

# Radiation and Surfaces

## 17 September

### **Lesson Aims:**

*All learners:*

1. Learn which surface colour is best for emitting heat radiation.

*Most learners:*

1. Demonstrate heat transfer by radiation using a Leslie Cube.
2. Absorption and emission of radiation.

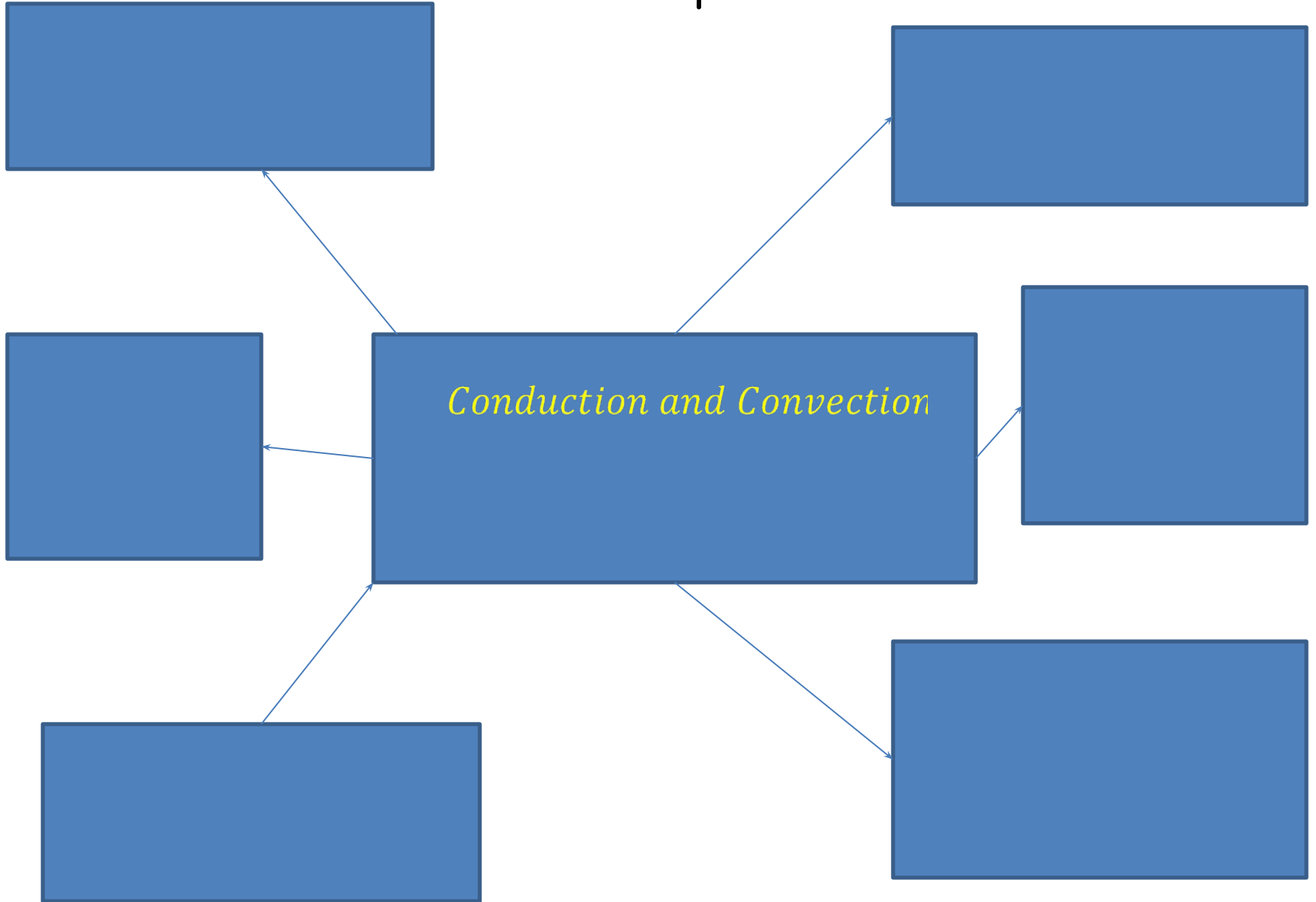
*Some learners:*

1. Complete all tasks.

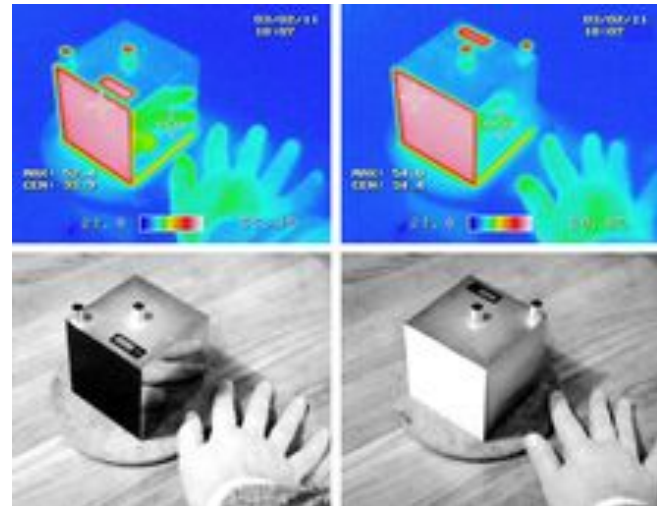
## True/False

1. Metals have free 'protons', so they are good conductors.
2. Temperature depends on the person who 'feels' it.
3. In a liquid, convection currents lift the heat to the top.
4. Saucepan handles should be made of copper.
5. Solids pass heat on heat energy by molecules colliding with their neighbours.
6. In a gas the particles move much slower than in a solid.
7. A fluid becomes more dense when heated.

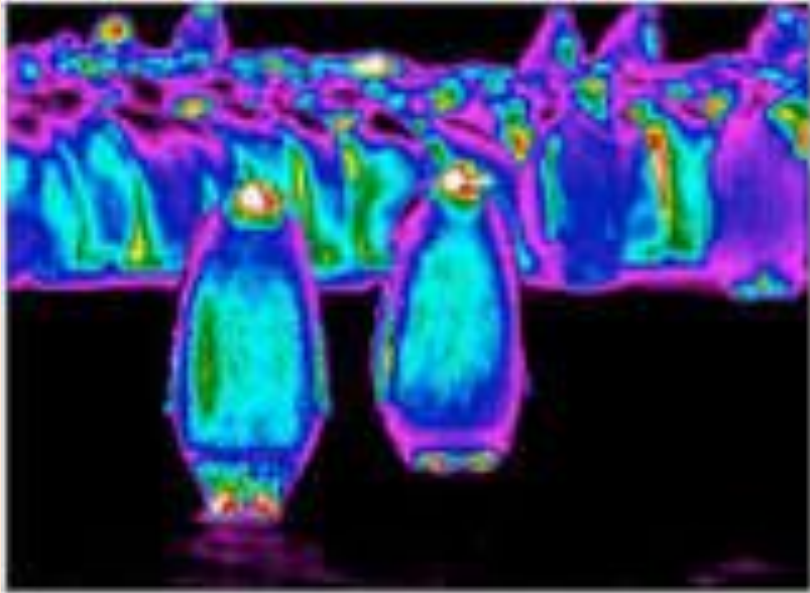
# Brain Dump



# Leslie Cube



Heat energy can be transferred by electromagnetic infrared radiation.



## True/False

1. An infrared camera can see people in the dark because they glow.
2. Radiators should really be painted black, as this will give of more heat.
3. A person wearing black clothes sitting in the shade will cool faster than a person wearing white clothes.
4. Marathon runners wear silver blankets to cool down faster.
5. The Earth gets its heat energy from the Sun as microwaves.
6. An iceberg would melt faster if it was painted black.
7. A thermos flask is painted shiny silver inside as it stops heat leaving and entering the flask.