Classified Collections

What to do

1. Choose a topic for your collection

2. Collect relevant items. Keep a journal/record of where the items were collected, how they were preserved or cared for and your safety considerations in how you safely collected them. Submit the journal/record with your collection.

3. Organise your collection into groups to show relationships between the items in the collection, or to assist in their recognition.

4. Develop a classification scheme. This may be a table, key, field guide or interactive computer program.

5. Present your collection as a poster or report. You may use a series of photographs in place of submitting the actual items that were collected. Include the classification system you have developed in the poster or report.

What makes a winning entry?

The classified collection should seek to help in the understanding of the material that is being collected. There should be:

- o a high standard of preservation and presentation of the specimen

- o complete and accurate information about the specimens, commensurate with the age of the collector.

The classification scheme can be used to group and identify the specimens. This may take the form of:

- o a table of characteristics that can be matched to the specimens to identify them

- o a taxonomic grouping of specimens

- o a dichotomous key may be appropriate

- o an interactive key, using relatively simple computer programming, could provide the basis for an interesting Communicating Science project.

The journal/record of where and how you collected your items and how they were preserved or cared for must be submitted to the contest with the report/poster of your collection. The journal may be typed or handwritten and scanned for online entry submission.

Some ideas to get you started

Geology
The collection may be assembled to assist in the identification of rocks or minerals. Relationships between rock types may be examined on a local or a larger scale, but there should be a question asked concerning these relationships.

Entomology
A classified insect collection might concentrate on the insects occurring in a backyard over a period of time, or it might concentrate on a particular group of insects that can be collected from a region, or it might survey the orders of insects that can be collected in a region. The purpose for the collection should be to increase understanding of insects.

Zoology
A classified collection of animals (other than insects) will usually be of durable discarded parts (shells or feathers). Feathers are attractive, but the purpose of collecting and classifying should be more than to simply gather and arrange.

There may be an opportunity to examine the relationship between feather size and bird size, or habitat (for example, is it possible to show that water birds have different feathers from land birds?), so there is a question behind the collection.

Botany
A classified plant collection might deal with a group of plants (e.g. ferns, conifers, palms, grasses, eucalypts, wattles), it might be the flowers of plants that are found in a particular area, or it might be a collection classified according to leaf shapes, flower or fruit characters, or chemical components (aromatic leaves).

A collection of seeds might investigate the relationships between seed composition (carbohydrate, protein, fat) and taxonomic group, or between seed size and plant habitat (food plant, weed, and forest plant).

A collection of herbs might examine how they are distributed between families of plants, their regions of origin, and how they are used (directly or after processing).

Protected Species
Be aware that there are a number of protected species and protected areas in Queensland where collecting is prohibited - even dead things. They are protected because they are valuable. Ensure that collected specimens are not listed by Environment and Resource Management as protected species or collected from a protected area. The website address is: https://environment.des.qld.gov.au/wildlife/threatened-species

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Category	Criteria	5 — Exceed expectations of student's learning level	4	3 — Evident and appropriate to learning level	2	1	0 — Not Evident
Investigation Process	Choice of Topic	Identification of specimens which can be classified scientifically in a plausible group					
		Considered selection of good quality specimens					
	Plan of the Project	Making plausible groupings to show similarities and differences					
		Evidence of specimen preservation and careful handling					
		Clear presentation of specimens					
		Description of the safety considerations					
	Interprets Results	Application of science knowledge to generate plausible and informed classification schemes					
		Shows relationships between the items in the collection to assist recognition					
		Includes 3 relevant, labelled diagrams that demonstrate different perspectives or attitudes					
	Findings and Conclusions	Coherent, legible and logical explanation of ideas, methods and eh classification scheme using appropriate scientific language and representations					
Science Focus	Validity	Draws on relevant evidence and relationships to support conclusions					
	Creative	Demonstrates an original and creative approach to the choice of specimens and their display					
Evidence of ownership	Acknowledgements	Acknowledges resources used (including reference materials, books, websites etc and assistance from other people).					
		Permission to use copyrighted material where applicable					
	Evidence	Has provided detailed evidence of work (such as draft, workings and/or notes) ensuring the product or device is a true representation of the student's learning and understanding.					
		TOTAL					