A curious way to get about

In 1948, scientists discovered that dolphins use ultrasounds to find out what is around them. Ultrasounds are a type of sound that humans cannot hear. Dolphins send ultrasounds that hit against objects around them. Then, these ultrasounds come back to the dolphins as echoes. These echoes tell the dolphins information about the things in their way: its distance, direction, size, shape, texture and weight.

When dolphins move around, they move their heads from side to side or up and down. This is how they explore their environment, detect any obstacles in their way and find food.

This system lets dolphins move around perfectly, even in the dark.

Read and answer

1. What kind of sounds do dolphins make?
   - They make ________________________________.

2. What information do echoes give dolphins?
   - They ________________________________ information about ________________________________.

3. What do dolphins use echoes for? Circle the odd one out.
   - to find food   •   to explore their environment   •   to detect obstacles   •   to walk on land

4. Do you think dolphins can find their way with their eyes covered? Choose the correct answer and say why.
   a) Yes, because they ________________________________.
   b) No, because they ________________________________.
A message from your body

Your body sends you messages about how it feels and what it needs. Learn to listen to your body so you can keep it healthy.

When you are thirsty, your body is saying you need water. Our tongues tell us we are thirsty. Saliva keeps our mouth and tongue wet. If they need water, they send a message to the brain that makes us feel thirsty.

Our body eliminates more than ½ litre of water every day through sweat, breathing, urine and faeces. We eliminate even more water when we exercise. This is why it is important to drink lots of water. But remember something very important, we have to drink clean drinking water so we don’t get ill.

Read and answer

1. What does our body do when we are thirsty?
   • It _____________________________________________________________.

2. What keeps your mouth and tongue wet?
   ________________________________________________________________.

3. Why do you need more water after exercising?
   • Because ________________________________________________________________________.

4. Choose the correct answer.

   When you are out in the country, can you drink the water from a river?
   a) Yes, because the water tastes good.
   b) No, because the water is not clean enough for drinking.
Your skin

Your skin is the heaviest organ in your body. The skin of an adult person can weigh between 4 and 5 kilos. It covers your entire body, protects you from microbes and the sun, helps you keep a constant temperature, and it is the sense organ of touch.

It can also tell who we are. If you carefully look at your fingertips, you can see small lines. These lines can be curves, spirals or circles. These are called fingerprints. Each person’s fingerprints are unique. That is why we use them as a form of identification. There are no two fingerprints in the world that are the same!

Read and answer

1. Choose the correct answer.

The skin of an adult person can weigh between...

a) 4-5 grams.  
   b) 4-5 kilos.  
   c) 14-15 kilos.

2. What functions does your skin do? Circle the odd one out.

- covers my body  
- protects me from microbes  
- protects me from the sun  
- keeps my temperature  
- it’s my sense organ of sight

3. What part of your skin identifies you? Why?

- My __________________ because there are no two __________________ in the world that are the __________________.
Laughing is good for you

We laugh when someone tells us a joke or when something is funny.

Different muscles in your body contract when you laugh, like your face, chest and tummy. Laughing hard exercises the top part of your trunk, your lungs, your heart and the muscles in your shoulders, arms, tummy and legs.

They say that laughing one hundred times is the same as fifteen minutes of cycling. Also, when you laugh, it makes you feel happy and your brain sends information that makes your body reduce stress and pain and even increase your defences against illnesses.

Read and answer

1. What parts of your body contract when you laugh hard?

2. Why is laughing good for you? Circle the odd one out.

- reduces stress and pain
- helps you against illnesses
- makes you grow tall
- makes you feel happy

3. Tell your classmates a funny joke. Observe and tick (✔) what you see.

My classmates...
- move their tummies
- move their shoulders
- close their eyes
- move their legs
- laugh
- move their arms
- smile
- cry
Friends under the sea

A hermit crab has a long, spiral body without a shell. In order to protect its body, he crawls inside the empty shell of a snail.

A sea anemone has tentacles that make it look like a beautiful flower. But its tentacles have poison.

These two very different animals usually live together. The hermit crab lets the anemone’s tentacles protect him against his worst enemy: the octopus. The anemone rides on the hermit crab’s back and moves around with it. Because the crab is always moving, it is easier for the anemone to get more food. It even eats food that the crab leaves behind.

Although the two look strange together, they are true friends.

Read and answer

1. What two sea animals are friends?

2. How do they help each other? Write anemone or hermit crab.
   • The tentacles of the _________________ protect the _________________.
   • The _________________ rides on the back of the _________________.

3. Tick (✔) other situations where living things help each other.

   □ Children help mum and dad cook dinner.
   □ A plant uses water to grow.
   □ A bee carries pollen to other flowers.
   □ A shark eats a fish.
   □ A boy takes care of his pet dog.
Water lilies sleep at night

Aquatic plants need a lot of water in their roots to live. Water lilies are aquatic plants that come from Africa and Asia. They live on ponds and lakes.

Water lilies have roots that touch the bottom of the ponds or lakes. They have long and bright green leaves that float. They usually have six petals and six stamens. When water lilies grow, their first leaves stay under the water. Then other leaves grow that float.

There are different types of water lilies. Night lilies bloom during the night. Tropical lilies live in tropical climates and bloom at any time during the day. And hardy lilies are very strong and can live in any type of weather.

The largest water lily is the Giant Water Lily. It lives in the Amazon rainforest and its leaves can grow 60 to 182 cm in diameter.

Read and answer

1. What is a water lily?

2. Write T if the sentence is true and F if the sentence is false.

   • Water lilies can live on land. ______
   • Water lilies have roots that float. ______
   • Water lilies have big green leaves. ______
   • Water lilies have six stems. ______
   • There are two types of water lilies. ______

3. What's the difference between night, tropical and hardy water lilies?
   • Night water lilies _____________________________.
   • Tropical water lilies _____________________________.
   • Hardy water lilies _____________________________.
Antarctica, the icy continent

Antarctica is the highest continent on Earth and has more than half of the Earth’s fresh water.

Because it is at the South Pole, it gets little sunlight and its climate is extremely cold. In summer, there is light 24 hours a day, but in winter it is always dark. In the most southern part, there is at least one night when the Sun doesn’t completely go down and at least one day when the Sun doesn’t completely come up.

Because of the cold temperatures, the only living things in Antarctica are algae, mosses, lichen, seals and some birds, like the emperor penguin. And the only people that live there are scientists that are working on different investigative projects.

Read and answer

1. Antarctica is in the...
   a) North Pole          b) South Pole

2. What four living things live in Antarctica?

3. Complete the sentences about Antarctica.

<table>
<thead>
<tr>
<th>dark</th>
<th>cold</th>
<th>Scientists</th>
<th>living things</th>
<th>light</th>
</tr>
</thead>
</table>

- There is _______________ all day in the summer and it is always _______________ in the winter.
- It doesn’t have many _______________ because of the _______________ temperatures.
- _______________ are the only humans that live in Antarctica.
Egyptian astronomers

Egyptians knew a lot about astronomy. In museums, we can see the astronomical maps and glass lenses that they used as telescopes. They used their observations to invent a calendar with twelve months. They added 5 more days so that each month had 30 days.

The Egyptians also used their knowledge about stars for architecture. They chose where they built their pyramids and temples according to very complex calculations. The best example is the temple of Abu Simbel, dedicated to Pharaoh Ramses II. Inside the temple, the sunlight shines on a statue of the Pharaoh on two specific dates: February 21, the birthday of Ramses II, and October 22, the day he became king.

Read and answer

1. What astronomical instruments from ancient Egypt can we see at museums?

2. What happens at the temple of Abu Simbel thanks to the complex astronomical calculations of the Egyptians?
   a) The sun shines on a statue of Ramses II on his birthday and the day he became king.
   b) The moon shines on a statue of Ramses III on his birthday and the day he became king.

3. What’s the difference between the Egyptian’s ancient calendar and the one we use now?
   Tick (✔).

   □ The number of days.
   □ The number of months.
   □ How they invented it.
The stone that floats

There are special mountains on Earth that are called volcanoes. They have a cone shape with cracks and openings at their summit. Sometimes gases, pieces of rock and lava come up through these cracks and openings. When they get cold, they become solid rocks.

One of most interesting volcanic rocks is pumice. Pumice stone is a volcanic rock with lots of holes, called pores. These pores have air in them. Since air weighs less than water, it makes the stone weigh less. If you put a pumice stone in water, it floats.

Pumice has many industrial uses because it is easy to carve. Also, because the surface of this rock is rough, it helps to eliminate rough parts of the skin.

Read and answer

1. Where does pumice stone come from?
   • It comes from ____________________________________________
   ____________________________________________

2. What are the characteristics of the pumice stone? Tick (✔).
   - It has pores.
   - It has spores.
   - It floats.
   - It is rough.
   - It is difficult to carve.
   - It is very heavy.

3. Why does pumice stone float?
   • Because ____________________________________________
Amsterdam on wheels

Fietspad in Dutch means ‘bike lane’. A bike lane is a path only for bicycles.

Holland is a European country that has 17,000 kilometres of bike lanes. Its capital is Amsterdam. There, all the streets have a bike lane. Their traffic lights have a bike symbol that changes colour to let cyclists pass.

Holland is a very flat country which is one reason why so many people use bicycles there. It is also a part of their culture.

Riding a bicycle is eco-friendly because it does not pollute the air. It is also a healthy way for the Dutch to exercise without even realising it.

Read and answer

1. What is a bike lane?

2. What does Dutch mean? Tick (√).
   - It is the language in Holland.
   - It is the people in Holland.
   - It is a city in Holland.

3. Write T if the sentence is true and F is the sentence is false.
   - Holland is in Europe. _______
   - Its capital is Paris. _______
   - Amsterdam has traffic lights with bike symbols. _______
   - Many Dutch use a bicycle because Holland is a very flat country. _______

4. Why is the bicycle a very good form of transport?
   - Because ____________________________________________________________.
Tree conservation

The Council of each municipality not only cares for its inhabitants, but for the environment, too. This is why one of its duties is to protect historical trees. A tree is considered a historical tree because of its age, history, size, shape, beauty or other characteristics. The Council is in charge of identifying them, informing the Ministry of Environment and of taking care of them.

There are some places where they are protected by fences. There are signs next to these fences that explain the special characteristics of these trees.

Some of these trees belong to inhabitants of the municipality, others belong to the municipality, and others belong to the Autonomous Community. Their conservation is really the responsibility of everyone.

Read and answer

1. Choose the correct answer.

What is a historical tree?
   a) A special tree that is protected.
   b) A big tree that is cut down.

2. What can be characteristics of a historical tree? Tick (✔).

   □ its size  □ its municipality
   □ its beauty  □ its roots
   □ its shape  □ its trunk
   □ its age  □ its history

3. Why do you believe that it is important to conserve historical trees?
   • Because they are unique / ordinary trees.
Jewels underground

Diamonds are formed deep inside the Earth at high temperatures. The best place to dig a diamond mine is at the centre of an inactive volcano.

Miners dig up rough diamonds mixed with rocks and soil. They clean the diamonds and separate them from the other materials. Later, jewellers cut them into the shape we see at shops.

One important property of a diamond is how hard it is. You can only cut a diamond with another diamond. Another special quality is how well it reflects the rays of light. This makes diamonds shine inside with the colours of the rainbow.

Read and answer

1. Choose the correct answer.

What do gold, silver and diamonds have in common?

a) They come from mines.
b) They come from the sea.

2. What is the difference between rough and cut diamonds?


3. What do miners do?

• They ____________________________________________.

4. Why do you think people like diamonds so much?

• Because ____________________________________________.