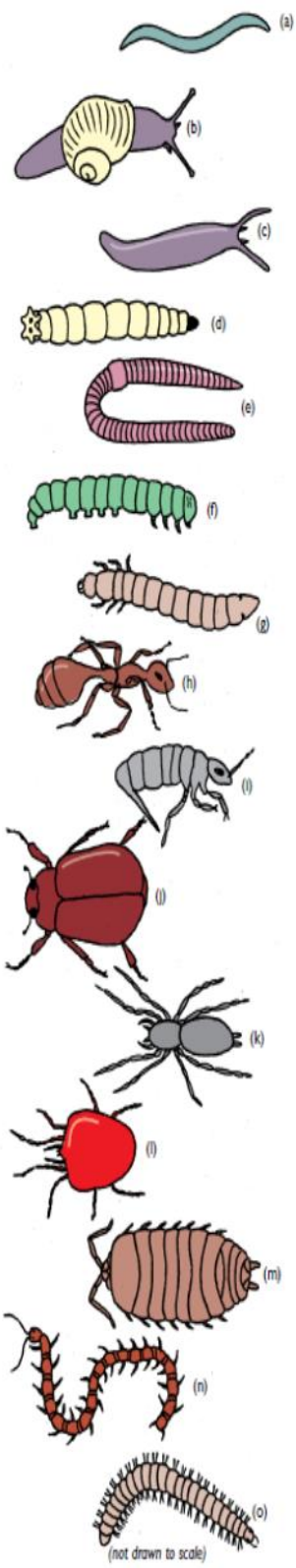
Biological Keys

1	body has no legs	go to 2
	body has legs	go to 6
2	body not divided into sections (segments)	go to 3
	body divided into segments	go to 5
3	body worm-like	nematode worm (a)
	body not worm-like	go to 4
4	shell present	snail (b)
	no shell present	slug (c)
5	no more than 13 segments present	fly maggot (d)
	more than 13 segments present	earthworm (e)
6	6 jointed legs present	go to 7
	more than 6 jointed legs present	go to 11
7	grub-like insect	go to 8
	adult insect	go to 9
8	non jointed legs present on abdomen	caterpillar (f)
	non jointed legs absent from abdomen	beetle larva (g)
9	thin waist between thorax and abdomen	ant (h)
	no thin waist between thorax and abdomen	go to 10
10	spring attached to abdomen	springtail (i)
	no spring attached to abdomen	beetle (j)
11	8 legs present	go to 12
	more than 8 legs present	go to 13
12	body divided into 2 parts	spider (k)
	body not divided into 2 parts	mite (l)
13	14 legs present	woodlouse (m)
	more than 14 legs present	go to 14
14	each body segment has 1 pair of legs	centipede (n)
	each body segment has 2 pairs of legs	millipede (o)



In the example shown, each

Organism can be identified using the paired statement key.

For organism (a)

Start at statement 1: it does not have legs so follow the instruction ‘go to 2’.

Statement 2: its body is not divided into sections so follow the instruction ‘go to 3’

Statement 3: its body is ‘worm-like’ so (a) is a Nematode worm.

To construct a 'paired statement key' it's a little trickier.

Example:

Plant	*Height range (cm)*	*Flower colour*	*Flowering period (months)*
Pink Campion	30–90	pink	6
Ragwort	30–200	yellow	6
Meadow Grass	30–70	green	3
Buttercup	5–90	yellow	5

In this example, the information in the table must be used to complete the paired statement key.

Statement 1 should have 2 'go to…' statements.

Using the information in the table, complete the three boxes in the paired statement key below.

1. Flower colour is yellow — go to 2

   Flower colour is not yellow — [ ]

Flower colour is not yellow must have the instruction **'go to 3'** since Ragwort is in statement 2 and Ragwort is yellow (seen in table).

2. Height of plant can be over 100 cm — Ragwort

   Height of plant is under 100 cm — [ ]

Since we have worked out statement 2 is for identifying Yellow flowers and Ragwort is already given, it is easy to work out the remaining yellow flower must be **'Buttercup'.** We can check this is correct by making sure its height is under 100cm (which it is : 5 – 90cm).

3. Flowering period lasts only 3 months — Meadow Grass

   Flowering period is longer than 3 months — [ ]

Statement 3 identifies the 'non yellow' flowers. Meadow Grass is already given so the only other non-yellow flower is **'Pink Campion'.**

1. The following paired statement key can be used to identify invertebrate groups.

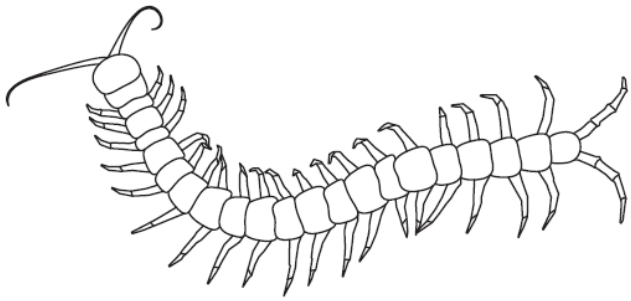
1. Six legs..... *Hexapoda*
   More than six legs..... go to 2

2. 8 legs ..... go to 3
   More than 8 legs ..... go to 4

3. Curved sting ..... *Dromopoda*
   No curved sting ..... *Arachnida*

4. 1 pair of legs per body segment..... *Chilopoda*
   2 pairs of legs per body segment ..... *Diplopoda*

Use the key to identify the invertebrate group to which the following organism belongs.



A Dromopoda
B Arachnida
C Chilopoda
D Diplopoda

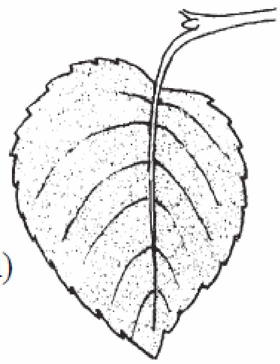
KU PS

2. Below is a key which can be used to identify some trees.

1	Broad leaves	Go to 2
	Narrow leaves	Go to 5
2	Leaf divided into separate parts	Go to 3
	Leaf made of a single part	Go to 4
3	5 pointed parts	Sycamore
	Many rounded parts	Oak
4	Leaf edge smooth	Beech
	Leaf edge saw-toothed	Elm
5	Leaves grow singly	Yew
	Leaves grow in groups	Go to 6
6	Leaves grow in pairs	Scots pine
	Leaves grow in tufts	Larch

(a) Using the key above, name the leaves drawn below.

(i)



(ii)

1

(b) Beech leaves have smooth edges. Using information in the key, state two other features of beech leaves.

1 ______________________________

2 ______________________________ 2

KU	PS

3. The table below contains information about five common moorland plants.

Name of plant	*Growth of stems*	*Shape of leaves*	*Colour of flowers*
Crowberry	Low and creeping along the ground	Narrow	Pink
Bearberry	Low and creeping along the ground	Broad	Pink
Blaeberry	Mostly growing upright from the ground	Broad	Pale purple
Cross-leaved heath	Mostly growing upright from the ground	Narrow	Pale pink
Bell heather	Mostly growing upright from the ground	Narrow	Deep purple

Copy and complete the construction of the paired-statement key to these moorland plants.

1. Plants with stems which creep along the ground — go to 2
   Plants with stems which grow upright from the ground — go to 3

2. _____
   _____

3. _____
   _____

4. _____
   _____

3