The National Orthodox School Shmaisani

The National Orthodox School / Shmaisani

Subject: Biology **Using keys**

Name: Answer key

Date: **Grade 8 – all sections**

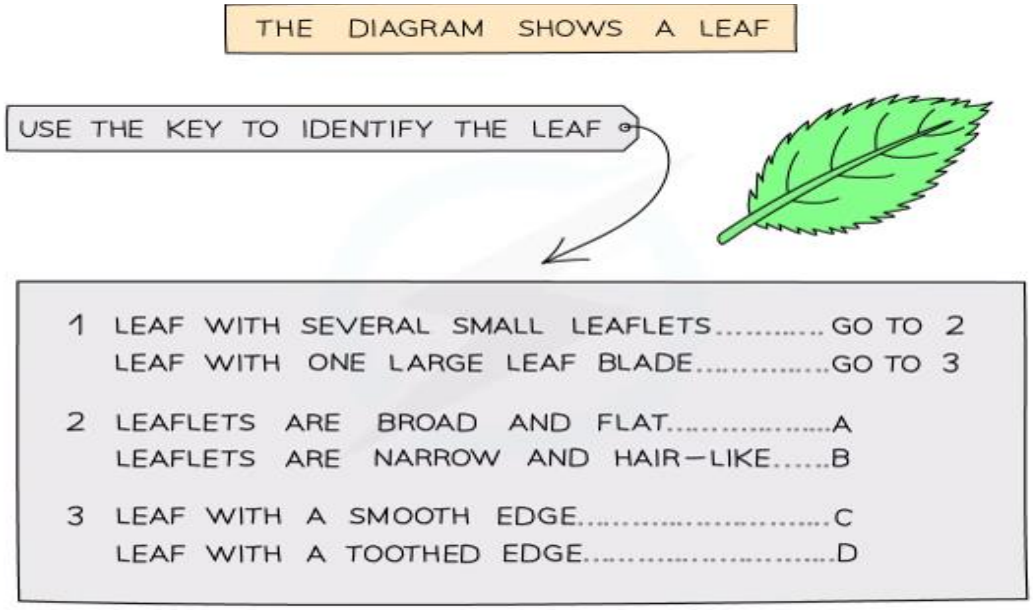
Dichotomous Keys

Keys are used to identify organisms based on a series of questions about their features , Dichotomous means 'branching into two' and it leads the user through to the name of the organism by giving two descriptions at a time and asking them to choose.

Each choice leads the user onto another two descriptions.

In order to successfully navigate a key, you need to pick a single organism to start with and follow the statements from the beginning until you find the name.

You then pick another organism and start at the beginning of the key again, repeating until all organisms are named.



Write the correct letter in the box D

Question 1 :

Fig. 1.1 shows five species of mollusc.

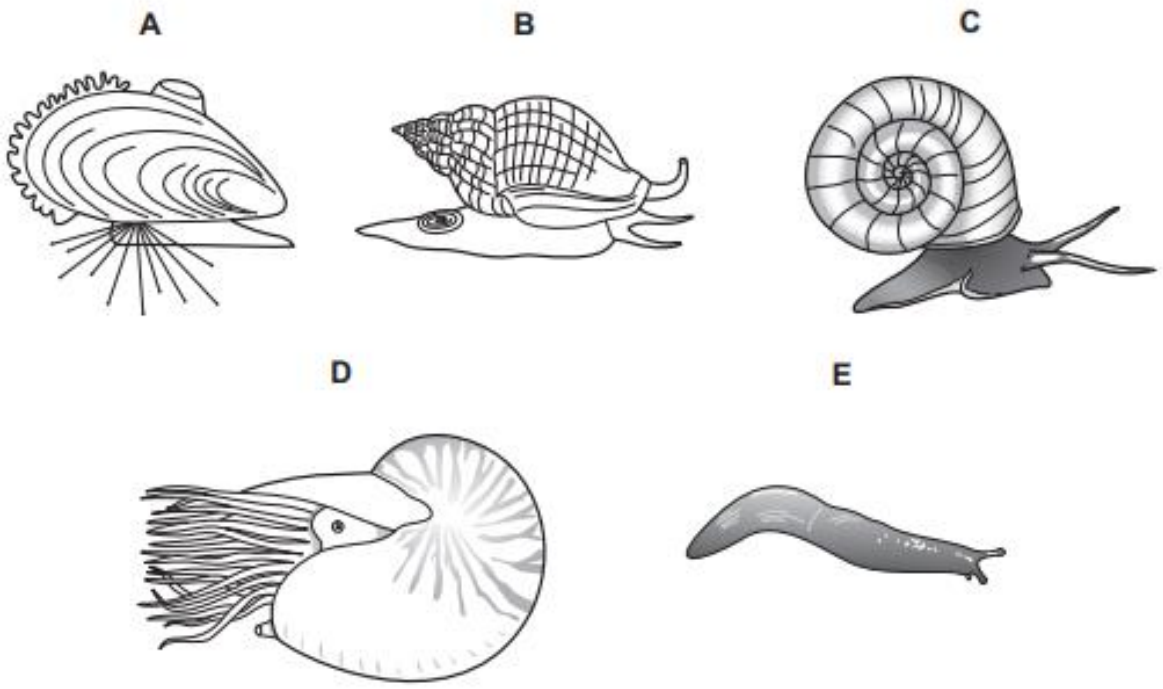


Fig. 1.1

Use the key to identify each species. Write the letter of each species (**A** to **E**) in the correct box beside the key.

Key

1 (a)	body is completely or partly covered in a shell	go to 2	
(b)	body is not completely covered or partly covered in a shell	*Limax flavus*	E
2 (a)	shell is attached to rocks by thin threads	*Mytilus edulis*	A
(b)	shell is not attached to rocks by thin threads	go to 3	
3 (a)	shell is a spire that comes to a point	*Buccinum undatum*	B
(b)	shell is not a spire that comes to a point	go to 4	
4 (a)	animal has tentacles	*Nautilus pompilius*	D
(b)	animal has 2 tentacles	*Planorbis planorbis*	C

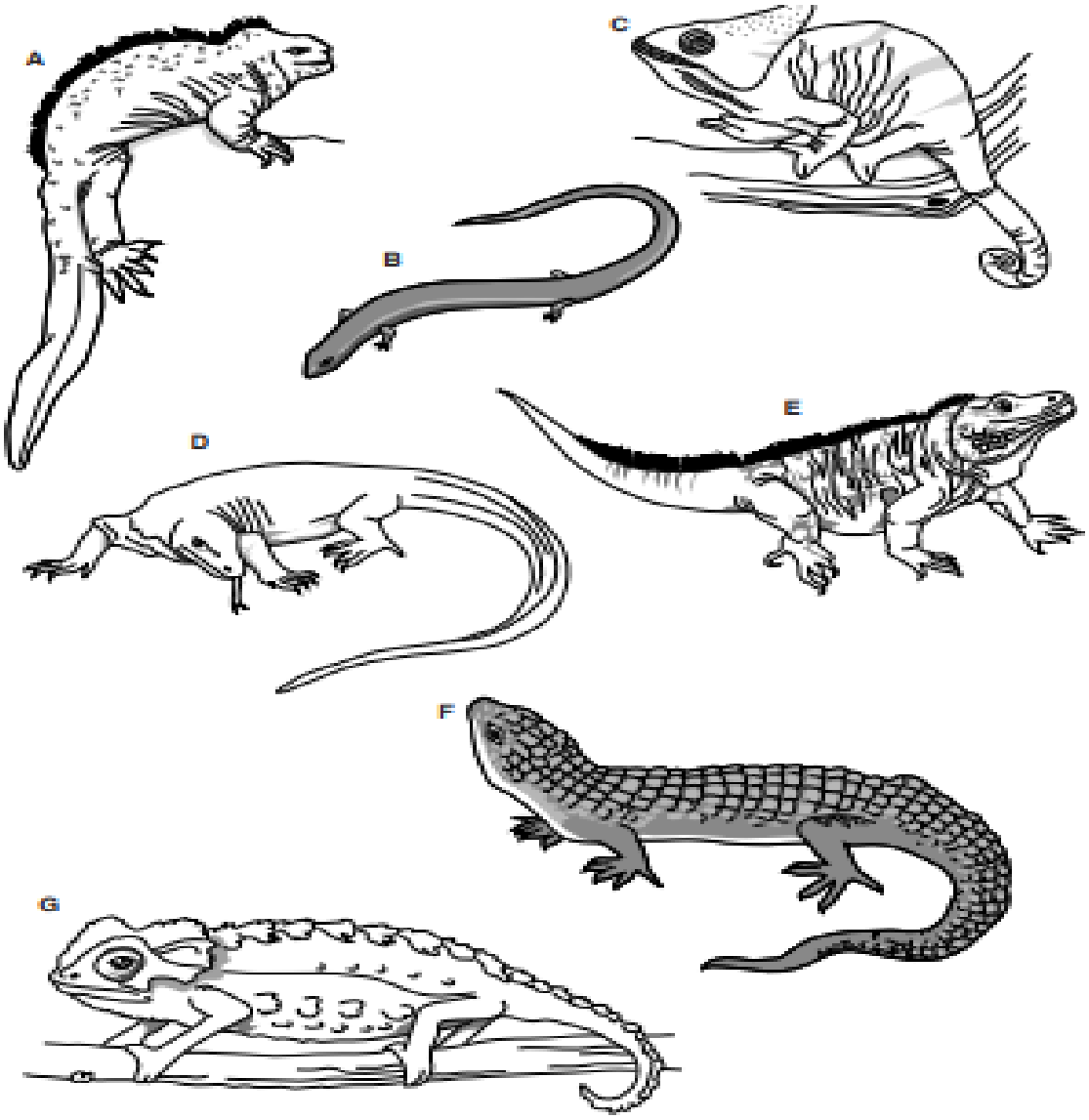
★ State **two** features that are shown by all molluscs.

1 Soft skin

2 slimy skin

Question 2 :

The figure shows seven lizards that are at risk of becoming extinct.



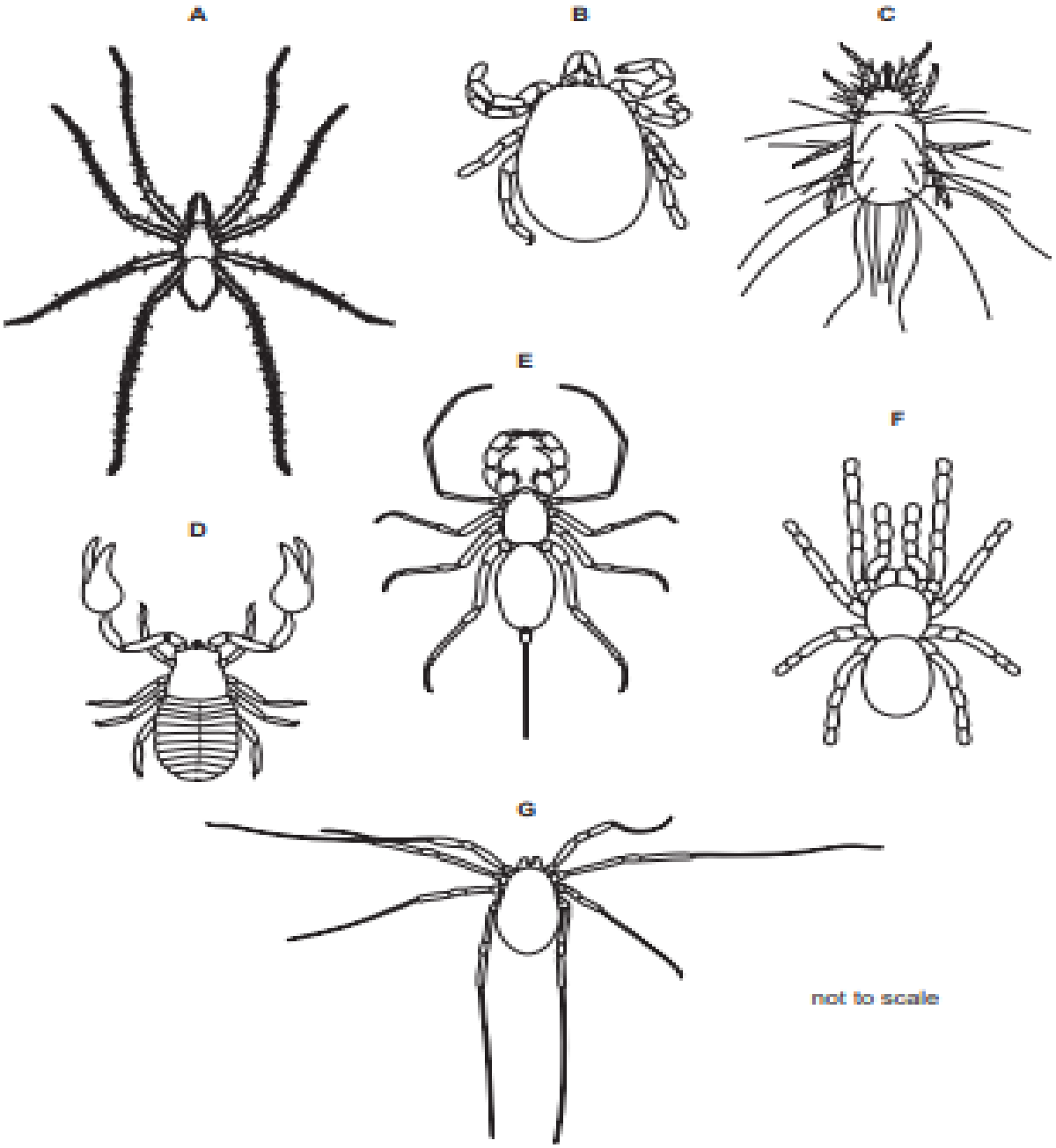
Use the key to identify each species. Write the letter of each species (**A** to **G**) in the correct box beside the key. One has been done for you.

key

1	(a)	feet with three toes	go to 2	
	(b)	feet with five toes	go to 3	
2	(a)	has a collar or crest on head	go to 4	
	(b)	has no collar or crest on head	*Chalcides minutus*	B
3	(a)	spikes along back	go to 5	
	(b)	no spikes along back	go to 6	
4	(a)	ridges extend along back and tail	*Brookesia perarmata*	G
	(b)	no ridges along back or tail	*Calumma parsonii*	C
5	(a)	blunt, rounded head	*Amblyrhynchus cristatus*	A
	(b)	elongated head	*Cyclura lewisi*	E
6	(a)	large raised scales on skin	*Abronia graminea*	F
	(b)	scales on skin are not large or raised	*Varanus komodoensis*	D

Question 3 :

The figure shows seven species of arachnid.

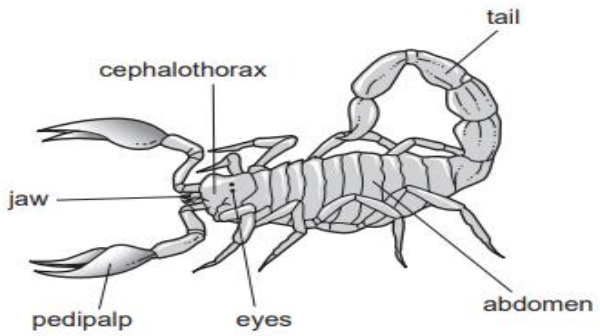


Use the key to identify each species. Write the letter of each species (**A** to **G**) in the correct box beside the key. One has been done for you.

Key

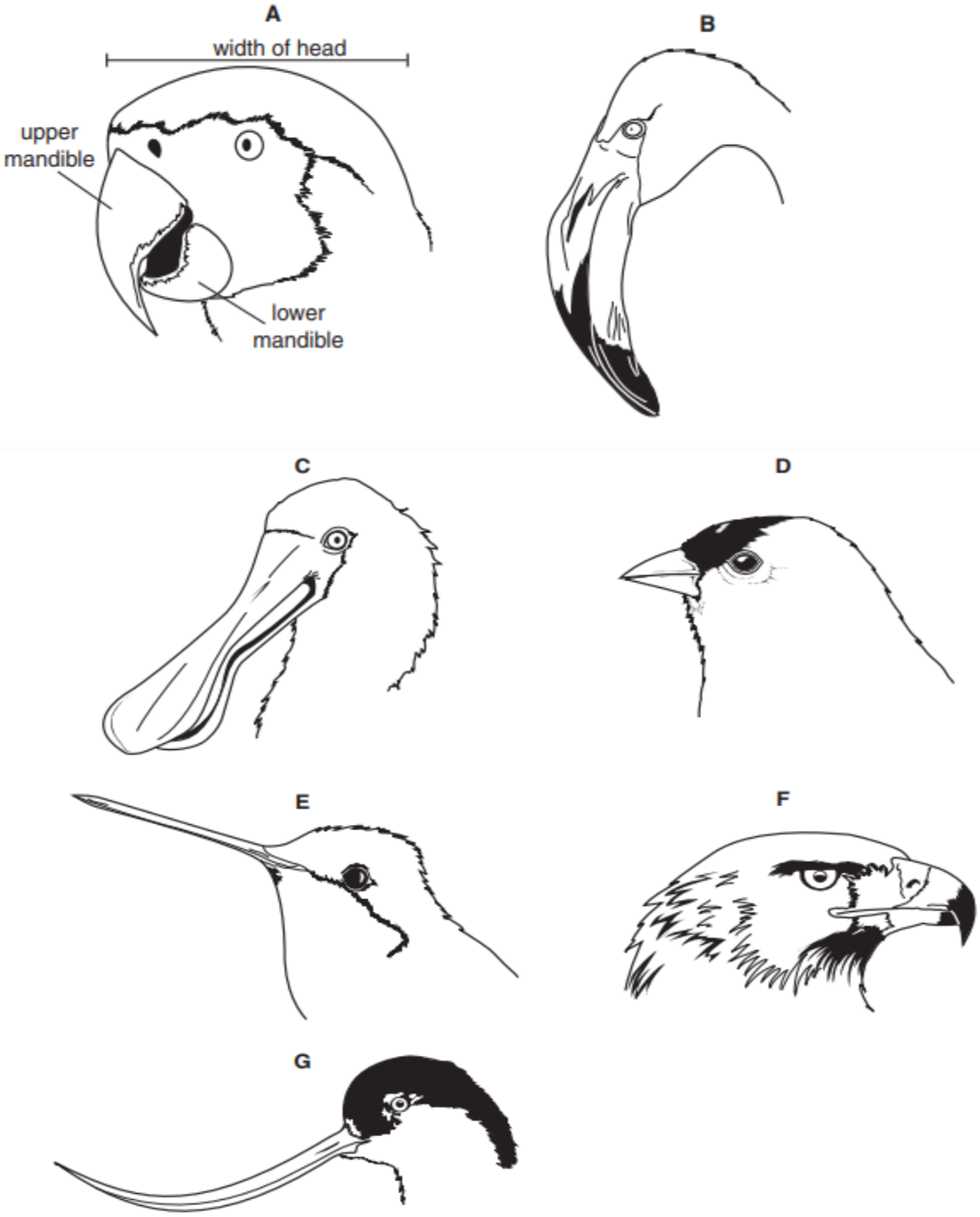
1 (a)	Abdomen with a tail	*Abaliella dicranotarsalis*	**E**
(b)	Abdomen without a tail	go to 2	
2 (a)	Legs much longer than abdomen and cephalothorax	go to 3	
(b)	Legs not much longer than abdomen and cephalothorax	go to 4	
3 (a)	Hairs on the legs	*Tegenaria domestica*	*A*
(b)	No hairs on the legs	*Odielus spinosus*	*G*
4 (a)	Cephalothorax or abdomen segmented	*Chelifer tuberculatus*	D
(b)	Cephalothorax and abdomen not segmented	go to 5	
5 (a)	Abdomen and cephalothorax about the same size	*Poecilotheria regalis*	F
(b)	Abdomen larger than cephalothorax	go to 6	
6 (a)	Body covered in long hairs	*Tyroglyphus longior*	*C*
(b)	Body not covered in hairs	*Ixodes hexagonus*	B

The diagram below helps you to identify the body parts of the species mentioned in the key above .



Question 4:

Fig. 1.2 shows the heads of seven different species of bird.



key

1	(a)	beak is shorter than the width of the head	go to 2	
	(b)	beak is longer than the width of the head	go to 4	
2	(a)	upper mandible is same length as the lower mandible	*Spinus tristis*	D
	(b)	upper mandible is longer than the lower mandible	go to 3	
3	(a)	lower mandible is about half the length of the upper mandible	*Ara ararauna*	A
	(b)	lower mandible is more than half the length of the upper mandible	*Aquila chrysaetos*	F
4	(a)	both mandibles widen at the end of the beak	*Platalea regia*	C
	(b)	both mandibles are a similar width along their whole length	go to 5	
5	(a)	beak is straight	*Trochilus polytmus*	E
	(b)	beak is curved	go to 6	
6	(a)	beak curves upwards	*Recurvirostra americana*	G
	(b)	beak curves downwards	*Phoenicopterus minor*	B