

Chapter 1 – Main Concepts

- Sound is a form of energy.
- This energy makes particles vibrate.
- One particle passes the sound energy to the next particle.
- The sound then reaches the ear.
- Sound travels better through a solid than through air.
- Sound cannot travel in outer space as there are no particles to vibrate.

1. What is sound?
 - (a) A type of force
 - (b) A type of energy
 - (c) A type of matter

2. True or False: Sound cannot travel in outer space.
 - (a) True
 - (b) False

Chapter 2 – Main Concepts

- To change the direction that a paper spinner turns, you change the direction of the wings. (Put the back one forward and the forward one back.)
 - You must have a weight pulling the spinner downwards for it to work well.
 - Long wings work better than short wings on the paper spinner as they provide more air resistance.
3. As you reduce the length of the wings of the paper spinner, you reduce how well it works. True or False?
 - (a) True
 - (b) False

Chapter 3 – Main Concepts

- Sycamore leaf and seed (wings)



- Ash leaf and seed (keys)



▪ Beech leaf and seed (Beech nut)



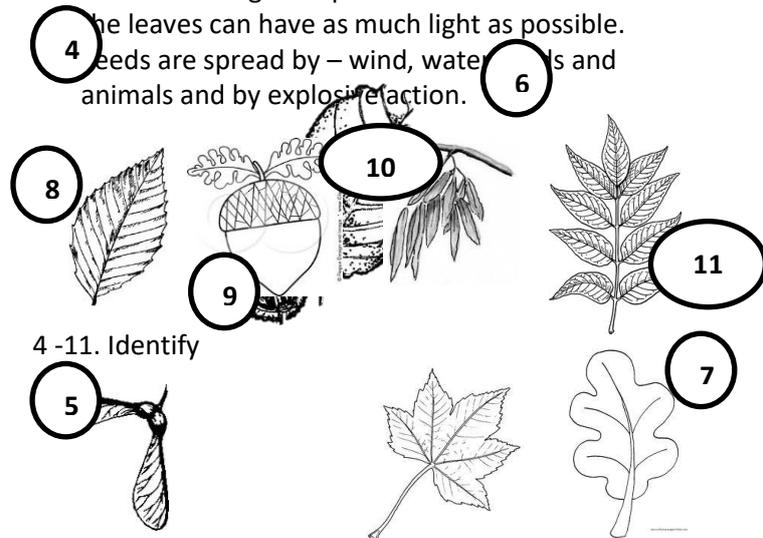
- Oak leaf and seed (Acorn)



- Horse Chestnut leaf and seed (chestnut)



- The root anchors the tree in the ground and draws water and minerals from the soil into the tree.
 - The trunk is surrounded by bark. Bark is the dead skin of the tree. It protects the inside of the tree.
 - The branches grow upwards and outwards so that the leaves can have as much light as possible.
4. Seeds are spread by – wind, water, animals and by explosive reaction.



4 -11. Identify

4. _____
5. _____
6. _____
7. _____

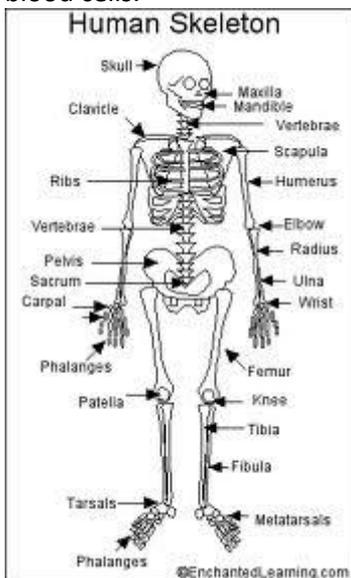
8. _____
9. _____
10. _____
11. _____

12. Which part of the tree anchors the tree into the ground?

- (a) Trunk
- (b) Root
- (c) Branch

Chapter 4 – Main Concepts

- The skeleton provides shape, support and protection for the body.
- Bones store minerals and make red and white blood cells.



- An adult has 206 bones.
- Muscles are attached to bones with tendons. Muscles help to move bones by working in pairs. One muscle contracts while another muscle relaxes.

13. What is the name of largest bone in the body?

- (a) Tibia
- (b) Femur
- (c) Fibula

14. Which of these is not a bone of the arm?

- (a) Metatarsals
- (b) Radius
- (c) Ulna

15. Which organ does the skull protect?

- (a) Heart
- (b) Lung
- (c) Brain

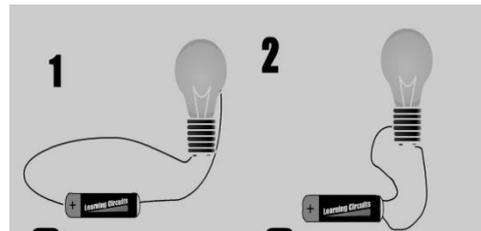
Chapter 5 – Main Concepts

- Electricity is the flow of electrons around a circuit.
- A circuit is a path along which electricity travels.
- There must be no break in the circuit or the bulb will not light.

16. What is the name of the path along which electricity travels?

- (a) Current
- (b) Circuit
- (c) Voltage

17. Which of these circuits will work?



- (a) Circuit 1
- (b) Circuit 2

Chapter 6 – Main Concepts

- A conductor of heat lets heat to pass through it e.g. metal.
- An insulator of heat does not let heat pass through it e.g. wood.
- When air is heated it expands
- When air is cooled it contracts.

18. A material which allows heat to pass through it is called a:

- (a) Conductor
- (b) Insulator

Chapter 7 – Main Concepts

- A conductor of electricity is a material which allows electricity to travel through it. All metals are conductors.
- An insulator of electricity is a material which does not allow electricity to travel through it. Insulators are used to cover wires so that we do not get an electric shock e.g. flex on a kettle.

19. Which of these will conduct electricity?

- (a) Tin foil
- (b) Ruler
- (c) Eraser

20. A material which does not allow electricity to pass through it is called a:

- (a) Conductor
- (b) Insulator

Chapter 8 – Main Concepts

- A spring balance is used to measure weight and force. Force is measured in Newton (N).
- The bigger and heavier the shape the more force required to move it.
- The less of an object's surface that is in contact with a table the less force required to move it.
- A round object requires less force to move it.

21. Force is measured in:

- (a) Grammes
- (b) Millilitres
- (c) Newton

Chapter 9 – Main Concepts

- Water, light and warmth are needed for growth.
- Seeds will germinate in the dark but the growth will fail if light remains absent.
- Fruit protects the seed. We eat the fruit e.g. an apple protects the apple tree seed. We eat the fruit e.g. apple.

22. Which of the following seeds will grow?

- Seed 1: Water, heat, light
- Seed 2: Water, heat, darkness
- Seed 3: No water, heat, light
- Seed 4: Water, cold, light

Chapter 11 – Main Concepts

- Magnetic power is greatest at the tip of the magnet.
- A magnet has two poles – North and South Pole.
- Like poles repel while unlike poles attract.
- Magnetic power travels through other substances.

23. Name the two poles of a magnet.

24. A North pole will _____ (attract / repel) a North Pole

25. A South pole will _____ (attract / repel) a North Pole.

Chapter 12 – Main Concepts

- Increasing the slope, increases the force needed to move the object up that slope.
- Increasing the weight of an object, increases the force needed to move the object.

26. Increasing the slope _____ (increases / decreases) the force needed to move the object up that slope.

27. Increasing the weight of an object _____ (increases / decreases) the force needed to move the object.

Chapter 13

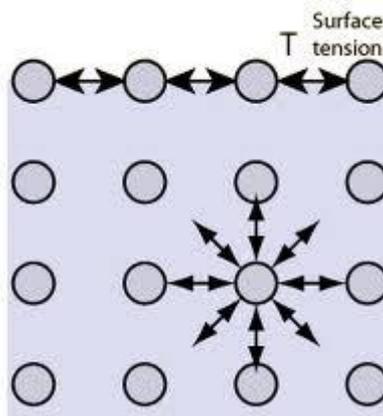
- Matter is anything that has weight and takes up space.
- A solid is matter which has definite shape and size. (If you put a solid in a box, it would not change shape) e.g. shoe.
- A liquid takes the shape of its container e.g. liquid.
- Gas is matter that has no definite shape. Gases take the shape of whatever container they are in e.g. air.

28 – 30. Identify the solid, liquid and gas.

SUGAR	GAS
AIR	LIQUID
OIL	SOLID

Chapter 14 – Main Concepts

- Surface tension is a force that holds the molecules of water together. It is present within the top layer of a liquid and causes the layer to act like an elastic sheet.



- It is powerful enough to hold water up at the top of the jar.
- It also allows items to flow on water.
- Water molecules have a 3-D shape because of surface tension.
- If we add washing up liquid to water molecules they will no longer hold their 3-D shape because the washing up liquid destroys the surface tension of the water.

- The world's second tallest bird is the emu.



31.

There is water in the glass. Will the water flow from the glass straight away if the card is taken away?

- (a) Yes
- (b) No

Chapter 15 – Main Concepts

- A food chain shows how each living thing gets its food. It shows who is eating whom.
- Badgers are **nocturnal** (hunt at night). They are mammals. Like humans, they are omnivorous, although unlike us, they eat several hundred **earthworms** every night. Badgers are **social** creatures and live together in large underground setts, comprised of a series of interlocking tunnels with nest chambers, toilets and several entrances. They inherit these setts from their parents. Young badgers are called cubs.
- Hares are much longer-limbed and swifter than **rabbits**. They use their powerful hind legs to outrun their enemies. Brown hares are widespread throughout central and western **Europe**, including most of the **UK**, where they were introduced by the Romans.
- The Thrush is light brown in colour and has a spotted breast. It lives in bushes or trees. It gets most of its food on the ground. It eats worms, insects and snails and will even dig underground to find food.
- The blackbird is a woodland bird that has learned to live in gardens, farms and parks as well as in woodlands. It eats worms and slugs, as well as berries and fruits. The male is black all over. It has a yellow beak.
- The robin has a red breast. It digs worms from the freshly dug soil. The male and female look similar.
- The world's tallest bird is the ostrich. The ostrich cannot fly.

32 – 36. Identify these birds:











Chapter 17 – Main Concepts

- Air takes up space
- Air can exert pressure
- Pouring liquid into a container can be made difficult by air as it escapes.

37. Air takes up space. True or False?

- (a) True
- (b) False

Chapter 18 – Main Concepts

- Light travels in straight lines.
- The path of light changes direction when it travels from one substance to another e.g. from air to water.

38. Light travels in curved waves. True or False?

(a) True

(b) False

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