



**Aerobic Respiration**  
**Science – Junior Cert**  
**Quick Notes**

# Aerobic Respiration

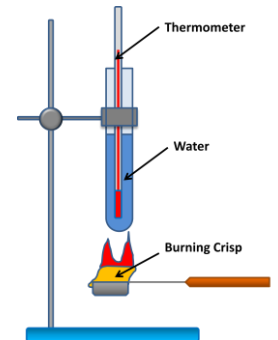
**Respiration:** *the release of energy from digested food*

## Investigate the Conversion of Chemical Energy in Food to Heat Energy

- Put some cold water in a test tube
- Take its temperature
- Light a crisp and hold it under the test tube of water
- After it has burned take the temperature of the water
- The temperature of the water has **risen from 16 °C to 28 °C**

### Conclusion

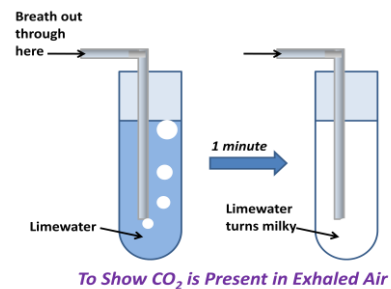
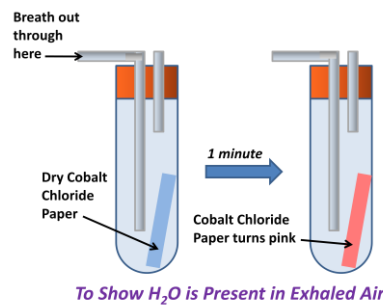
- Food contains lots of energy as **chemical potential energy**
- This can be **converted to heat energy by burning**



**Aerobic Respiration:** *The process of releasing energy from food using oxygen*



## Demonstrate the Products of Aerobic Respiration



## Tests to Compare the Carbon Dioxide Levels of Inhaled and Exhaled Air

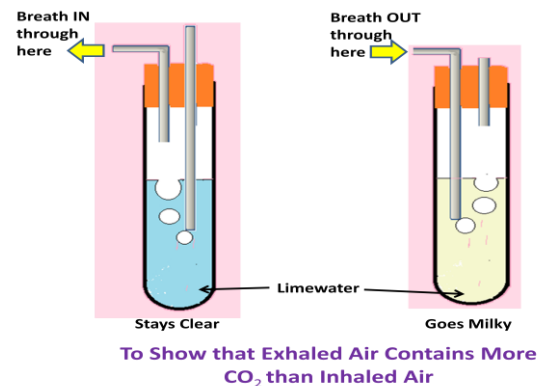
- Using the apparatus shown to the right
- Breathe in through one sample of limewater
- Breathe out through another sample of water

### Results

- Limewater
- **goes milky with exhaled air**
- **Stays clear with inhaled air**

### Conclusion

- **Exhaled air contains more CO<sub>2</sub>**
- **Take careful note of the positions of the pipes**



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