

Activities based on the NZAC Pare

Activities based on the Pare image

- **Make a key** to identify the arthropods on the Pare:
 - Number each arthropod with a unique number;
 - Make a list of those numbers;
 - Print the name of each arthropod against its unique number.
- **Colour in the arthropods.** Perhaps use different colours for different Orders or Classes of arthropods.
- **Colour in the manaia.** The central part of each eye is made of paua shell.
- **Draw an arthropod.**

Activities based on the Pare information

- **Spelling challenge:** choose a word from the information with each arthropod and learn to spell it. Write a sentence using the chosen word.
- **Word-making challenge:** choose a word and make a list of words you can form with the letters in that word.
- **Geography challenge:** locate the New Zealand place names and the offshore islands mentioned.

Questions based on the Pare

Arthropods

1. How many animals (arthropods) are there on the pare?
2. How many arthropods are on the left and right of the central manaia? (Is this different to what you see as left and right?)
3. How many insects are there?
4. How many arthropods are there that are not insects?
5. How many legs do the spider and mite each have?
6. How many legs do the beetles each have?
7. How many wings does the blowfly have?
8. How many wings do the other insects have?
9. How many spines are there on the hind leg of the wētā?
10. How many segments does the centipede have?

11. How many arthropods have their heads facing the:
 - a. top
 - b. bottom
 - c. left
 - d. right
 - e. none of these?
12. How many arthropods have their bodies oriented more than 20° from a horizontal or vertical line on the pare?

Manaia (figures)

1. How many manaia are there on the pare?
2. How many eyes can be seen?
3. How many manaia have 1 eye only?
4. How many tongues are there? Describe their shapes.
5. How many fingers and toes are there on each limb of a manaia?
6. What is the total number of fingers and toes?
7. What is the total number of fingers and toes with nails?

Scientific names

- Animals and plants are given a scientific name when they are formally described by scientific researchers.
- The scientific name consists of a **Genus** name and a **species** name, usually written in *italic* type.
- The *Genus* name has a capital first letter, whereas the *species* name is all in lower-case letters.
- All organisms are classified in a hierarchical system indicating the degree of relationship between them.

Classification of the arthropods on the Pare

The 13 organisms on the Pare are classified into 10 Orders in 3 Classes of the phylum Arthropoda as follows:

Phylum: **Arthropoda** (which means "jointed limbs")

- Class: **Insecta** (insects)
 - Order: **Coleoptera** (beetles)
 - Order: **Diptera** (flies)
 - Order: **Hemiptera** (true bugs)
 - Order: **Hymenoptera** (wasps)
 - Order: **Lepidoptera** (moths and butterflies)

- Order: **Odonata** (dragonflies)
- Order: **Orthoptera** (grasshoppers, wētā)

- Class: **Arachnida** (mites, spiders)
 - Order: **Acari** (mites)
 - Order: **Araneae** (spiders)

- Class: **Myriapoda** (which means "many limbs"; the centipedes and millipedes)
 - Order: **Chilopoda** (centipedes).

Trevor Crosby (Curator, NZAC)
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