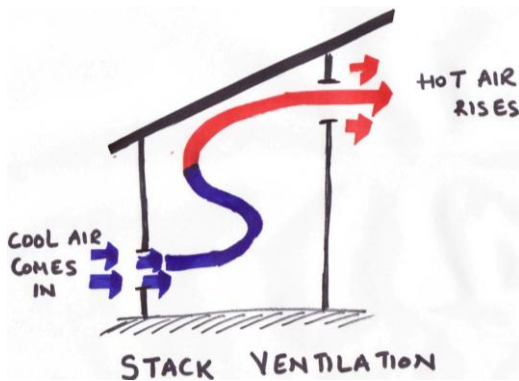
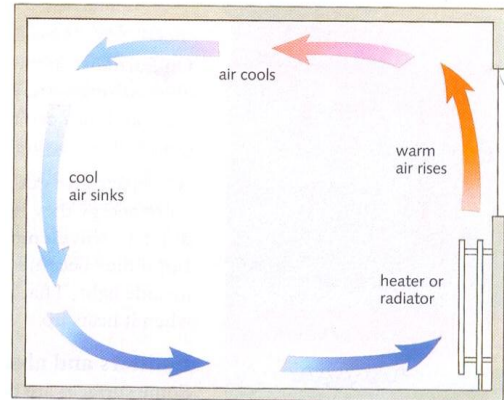


Build the Coolest House – Convection

CONVECTION Have you ever put your hand on top of a hot bowl of soup? What do you feel? Do you feel any heat if you put your hand on the side? Which way do you feel more heat? Right! On top! This process is called CONVECTION. If we observe hot air rising what do you think will happen to cold air? Right! Cold air will sink. What do you think is heavier (cold or hot air)? Yes. Cold air is heavier.



So cold air sinks and hot air rises – like in this picture. **Using what we just learned your challenge is to build a house with doors and windows that help remove the hot air and keep the house cool (without using any fans or ACs), so that we can conserve energy.**

MATERIALS Construction paper, tape, scissors, 2 incense sticks, one matchbox and thermometer.

EXPERIMENT Take a look at these designs to get ideas for your house and build it using construction paper and tape. You will get 15 min to design and build your house and 10 min to test it. Once the house is complete, put a smoking incense stick inside the house. If the placement of windows and doors is good, then smoke will come out of the house (i.e. the house is well ventilated). Place a thermometer at various points inside the house. Where do you see the highest reading?

REFLECTION

1. What design worked best i.e. what placement of windows helped more smoke to get out of the house?
2. Where did you get the highest temperature reading? Why do you think you saw this?
3. Can you think of some other examples of convection? Maybe in the kitchen?

