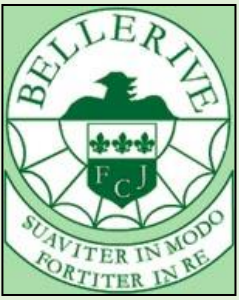


# Lesson 1 – The Breathing System.

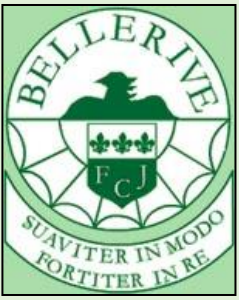


Key points to learn:

- 1) The breathing system is where the gases **oxygen** and **carbon dioxide** are exchanged.
- 2) The lungs are like big pink sponges.
- 3) The **diaphragm** and the **intercostals** are the muscles needed for breathing.
- 4) The **trachea**, **bronchi** and the **bronchioles** are the tubes that carry the air.
- 5) The **alveoli** are where gas exchange takes place.

Ref: CGP Biology page 39.

# Lesson 2 – Gas Exchange.

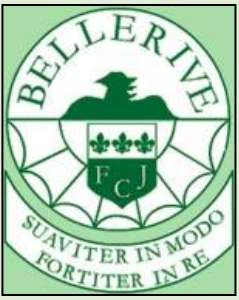


Key points to learn:

- 1) During gas exchange oxygen passes into the **blood** and carbon dioxide passes into the **alveoli**.
- 2) The gases move by **diffusion**.
- 3) The alveoli are **well-adapted** for gas exchange (large surface area, thin walls, moist and good blood supply).

Ref: CGP Biology page 39.

# Lesson 3 – How we breathe.

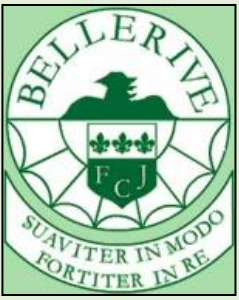


## Key points to learn:

- 1) Inhaling and exhaling are breathing in and out.
- 2) The movement of the **diaphragm** and **ribs** enables you to breathe in and out.
- 3) Increasing the volume of the chest, causes the pressure to drop and air is sucked in.
- 4) Decreasing the volume of the chest, causes the pressure to increase and air is pushed out.

Ref: CGP Biology page 42 & 43.

## Lesson 4 – Exercise.

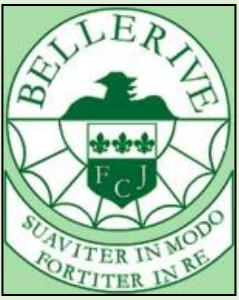


Key points to learn:

- 1) Strength, stamina, suppleness and speed are 4 aspects of fitness.
- 2) During exercise, your muscles **respire** more.
- 3) The muscles need more **oxygen** during exercise.
- 4) Your breathing **rate** and the **depth** of breathing increase during exercise.

Ref: CGP Biology page 45.

# Lesson 5 – Smoking.

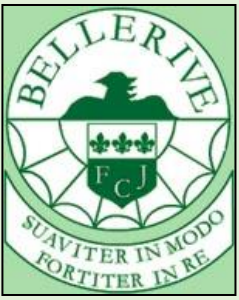


## Key points to learn:

- 1) Cigarette smoke contains carbon monoxide, tar, nicotine and irritants.
- 2) Tar causes **cancer** (lung, throat, mouth).
- 3) Nicotine is an **addictive** drug.
- 4) Cigarette smoke damages the **cilia** in the breathing system.
- 5) Carbon monoxide affects the **growth** of an embryo.

Ref: CGP Biology page 46.

# Lesson 6 – Asthma.

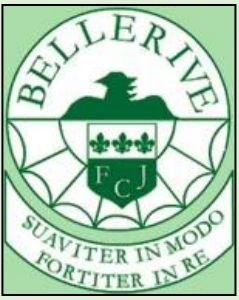


Key points to learn:

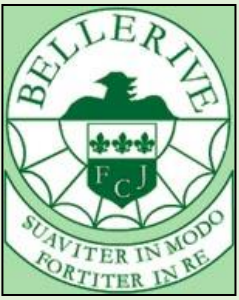
- 1) Asthma makes it very difficult for a person to breathe.
- 2) Asthma can be **triggered** by pet hair, pollen, dust and smoke.
- 3) In an **asthma attack** the airways narrow and become inflamed.
- 4) Symptoms of an asthma attack are: difficulty breathing, wheezing and a tight chest.
- 5) Asthma sufferers use **inhalers** to open up the airways.

Ref: CGP Biology page 45.

# Lesson 7 – Mini Progress Test 1.



# Lesson 8 – The Skeletal System.



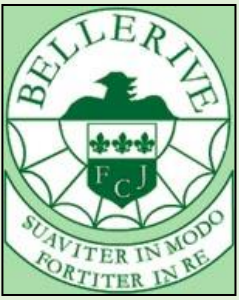
Key points to learn:

- 1) The skeletal system has **FOUR** functions: support, protection, movement and blood cell production.
- 2) Bones are made from **living** cells.
- 3) **Joints** are where bones meet and they allow movement.
- 4) **Cartilage** and **synovial fluid** allow the joint to move easily.

Ref: CGP Biology page 32 & 33.



# Lesson 9 – Muscles and movement.

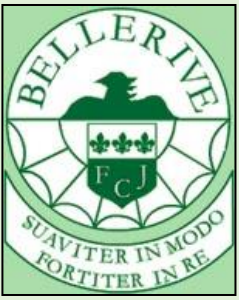


Key points to learn:

- 1) Ligaments join bones to bones.
- 2) Tendons join muscles to bones.
- 3) Muscles are found in pairs around a joint.
- 4) Muscles are **antagonistic**: One contracts the other relaxes.
- 5) The biceps and triceps are antagonistic muscles.

Ref: CGP Biology page 33 & 35.

# Lesson 10 – Biomechanics.

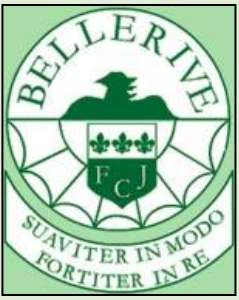


Key points to learn:

- 1) Muscles apply a **force** to a bone to make it move.
- 2) Biomechanics is the study of the forces acting on the body.
- 3) Pivots, levers and moments are involved when a force acts on the body.
- 4) The force applied to a muscle can be calculated using the '**Principle of Moments**'.

Ref: CGP Biology page 35 & 36.

# Lesson 11 – Drugs.

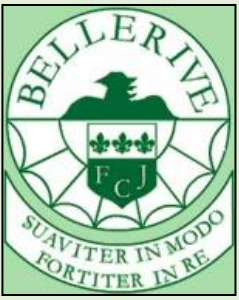


Key points to learn:

- 1) Drugs include **medicines** and **recreational** drugs.
- 2) Recreational drugs are used for 'enjoyment'.
- 3) Drugs can be **legal** or **illegal**.
- 4) Recreational drugs can be stimulants, depressants, painkillers or hallucinogens.
- 5) Many drugs are **addictive** and cause serious damage to the body.

Ref: CGP Biology page 55 & 56.

# Lesson 12 – Alcohol.



Key points to learn:

- 1) Alcohol is a legal (if over 18) recreational drug.
- 2) Alcohol is a **depressant** drug.
- 3) Alcohol damages the **brain** and the **liver**.
- 4) Alcohol impairs judgement and can lead to accidents.
- 5) Alcohol is **addictive**.

Ref: CGP Biology page 56.

# Lesson 13 – Mini Progress Test 2.

