**Year 7 Bitesize Science revision**

**Cells, tissues and organs**

Go to: <http://www.bbc.co.uk/bitesize/ks3/science/organisms_behaviour_health/>

Click on: ‘Cells to systems: revise’

**Animal and plant cells**

1. Name the cells parts that both plant and animal cells contain

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1. Name the parts only found in plant cells

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1. Complete the following table

|  |  |
| --- | --- |
| Part | Function |
| Cell membrane |  |
| Cytoplasm |  |
| Nucleus |  |
| Chloroplast |  |
| Vacuole |  |
| Cell wall |  |

**Cells and their functions**

1. What is a specialised cell?

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1. Complete the table

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| --- | --- | --- |
| Type of cell | Type of function | Specialisations |
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**Cells, Organs, Tissues and systems**

1. What is a tissue?

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1. Write down three examples of tissue

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1. What is an organ?

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1. Write down three examples of organs

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1. What is an organ system?

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1. Write down three examples of organ systems

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**Reproduction**

**Go to:** [**http://www.bbc.co.uk/bitesize/ks3/science/organisms\_behaviour\_health/**](http://www.bbc.co.uk/bitesize/ks3/science/organisms_behaviour_health/)

Click on: ‘reproduction: revise’

**The male reproductive system**

1. What two things do the testes do?

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1. What tubes do the sperm pass through initially?
2. What is the liquid which carries the sperm?

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1. What is reproductive function of the penis?

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1. What is the urethra?

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**The female reproductive system**

1. What are the female sex cells called?

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1. Where are they found?

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1. Fill out the gaps

Each \_\_\_\_\_\_ is connected to the uterus by an egg \_\_\_\_\_. This is sometimes called an oviduct or \_\_\_\_\_\_\_\_\_\_\_ tube. The egg tube is lined with cilia, which are tiny \_\_\_\_\_\_ on cells. Every \_\_\_\_\_\_, an egg develops and becomes \_\_\_\_\_\_\_\_, and is released from an ovary. The cilia \_\_\_\_\_\_\_ the egg along inside the egg tube and into the uterus.

1. What is the uterus?

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1. What is the cervix?

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1. What happens during sexual intercourse?

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**The Menstrual Cycle**

1. How long does the menstrual cycle last?

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1. When does the menstrual cycle stop?

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1. What happens during menstruation?

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1. How long does menstruation last for?

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1. What is ovulation?

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1. After how many days into the menstrual cycle does ovulation occur?

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1. Why does the uterus lining grow?

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**Fertilisation and foetal development**

1. Copy & complete.

During sexual intercourse the man's penis releases \_\_\_\_\_\_\_\_ into the woman's \_\_\_\_\_\_\_\_\_\_. Sperm cells travel in semen from the \_\_\_\_\_\_\_ and into the top of the vagina. They enter the uterus through the \_\_\_\_\_\_\_\_ and travel to the \_\_\_\_ \_\_\_\_\_\_\_.

If a sperm cell meets with an egg cell there, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can happen. Fertilisation happens when an egg cell meets with a \_\_\_\_\_\_\_\_ cell and joins with it.

1. What is an embryo?

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1. What does the embryo become?

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1. What three things does the foetus require?

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1. What is amniotic fluid?

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1. What is the amnion?

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1. What is the placenta for?

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1. How is the placenta connected to the baby?

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1. What things pass through the placenta that the baby needs?

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1. What is a waste product that passes through the placenta?

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1. How do substances pass through the placenta?

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1. Copy and complete

After \_\_\_\_\_\_ months the baby is ready to be born. The \_\_\_\_\_\_\_\_ relaxes and \_\_\_\_\_\_\_\_\_\_ in the wall of the uterus \_\_\_\_\_\_\_\_\_\_, pushing the \_\_\_\_\_ out of the mother's body.

**Puberty**

1. What is puberty?

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1. Where are the male sex hormones made?

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1. Where are the female sex hormones made?

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1. Complete the Venn diagram below for changes that occur during puberty.

**Particles & reactions**

Go to: http://www.bbc.co.uk/bitesize/ks3/science/chemical\_material\_behaviour

Click on: ‘Particle model revise’

**Solids**

1. Write down five properties of solids

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1. Why do solids have a fixed shape and cannot flow?

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1. Why can’t solids be compressed?

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**Liquids**

1. Write down one way the particles in a solid and liquid are similar

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1. Write down two ways in which the particles in a liquid and solid are different

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1. Why can liquids flow?

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1. Why cannot liquids be compressed?

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**Gases**

1. How are particles in a gas and liquid similar?

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1. How are particles in a liquid and gas different?

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1. Why do gases quickly fill their containers?

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1. Why can gases be easily compressed?

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**Arrangement and movement**

1. Complete the following table

|  |  |  |  |
| --- | --- | --- | --- |
|  | Solid | Liquid | Gas |
| Arrangement of particles |  |  |  |
| Movement of particles |  |  |  |
| Diagram |  |  |  |

Click on: **http://www.bbc.co.uk/bitesize/ks3/science/chemical\_material\_behaviour/behaviour\_of\_matter/revision/4/**

**Diffusion**

1. What is diffusion?

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1. Why does diffusion happen quickly in gases?

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1. Why can diffusion also happen in liquids?

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1. Why is diffusion in liquids slower than diffusion in gases?

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1. Why can’t diffusion happen at all in solids?

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**Working in a laboratory**

Go to:

<http://www.bbc.co.uk/bitesize/ks3/science/chemical_material_behaviour/acids_bases_metals>

Click on: ‘acids, bases and metals revise’

**Acids in the laboratory**

1. What is an irritant?

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1. Why is concentrated acid considered corrosive?

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1. What **two** acids would be found in lemons?

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**Indicators and the pH Scale**

1. Complete the following table

|  |  |  |
| --- | --- | --- |
| **Type of solution** | **Red Litmus** | **Blue Litmus** |
| Acidic |  |  |
| Alkaline |  |  |
| Neutral |  |  |

1. What does universal indicator tell us that litmus doesn’t?

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1. What pH can an acid be?

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1. What pH can an alkali be?

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1. What is the pH of a neutral substance

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**Forces & speed**

Go to: <http://www.bbc.co.uk/bitesize/ks3/science/energy_electricity_forces/>

**Click on : ‘forces revise’**

**What are forces?**

1. A force can either be a \_\_\_\_\_\_\_ or a \_\_\_\_\_\_\_\_
2. How do we measure forces?

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1. What is the unit of force?

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1. What is the symbol for this unit?

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**Weight, mass and gravity**

1. What is mass?

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1. What units are mass measured in?

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1. What is the symbol for these units?

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1. What is the force of gravity?

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1. What two factors affect the size of the force of gravity?

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1. Why do we only notice gravity when near large objects?

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1. Which way does the force of gravity act on the Earth?

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1. What is weight?

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1. What units is weight measured in?

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1. How does the weight of an object on earth compare to its weight on the moon?

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1. How much does a 70 kg person weigh on the earth?

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1. What is the mass of a 70 kg person on the moon?

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1. How much bigger is gravity on the Earth compared to that on the moon?

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**Balanced Forces**

1. How can forces be represented?
2. What two features are used to show the size and direction of a force?
3. What two things can happen to an object when the forces on it are balanced?
4. Complete the table

|  |  |  |  |
| --- | --- | --- | --- |
| Situation | Force acting upwards | Force acting downwards | Diagram |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Unbalanced forces**

1. What can happen when forces are unbalanced

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1. What is meant by a resultant force

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1. What is the resultant force on the lorry?

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1. What would this cause the lorry to do?

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**Frictional Forces**

1. Complete the following

|  |  |
| --- | --- |
| Helpful frictional forces | Unhelpful frictional forces |
|  |  |

1. Fill in the gaps.

Bikes, cars and other vehicles experience \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_as they move. This is caused by the \_\_\_\_\_\_\_\_\_\_\_\_ forces of the \_\_\_ against the vehicle. The faster the vehicle moves the \_\_\_\_\_\_\_\_\_\_\_\_ the air resistance becomes. The \_\_\_\_\_ speed of a vehicle is reached when the force from the cyclist or engine is \_\_\_\_\_\_\_\_\_\_\_\_ by air resistance.

1. What is meant by streamlining?

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1. Why do we streamline vehicles?

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**Energy transfers**

Go to:

<http://www.bbc.co.uk/bitesize/ks3/science/energy_electricity_forces/>

Click on: ‘energy transfer and storage revise’

**Energy Basics**

1. Complete the following table

|  |  |
| --- | --- |
| Type of energy | Description |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**Energy Transfer Diagrams**

1. What is the energy input for a battery?

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1. What is this energy converted into?

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1. What two forms of energy is does the bulb transfer electrical energy into?

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1. What does the curved arrow of the Sankey diagram represent?

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1. What does the straight arrow represent?

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1. What does the thickness of a Sankey diagram represent?

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**Non-renewable energy sources**

1. What are non-renewable energy resources?

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1. What are the three fossil fuels?

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1. How were they formed?

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1. Fill in the gaps.

The \_\_\_\_\_\_\_\_\_ stored in the fossil fuels originally came from \_\_\_\_\_\_\_\_\_\_. Plants used \_\_\_\_\_ energy from the Sun for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to make their chemicals. This stored chemical energy was transferred to stored chemical energy in \_\_\_\_\_\_\_ that ate the plants. When the living things \_\_\_\_\_, they were gradually buried by layers of \_\_\_\_\_\_.

The buried remains were put under \_\_\_\_\_\_\_\_\_ and chemical reactions heated them up. They gradually changed into the \_\_\_\_\_\_\_\_ fuels. Once we have used them all up, they will take \_\_\_\_\_\_\_\_\_\_ of years to replace, if they can be replaced at all.

**Renewable Energy Resources**

1. What is meant by biomass?

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1. Why is wood not considered non-renewable?

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1. Where does the energy in biomass originally come from?

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1. What causes the wind?

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1. What form of energy does the wind have?

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1. When will a wind turbine not work properly?

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1. What three ways can electricity be generated from water?

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1. Where does the heat energy to heat the water come from in geothermal energy?

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1. What is the energy transfer in solar cells?

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1. How else can solar power be used, other than to generate electricity?

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**Generating and Saving energy**

* 1. What is the correct order of these statements?

1. the electricity goes to the transformers to produce the correct voltage
2. the fuel is burned to boil water to make steam
3. the spinning turbine turns a generator which produces electricity
4. the steam makes a turbine spin
   1. Why do we want to save as much energy as possible?

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* 1. List three ways we can save energy

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\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Go to: <http://www.bbc.co.uk/bitesize/ks3/science/energy_electricity_forces/>

Click on: ‘electric current and Voltage revise’

**Series and Parallel circuits**

* + 1. What is the difference between a series and parallel circuit?

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* + 1. If you add more bulbs in series what happens to the bulb brightness?

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* + 1. What happens to the bulbs in a series circuit if one if broken?

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* 1. In a parallel circuit, what happens to the bulbs if one bulb is broken?

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* 1. Why does this happen?

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**Measuring Amps & Volts**

* + 1. What is current measured in?

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* + 1. What is the current measured with?

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* + 1. How is the ammeter placed in a circuit to measure the current?

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* + 1. What is Voltage measured in?

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* + 1. What is the Voltage measured with?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. How is the Voltmeter placed in a circuit to measure the Voltage

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**Current in a series circuit**

* + 1. What can you say about current at all points in a series circuit?

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* + 1. What happens to the current if the cells of bulbs in increased?

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