YEAR 4

Thursday 21st September

Homework Tasks (Year 4):

- **Reading Comprehension:** Please complete – and mark - the 'Amazing animal hearing' tasks on the next pages of this document and record your responses in your homework jotter book.

Please place your homework books in the homework box by Wednesday 21st September

- **Spelling:** A spelling test, on **Autumn Term 1 -Week 1 Red words** will take place next **Thursday** (see the separate spelling sheet for this term – it is split into weeks and you will be instructed which week we are currently learning).

- **Times Tables:** Please complete - and mark- Autumn Term: Workout 1 p2-3 of your CGP 10-minute weekly workout book and your weekly test on the **2x, 5x and 10 x** table will be next **Friday.**

- **Reading:** Please read for 45mins throughout the week.

Unit focus: Sound
Text focus: Information Text

STAGE 4

Amazing Animal Hearing

Humans have pretty good hearing, but it's nothing compared to some members of the animal kingdom!

Bats

Bats have incredible hearing. What's more, for some species of bat, sound is the most important sense. That's because they use sound to help them navigate and find prey. It is called echolocation and it allows them to 'see' in the dark. Echolocation works by the bats making high-pitched sounds as they fly. These sound waves bounce off objects around them, and even tiny insects. The bats hear the echo arrive back at their ears and can tell where the objects are. Other animals that use echolocation are dolphins and whales. Humans have designed machines which use a similar strategy called 'sonar'. Submarines and ships use sonar to find objects underwater using sound.

Pigeons

Pigeons can hear sounds which are outside the range of human hearing. Believe it or not, they can hear a storm approaching days before it arrives. They can also detect in advance when a volcano or earthquake is about to occur. This is because they can hear low-pitched sounds called 'infrasounds'. Some scientists think it is their amazing hearing which is the secret to pigeons' fantastic navigation skills.

Moths

A moth called the greater wax moth has been found to be an expert in hearing high pitches. The pitch of sounds is measured in a unit called a kilohertz (kHz). Humans can hear sounds up to 20kHz. Sounds above this pitch are called ultrasounds and we would need machines to help us detect them. Dolphins can hear up to 160kHz. Meanwhile, the greater wax moth can hear up to 300kHz. It's hard to imagine what this would be like because it is so far outside the range of human hearing. It means that the moths can communicate without other creatures hearing. Useful if you're trying to stay away from predators.

Whales

Whales rely on sound to communicate across the vastness of the oceans. They use very low and very loud sounds which can travel a long way. Sound travels quickly through water so this helps the sound spread far and wide. Whales can hear each other hundreds or thousands of miles apart! However, sound pollution from ships can make it harder for whales to communicate.

Cats

Cats may be born deaf but within a few weeks, they have developed excellent hearing. They can hear sounds that are both lower and higher than the hearing range of humans. In addition, they also have very acute hearing. This means that they can pick up very quiet sounds. This is helpful as they can hear the slightest movements of their prey. Cats can also rotate their ears independently of each other. This helps them to locate the source of a sound. Cats also use ear movements to communicate as anyone who has tried to stroke a cat when its ears are pinned back may have discovered.

Elephants

Elephants communicate over large distances using low-pitched sounds. They have large ears which help them to funnel sound into their ears and also help them stay cool. Scientists have also discovered that elephants use their feet to help them hear. That is because they can detect the sounds through the vibrations in the ground beneath them.

VOCABULARY FOCUS

1. What is meant by the word *navigate*?
2. Find and copy a word from the section about bats which is similar in meaning to *method* or *technique*.
3. Find and copy a word which means *the great size.*
4. What does *acute* tell us about a cat's hearing?
5. What word could replace *locate*?

VIPERS QUESTIONS

E Why is the word 'see' inside inverted commas?

R What are ultrasounds?

R Besides hearing, what else do elephants use their ears for?

S Looking at the whole text, match each animal with its main strength in hearing according to the text:

The best long range hearing in water.

The best long range hearing on land.

Able to hear lowest frequency sounds.

Able to hear highest frequency sounds.

Able to hear very quiet sounds.

Able to use sound to see.

E The writer is impressed by the hearing of these animals. How do they show this?

all resources ©2023 Literacy Shed
http://www.literacyshedplus.com

Answers - Amazing Animal Hearing:

1. Find their way, direct themselves
2. Strategy
3. Vastness
4. It is powerful and sensitive
5. Find, discover, identify the position of, pinpoint

E: Because it is not seeing in the way we think of it – it isn't using sight/eyes.

R: Sounds above the range of human hearing. Sounds above 20kHz.

R: To keep themselves cool.

S: The best long range hearing in water: Whales.

The best long range hearing on land: Elephants.

Able to hear lowest frequency sounds: Pigeons.

Able to hear highest frequency sounds: Moths.

Able to hear very quiet sounds: Cats.

Able to use sound to see: Bats

E: Use of words such as incredible, fantastic, amazing, expert. Phrases such as 'believe it or not' which suggest surprise. Use of exclamation marks for surprising/impressive facts eg. Whales can hear each other hundreds or thousands of miles apart!