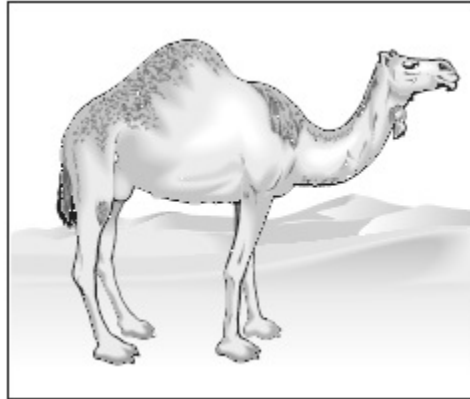


1

Camels

Camels can live in hot places.



Some features of a camel's body help it to survive in a hot desert.

Match each feature below to show how it helps the camel survive in the desert.

One has been done for you.



Camel's features	How feature helps
long legs	keep the camel's body further from the hot sand
wide feet	protect camels when eating prickly plants
thick fur	help camels stay on top of the sand
long eyelashes	protect camels against sand blowing in the air
thick, leathery lips	protects camels from getting sunburnt

2 marks

2

Owls

- (a) The owl has caught a mouse to feed its young.



The owl has good hearing for finding prey at night.

Look at the picture.

How else is the owl suited to **catching** its prey?



.....

1 mark

- (b) Which three things do **all** animals do?

Tick **THREE** boxes.



move

☐

grow

☐

play

☐

walk

☐

wash

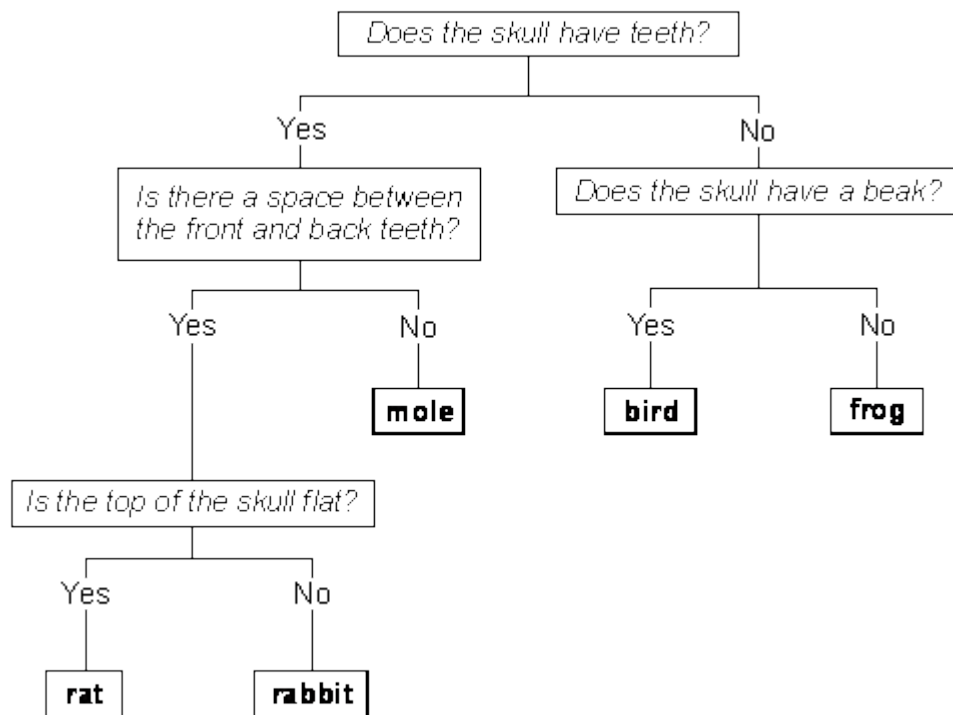
☐

reproduce

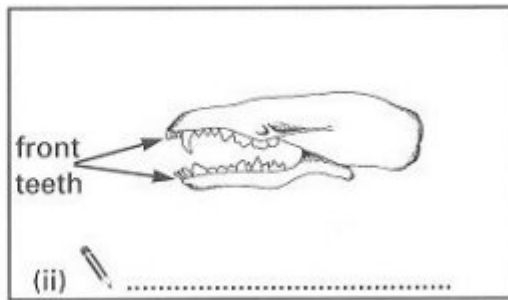
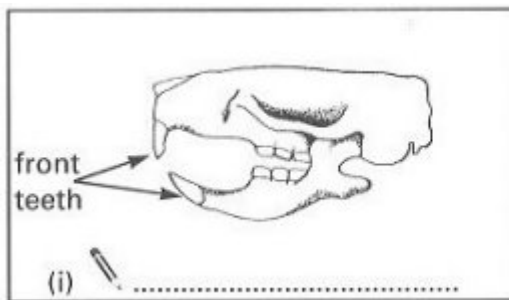
☐

3 marks

- (c) This key describes the skulls of some small animals that owls eat.



Use the key to identify the skulls shown below.

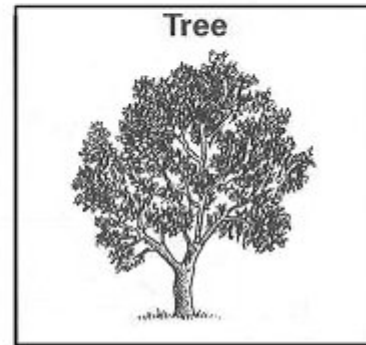
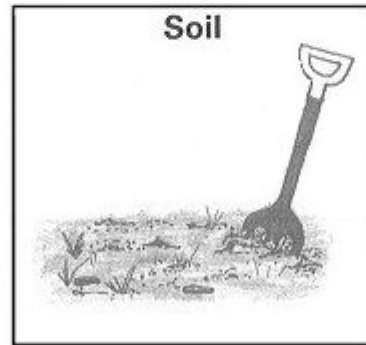
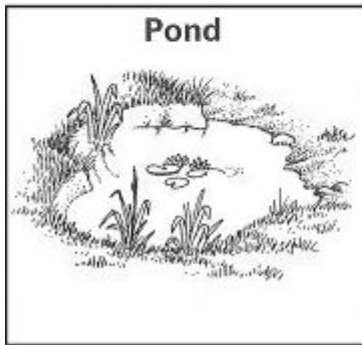
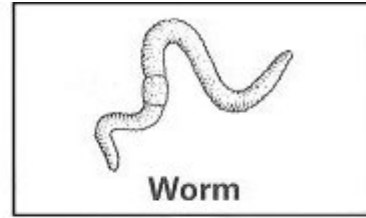
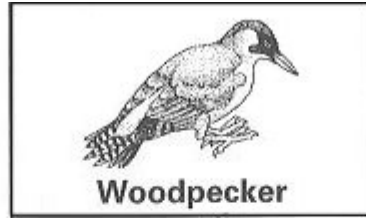
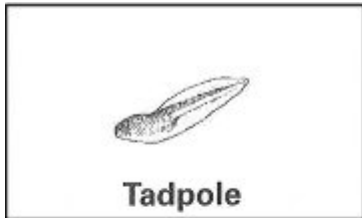


2 marks

3

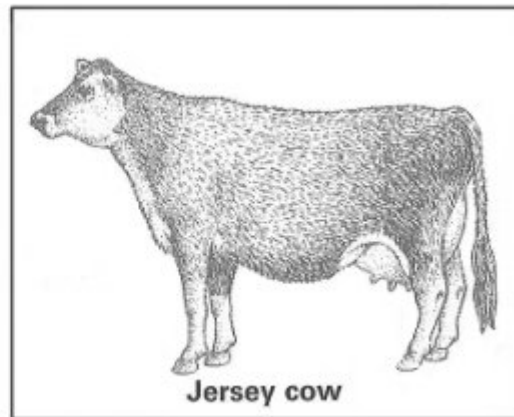
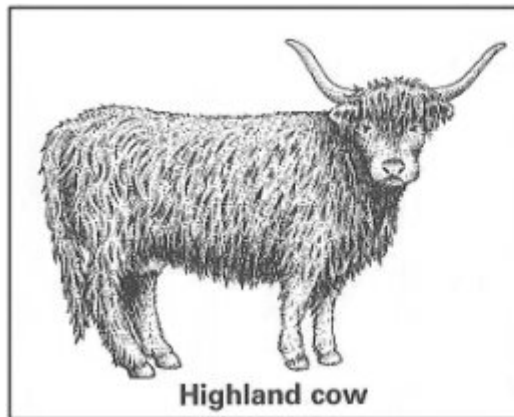
Animals in their environment

- (a) Draw **THREE** lines to match each of these animals to the environment in which it lives.



1 mark

- (b) Highland cows look different from other types of cow.



Look at the pictures of the cows.

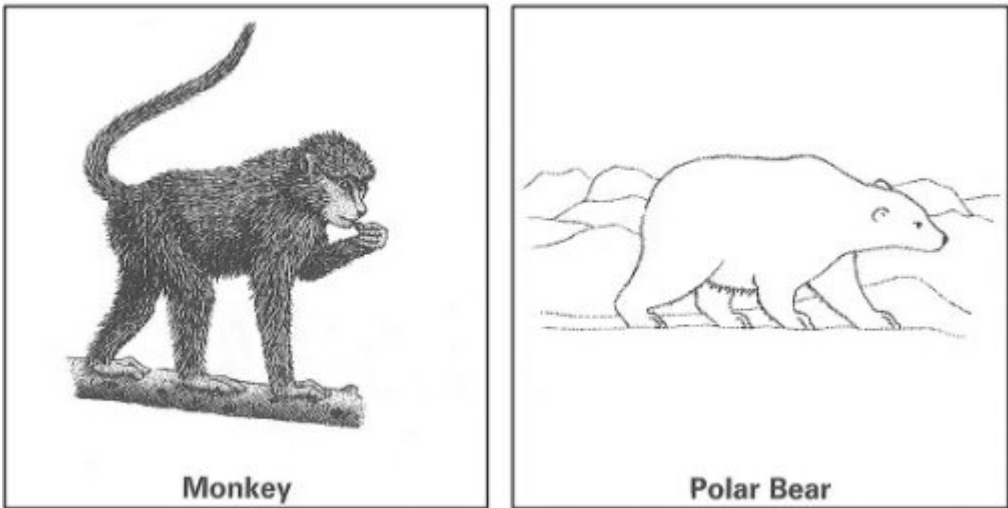
How are Highland cows better protected against cold weather than Jersey cows?




.....

1 mark

(c) These animals live in different environments.



Complete the table below to describe **ONE** feature of a Polar Bear. Say how the feature helps the Polar Bear to live in its environment.

Animal	Lives in...	One feature that helps the animal to live in its environment	How the feature helps
Monkey	rainforest	<i>it has a tail</i>	<i>to help it balance</i>
Polar Bear	the Arctic	 <i>it has</i> <i>.....</i>	<i>.....</i> <i>.....</i>

1 mark

4

Birds in their environments

(a) Many water birds have webbed feet.



Why are webbed feet useful to water birds?



1 mark

- (b) Birds have different shaped beaks.
The shape of the bird's beak is suited to the food the bird eats.

Draw **THREE** lines to match each beak to the food the bird eats.



Beak



Food

animals buried
deep in mud

small seeds
and berries

meat torn from
prey

1 mark

- (c) There is a law in England to stop people taking eggs from the nests of wild birds.

It is important for **wild birds** that people stop taking their eggs.
Tick **ONE** box to show why.



because there would be
no food for foxes

☐

because birds' eggs
break easily

☐

so people do not hurt
themselves taking eggs

☐

so there are enough
birds to reproduce

☐

1 mark

5

Duck pond

- (a) Peter goes to the duck pond with his grandad and his dog.

Tick **TWO** boxes to show two things that are true about a **dog** and a **duck**.



They both have fur.

☐

They both move.

☐

They both lay eggs.

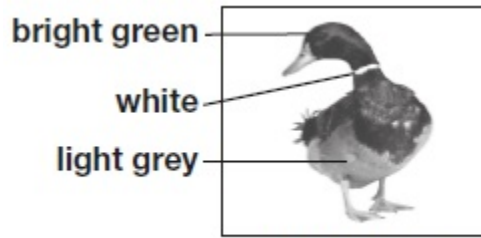
☐

They both breathe.

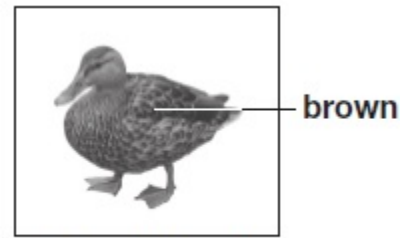
☐

1 mark

- (b) Two of the ducks come out of the pond.



Male duck



Female duck

- (i) Describe how a duck's feet are adapted for swimming.



1 mark

- (ii)



Why do the
two ducks
look different?

The female needs
to stay hidden when
she sits in her nest.



Why would the female duck be hard to see in a nest?



1 mark

- (iii) Explain why the female duck needs to stay hidden when she is in her nest.

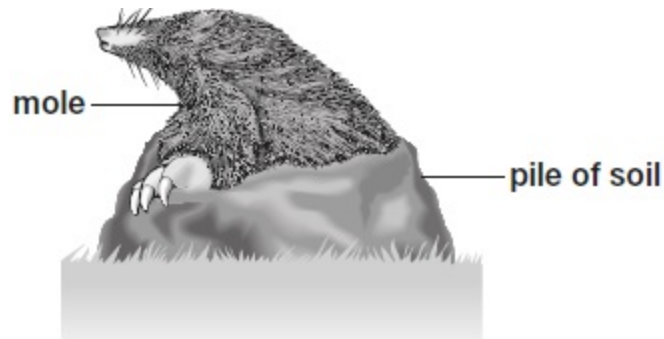


1 mark

- (c) Peter sees some piles of soil on the grass near the pond.

Grandad tells him that the piles of soil are made by animals called moles.

Look at the picture of a mole.



- (i) Describe how a feature of the mole helps the mole to live underground.



Feature: _____

How it helps: _____

1 mark

- (ii)



Why do moles live in soil?

To find earthworms to eat, and to hide in the soil.



Which word **cannot** be used to describe a mole?

Tick **ONE** box.

prey

producer

predator

consumer

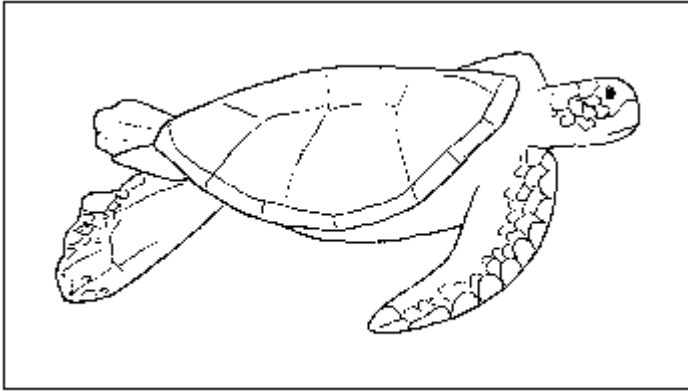
☐☐☐☐

1 mark

6

Sea turtles

- (a) Turtles live in the sea. They lay their eggs on sandy beaches.



Sea turtle

Tick **ONE** box to show which life process laying eggs is part of.

reproduction

☐

growth

☐

nutrition

☐

movement

☐

1 mark

- (b) Baby turtles hatch from the eggs at night to avoid being eaten by predators.

How could hatching at night help baby turtles to avoid predators?

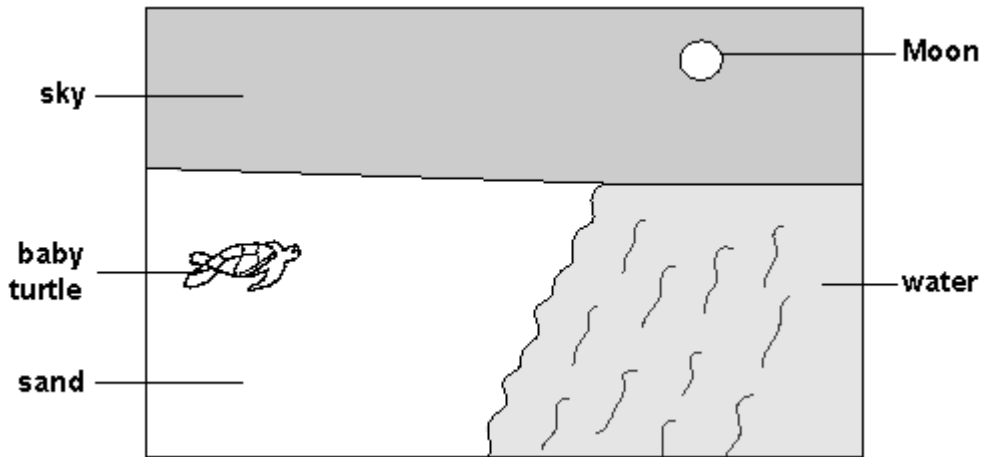
.....

.....

1 mark

- (c) After the baby turtles hatch they go towards the sea. They know which way to go because they can see moonlight reflecting on the water.

Draw **TWO** arrows on the diagram below to show the **direction light travels** for the turtle to see the moonlight reflection on the water.



2 marks

- (d) Light sources in nearby towns can confuse baby turtles. They go in the wrong direction towards the town.

If they do not find the sea, the baby turtles may die.

What could people do at night to help the baby turtles to find the sea?

Tick **TWO** boxes.

turn off street lights
in towns

☐

turn off lights on
ships

☐

stop cars driving
near the beach

☐

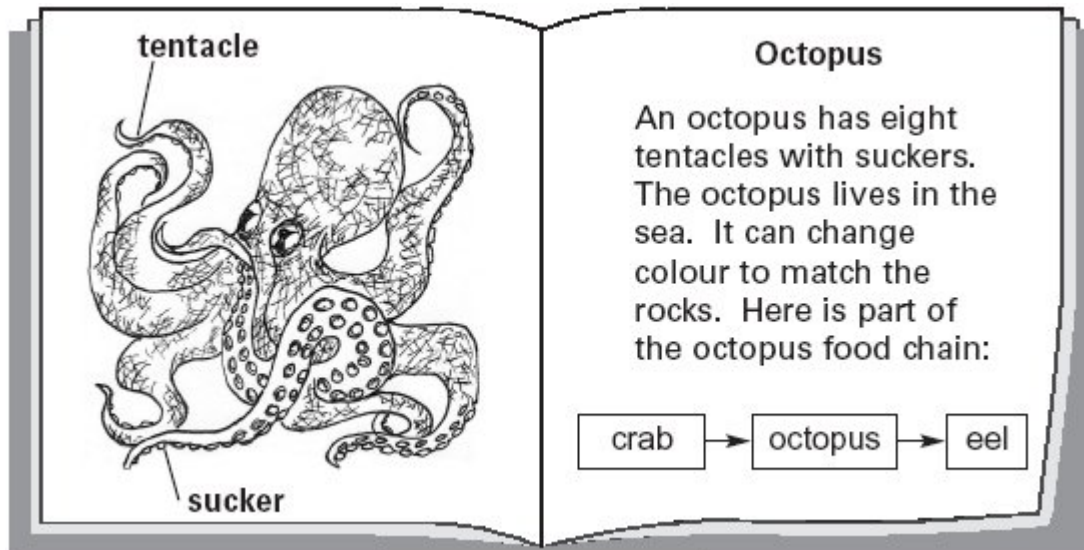
open curtains

☐

1 mark

Animals

- (a) Some children are reading a book about an octopus.



Some animals have sharp claws to catch hold of their prey.

Which feature of the octopus helps it to catch hold of its prey?
Use the book to help you.

.....

1 mark

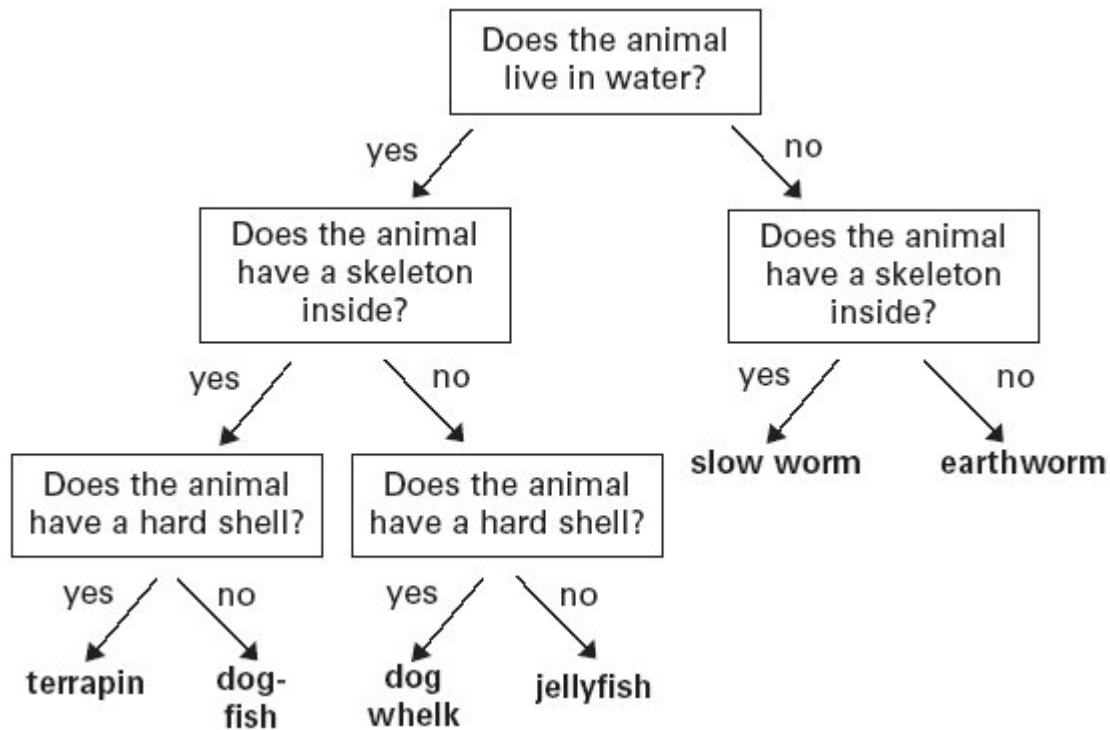
- (b) How does changing colour to match the rocks help the octopus to **protect** itself?

.....

.....

1 mark

(c) The key below can be used to identify some animals.



Use the information in the key to help you circle the animals in the box below that **do not** have a skeleton inside their bodies.

Circle all the correct answers.



terrapiin	dogfish	dog whelk
jellyfish	slow worm	earthworm

2 marks

(d) Use the key to write **three** facts about a terrapiin.



1.
2.
3.

2 marks

Mark schemes

1

Award **TWO** marks for:

Camel's features	How feature helps
long legs	keep the camel's body further from the hot sand
wide feet	protect camels when eating prickly plants
thick fur (given)	help camels stay on top of the sand
long eyelashes	protect camels against sand blowing in the air
thick, leathery lips	protects camels from getting sunburnt

If **TWO** marks cannot be awarded, award **ONE** mark for any **two** correct lines drawn.

Do not give credit if more than one line is drawn from each camel's feature.

2

2

(a) Award **ONE** mark for a description of a specific adaptation of the owl:

- it has sharp/long claws/talons;
- it has big eyes;
- it has a sharp/strong/hooks beak.

Allow:

- its head can turn round;
- it can fly silently/quietly;
- it can see prey at night.

Do not give credit for:

- beak/claws [no description],
- it's awake at night when other animals are asleep;
- it is quiet [not specific];
- it can keep very still.

1

(b) (i), (ii), (iii) Award **ONE** mark for each of:

move	<input checked="" type="checkbox"/>	grow	<input checked="" type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>	reproduce	<input checked="" type="checkbox"/>

3

(c) (i) Award **ONE** mark for:

- rat.

1

(ii) Award **ONE** mark for:

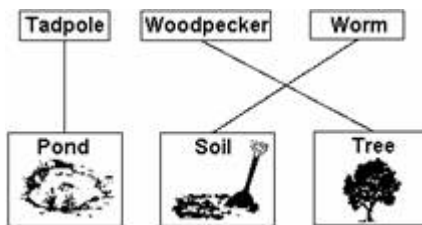
- mole.

1

[6]

3

(a) Award **ONE** mark for correct match of **all three**:



Allow:

worm linked to pond.

1

(b) Award **ONE** mark for an identification that Highland cattle have long, thick fur (which protects them in colder climates):

- they have (a) thicker fur/coat;
- they have longer hair;
- their thicker coat traps the air and keeps them warm.

Allow:

- they have more/long hair;
- they have a lot of fur;
- they have (a) thick fur/coat;
- they have a woolly coat.

Do not give credit for an insufficient response:

- *they have hair;*
- *a Highland cow has fur, but a Jersey cow does not;*
- *their coat traps the air to keep them warm;*
- *they have horns;*
- *the Highland cow has thick skin.*

1

- (c) Award **ONE** mark for **both** boxes in the row completed correctly, indicating that a Polar Bear has a specific feature for a purpose:

- (thick) fur ... to help keep warm;
- a thick layer of fat under its fur ... to keep it warm;
- an acute sense of smell ... to find prey;
- white fur ... to camouflage/hide itself;
- sharp claws ... to catch prey/fish/ food;
- a waterproof coat ... to help in the water;
- sharp teeth ... to eat its food.

Allow:

- it has the ability to swim ... to catch fish;
- limbs ... to help it swim.

Give credit for a correct response that goes beyond the key stage 2 programme of study:

- large paws ... to help it exert less pressure on the snow;
- a large body .. to help it retain energy;
- small ears ... to minimise heat loss;
- tiny hairs on the soles of its feet... to stop it slipping (on the ice);
- hollow hairs ... for insulation.

Do not give credit for a response that includes incorrect science:

- large paws to wrap around itself to keep warm;
- thick fur to protect its eyes.

Do not give credit for an insufficient response:

- it does not mind the cold .. so it can live in the Arctic;
[these are not **features** of the animal which aid survival].

Do not give credit when the second box does not match the first box.

1

[3]

4

- (a) Award **ONE** mark for an indication that webbed feet help water birds to swim (a description of how they use their feet to swim may be given) **or** that webbed feet can help birds to walk on mud:

- webbed feet are used to help the bird swim/move in the water
- water birds have webbed feet for swimming
- to help push back the water
- so they can move better in the water
- to stop them sinking in the mud.

ONE mark may be awarded for a response that describes how webbed feet help the bird to land on water from flight:

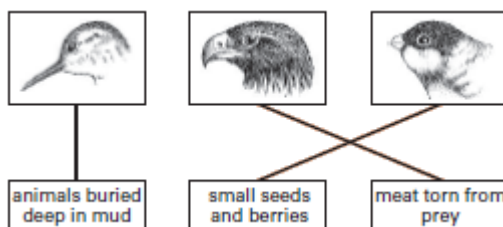
- they act as brakes when the bird lands on water/help birds land on water.

Do not give credit for an insufficient response:

- to give good grip [this is not specific to birds with webbed feet]
- so they can walk on water
- so they can move easily [webbed feet do not aid movement on land or in the air].

1

- (b) Award **ONE** mark for correctly matching **all three** beaks with foods:



1

(c) Award **ONE** mark for:

☐☐

- ☐ so there are enough birds to reproduce

☒

1

[3]

5

(a) Award **ONE** mark for:

☐☒☐☒

1

(b) (i) Award **ONE** mark for:

- webbed
 - they are like paddles/flippers
- ONE** mark may be awarded for:
- *they are wide (to push back the water)*
- Do not** give credit for an insufficient response, for example:
- *it helps them swim*
 - *they are large/larger*
 - *the feet are spread out*

1

(ii) Award **ONE** mark for recognising the female duck's colouration will mean it is camouflaged, for example:

- it is brown so the same colour as the nest
 - brown so well camouflaged
 - duller colours than male so better camouflaged
- ONE** mark may be awarded for:
- *it is camouflaged*
 - *she is the same colour as the nest*
 - *she is not colourful so would blend in / not stand out*
- Do not** give credit for an insufficient response, for example:
- *the duck is brown*
 - *it is hidden because it is brown [given that the duck is hidden and brown]*

1

(iii) Award **ONE** mark for identifying that the duck needs to stay hidden so she or her eggs/ducklings are safe from predators, for example:

- to protect her eggs/ducklings/babies/young (allow chicks) from predators
- so she cannot be seen by predators/hunters

ONE mark may be awarded for:

- so her eggs/young don't get eaten
- so she isn't eaten/shot
- to protect her eggs/young

Do not give credit for an insufficient response, for example:

- she stays hidden [given]
- so she cannot be seen [unqualified]

1

(c) (i) Award **ONE** mark for **one** feature identified and a description of how it helps the mole to live underground:

- broad/wide legs; strong for digging
- front legs; look strong/have large muscles
- feet; are large and wide to push back soil
- (front) claws; for breaking up the soil/dirt
- sharp/long claws; for digging
- whiskers; for sensing prey/where they are going when underground

ONE mark may be awarded for:

- head/nose; it is pointed to move through the soil
- fur; smooth to move through the soil
- claws; for digging

ONE mark may be awarded for a feature of a mole that is not clearly observable from the picture and a description of how that feature helps the mole to live underground:

- tiny/invisible eyes; so dirt does not get in
- small hind limbs; so do not get in the way to move easily through the soil

Do not give credit for an insufficient response:

- claws; to live underground [given]

1

(ii) Award **ONE** mark for:

☐ ☒ ☐ ☐

Do not give credit if more than one box is ticked.

1

6

(a) Award **ONE** mark for:

- reproduction



1(L4)

(b) Award **ONE** mark for a response that indicates the predators will find it more difficult to see the turtles:

- it is dark so predators are less likely to see them
- they are hidden (by the darkness)
- they cannot be seen.

ONE mark may be awarded for a response implying the predators will not be present for the hatching:

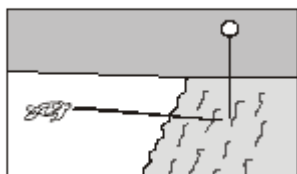
- the predators are asleep
- the predators will come in the morning.

Do not give credit for an insufficient response:

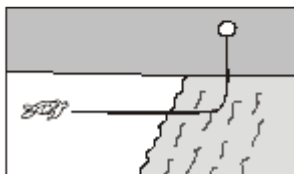
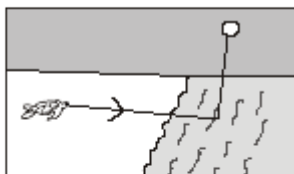
- they will not get eaten [given]
- because it is dark [given]
- predators will not hunt them.

1(L4)

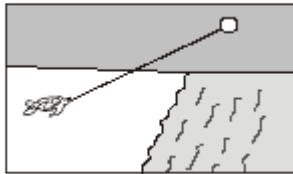
(c) (i) Award **ONE** mark for **two** lines (with or without correct arrowheads) showing the correct path of light. The lines must go from the Moon to the sea and from the sea to the turtle's eyes/body:



ONE mark may be awarded for one continuous reflected or curved line even if the arrowhead is incorrect or missing:

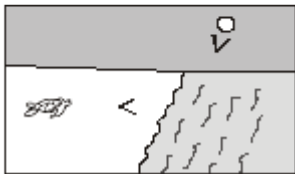
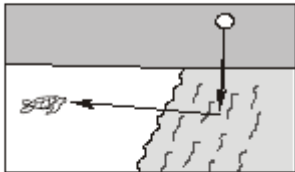


Do not give credit for an insufficient response where only one line is drawn:

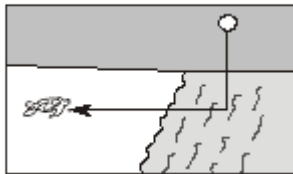


1(L5)

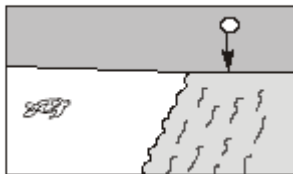
- (ii) Award **ONE** mark for **two** arrowheads showing the direction of light travel from the Moon to the sea and from the sea to the turtle:



ONE mark may be awarded for a correct arrowhead on a continuous reflected line:



Do not give credit for an insufficient response where the direction of travel is shown only by one non-reflected arrow:



1(L5)

- (d) Award **ONE** mark for **both** correct boxes ticked:

• turn off street lights in towns



• stop cars driving near the beach



1(L4)

[5]

7

(a) Award **ONE** mark for a feature of the octopus which helps it to catch its prey:

- it has suckers (to help it catch hold of its prey);
- its (bendy/flexible/long/many) legs/arms/tentacles;
- an octopus has eight tentacles with suckers on them.

1(L3)

(b) Award **ONE** mark for an indication of camouflage for protection (from predators):

- so its predators cannot see it;
- so an eel is less likely to see it;
- it camouflages itself;
- it cannot be seen;
- so it can hide from predators (more easily).

ONE mark may be awarded for a response referring to being caught/eaten rather than to being hidden:

- it is less likely to be eaten;
- the eel will not eat it.

ONE mark may be awarded for a response referring to camouflage reducing the likelihood that the octopus could be hurt by its prey:

- it is camouflaged so it cannot be seen by its prey;
- the crab might not hurt it.

Do not give credit for an insufficient response:

- changing colour protects it [given].

1(L4)

(c) Award **TWO** marks for identifying the **three** correct animals:

terrapin

dogfish

dog whelk

jellyfish

slow worm

earthworm

2(L4)

or

If you are unable to award two marks, award **ONE** mark for identifying **any two** correct animals.

1

(d) Award **TWO** marks for an unambiguous indication of **any three** of the following facts [given in any order]:

- it lives in water;
- it has a skeleton (inside);
- it has a hard shell;
- it is an animal.

ONE mark may be awarded for:

- *it lives in the ocean/sea.*

2(L4)

or

If you are unable to award two marks, award **ONE** mark for **any two** facts correctly identified.

1

[6]