Science Department

2023/2024

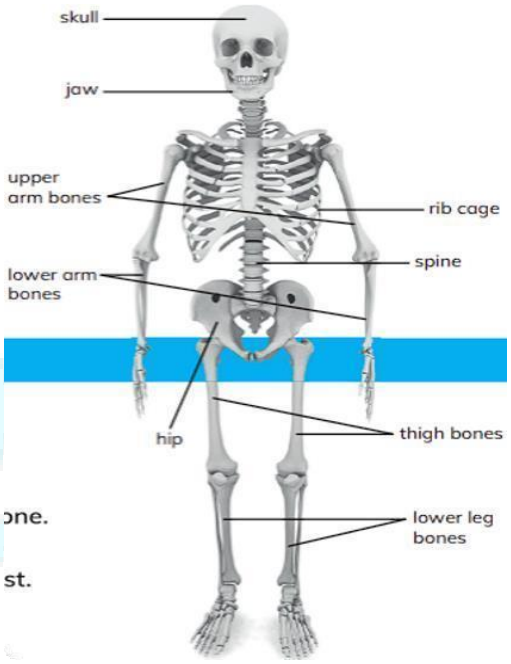
Year 4

Term 1

Name: ……

Class: ……

1. bones are joined together to form a skeleton.
2. Skeleton is a strong frame that supports our body from the inside
3. A baby is born with around 300 bones and as the baby grows into an adult the bones fuse together and the number of bones an adult then has is 206.
4. Bones are attached together through joints.
5. Names of bones in our body:
6. A model helps us understand how something works or see what something looks like that we cannot see in real life.
7. The skeleton main function is:
   1. Skeletons protect
   2. Skeletons give shape
   3. Skeletons allow us to move
   4. Skeletons help us to grow
8. The parts inside our bodies are called organs. The body organs do important jobs that keep us alive and healthy.
9. Our skeletons protect the main organs of our bodies.
10. skull protects the brain
11. Rib cage protects the soft organs (lungs and heart)
12. The skeleton forms a frame that supports or holds up the rest of the body and gives the body its shape.
13. Our skeleton makes our body firm. We cannot squash our body easily because we have skeleton.
14. We can move because there are muscles joined to bones of the skeleton.
15. Muscles are parts of the body that help us to move.
16. We grow and get bigger because our skeleton
17. grows. An adult's skeleton is much bigger than a child's skeleton.
18. Your bones become bigger as you grow up.
19. Your bones keep growing until you are 20 years old.
20. Broken bones can repair themselves as long as they are SLOWLY put back together.
21. Our brain is the director It sends commands to the rest of the body parts to move.
22. Muscles are very flexible like elastic it can stretch and change shape easily.
23. Muscles are found under the skin they cover the skeleton and give your body the shape that you have.
24. All animals with skeletons have muscles attached to the bones.
25. Muscles pull on bones to make them move.



26. Muscles work by getting shorter and longer.
27. When muscles get shorter, they pull on the bones they are joined to.We say that the muscle Contracts.
28. When the muscle gets longer and let you rest this is called muscle Relax.
29. Muscles always work in pairs.
30. When one muscle contracts the other relaxes.
31. Muscles pulls on the bone it is joined to; this makes the bone move 32. Do you know that the heart is a Muscle also.
33. It is a special muscle that is not joined to bones.
34. Movement helps to keep us healthy in different ways
35. Movement:
    1- Makes your heart and lungs work together.
    2- Makes your muscles and bones stronger.
    3- Let's you stretch your body easily.
    4- Helps to stop you from getting some illness.
    5- Helps you think better.
    6- Put you in a good mood.
36. We call animals with skeleton inside their bodies Vertebrates.
37. The word vertebrate means with a backbone.
38. Vertebrates are sorted into 5 different groups:
    - Fish
    - Amphibians
    - Reptiles
    - Bird
    - Mammals
39. Fish:
    - Live in water
    - Have fins instead of arms and legs.
    - Their bodies are covered with scales.
40. Amphibians:
    - Live in water and on land.
    - Their bodies are covered with smooth, wet skin.
    - Like Frog and Salamander

41. Reptiles:
    - Covered with dry scales
    - Most reptiles live on land like
    - Snakes-Lizards-Tortoise
    - Some reptiles live in water for example…….Crocodiles

42. Birds:
    - Birds are covered with Feathers.
    - Birds have wings instead of arms.
    - Most birds can fly.
    - Some birds can't fly.
    - Ostrich cannot fly 43. Mammals:
    - Mammals are covered with hair or fur.
    - Most mammals live on land.
    - Some mammals live in sea for example……. Whales-Dolphins

44. Animals with no bones are called Invertebrates.
45. the word invertebrate means without a Backbone.
46. Some invertebrate animals have Hard skins or shells on the outside of their bodiesThis hard outer layer is called an Exoskeleton.
47. The exoskeleton Protects the animal.Supports the animal's body. Examples Locust – Beetle.
48. The skeleton of a vertebrate GROWS which allows the animal to grow.
49. exoskeleton of an invertebrate CANNOT GROW.
50. Identification Keys:
    - Scientists use identification keys to help them…….
    - Sort
    - And identify objects.
    - It is based on questions that can be answered either yes or no, by answering the questions we can identify and sort animals.
51. We take medicines :
    - To help make us better when we have an illness
    - To prevent us from getting ill
52. You should only take medicines if they are given to you by a doctor, a nurse or an adult who looks after you.
53. Medicines come with Instructions; we must follow these instructions.
54. Instructions tell you how much medicine you must take and how often you should take it.
55. Taking medicines in different ways:

- injections and vaccinations
- Inhalers that we breath
- Creams and ointments

- Drip

56. Injections
    - We take some medicines as injections.
    - Some injections can stop or prevent us from getting illnesses such as measles or flu.
    - These injections are called vaccinations.
57. Inhalers
    - We breathe in medicines from inhalers for asthma and other breathing problems.

58. Creams and ointments

- We use creams and ointments • to stop insect bites itching and
- for skin problems.

59. Drip

- People who are very sick in
- hospital often get their medicine directly into their blood through a drip.

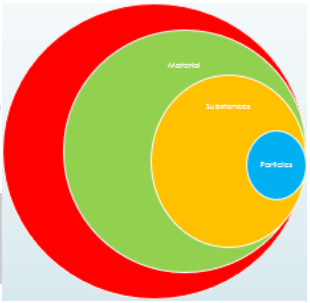
60. The germs infect your body. This means the germs get into your body and make you ill.
61. plant or an animal can have infectious diseases:

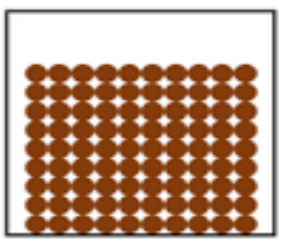
leaf blast can kill young rice plants.

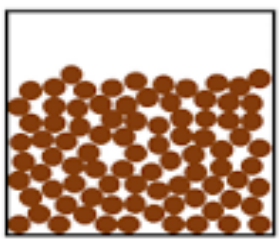
Bird flu

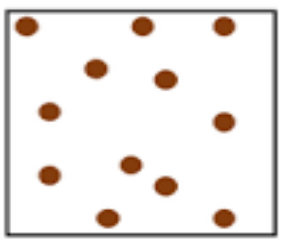
62. Energy makes us able to do work.
63. Living things have energy
64. Non-living things also have energy
65. Forms of energy (heat – light – movement – wind)
66. Energy makes things move or change.
67. Energy cannot used up or destroyed it always transfers and change
68. Electricity is another form of energy.
69. We call it electrical energy.
70. There are often energy changes when we use electrical appliances such as stoves and fans.
71. Electrical appliances are objects that need electrical energy to work.

72. Sometimes we cannot see any signs that tells that an object has energy. It seems that the energy is used up. But that is not true
73. Energy can only be transferred and change form.
74. We cannot make energy, All the energy around us……has always been with us and always will be with us it just moves and changes form
75. We get our energy from the food we eat.
76. The energy moves from the food into our bodies.
77. Plants make their own food!
78. plants use light form the sun water from the soil and air to make their food
79. This process is called Photosynthesis.
80. plants are the only living things that can make their own food 81. plants can make their own food so that's way we call the **Producers**
82. Animals CANNOT make their food.
83. Animals must eat plants or other animals to get their food and energy. 84. We call animals **Consumers**
85. Some **consumers** eat:
    - Plants only called herbivores.
    - Animals onlycalled carnivores.
    - Both plants and animals called omnivores.
86. **Predators** Are carnivores that eat animals.
87. **Preys** are herbivores that eaten by predators.
88. Food chain it is the path that the energy take from the sun till it reaches our body.
89. The order of living things in a food chain is always Producer → Consumer.
90. Matter is EVERYTHING AROUND US that has mass and occupy a space.
91. A substance is a **PURE** type of solid, liquid, or gas. (made out of one thing)
92. Most materials are mixtures of different substances. (made out of more than one thing)
93. **OBJECTS** are made of **MATERIALS** are made of **SUBSTANCES** are made of **PARTICLES**.
94. **O**nly **M**om and **S**on can **P**lay.
95. Matter made out of particles.
96. Scientists use a **MODEL** to explain **how the particles form substances.**
97. The particle model describes the differences between substances that are solids, liquids and gases.
98.





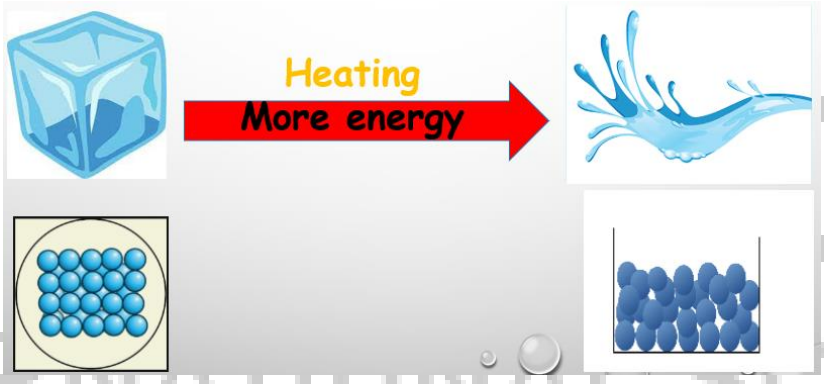




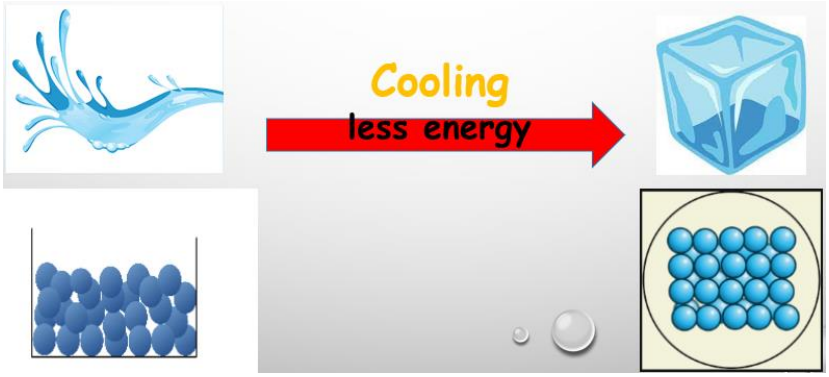
99. The particles have **spaces** between them.
100. The particles are always **moving**.
101.

Solid	Liquid
-The particles are packed tightly together in a regular pattern, with the same amount of space between each particle. -The spaces between the particles are very small. -This means the particles cannot move around very much and are in a fixed position.	-The particles are also close together , but they are not packed in a regular pattern . -There are bigger spaces between the particles, this allows the particles to slide past one another and change places.

102. **Properties:** It describes what a substance or material is **like, or how it behaves**
103. **Solids keep their own shape; liquids cannot keep their own shape.**
104. **Powders**: are **solids** that behaves like **liquids.**
105. Powders are made of **very tiny pieces of grains.**
106. There is **air** between the grains.
107. This means that the grains have **space to move in**.
108. This lets the grains flow past one another like the particles in a liquid.
109. **Melting:** Changing of ice from solid to liquid when heated.



110. **Solidifying:** Changing of ice from solid to liquid when heated.



111. As the substance only changes its form. The substance **does not** change into a different substance.
112. Change of state is called a ……**physical process**
113. It occurs when some substances mix together and change to form a new substance or material
it called chemical reaction