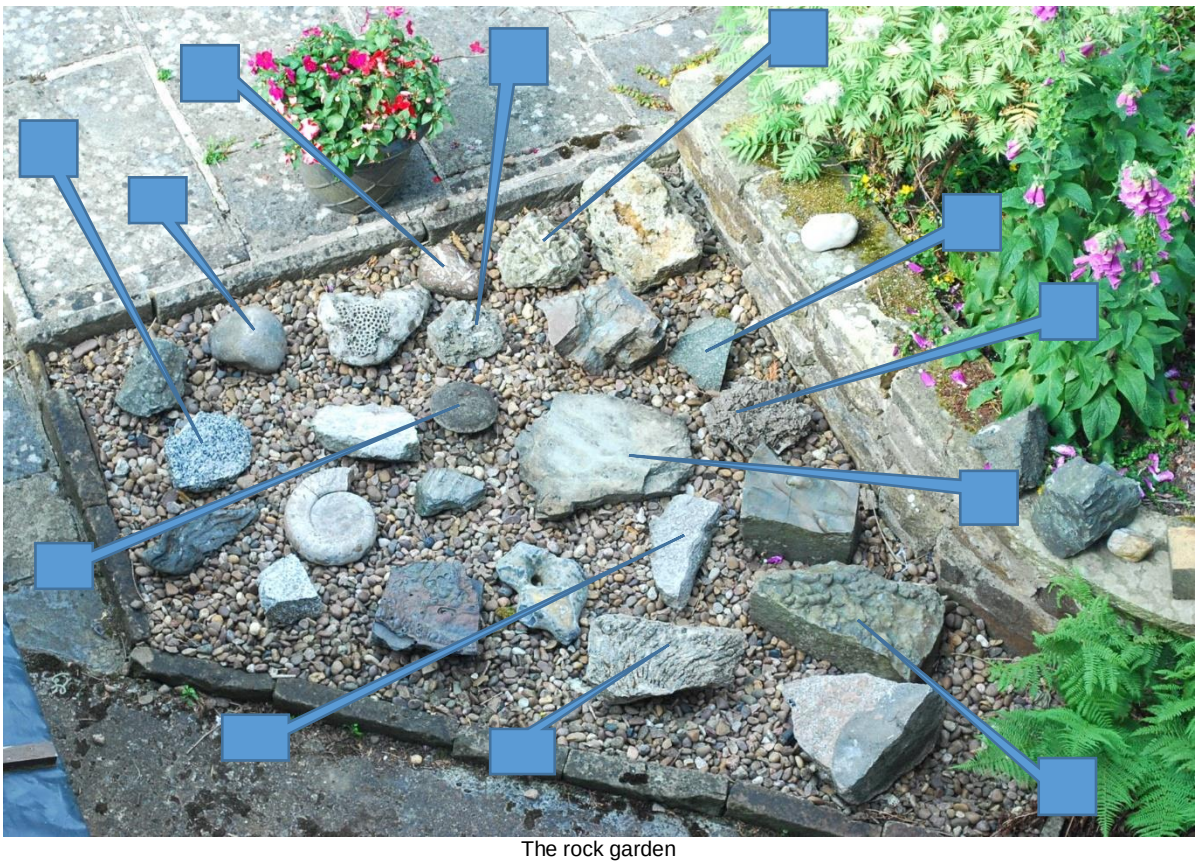
A forgotten rock garden - 2
Help a geologist identify a treasured outdoor collection

A geologist has assembled 24 large specimens, which were collected from field trips throughout the UK, into a “rock garden”. The identification, description and location of most specimens were recorded into a key, but unfortunately this has become lost. Help to link the correct description and name to each of 12 specimens from the photographs below. The other 12 specimens are featured in “A forgotten rock garden – 1”. *(The individual photos may need enlarging for clarity)*



The rock garden

Study each photograph below, and match it up with the appropriate letter and description from Table 1. Then label each arrow with the appropriate letter on an enlargement of the rock garden photo above.

13

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M. Load casts on the base of a graded sandstone block; Mam Tor Beds, Peak District	S. Granite with quartz, feldspars and dark ferromagnesian minerals; Strontian, Sunart, Highland Scotland
N. Large cubic crystals of fluorite from a vein in a Carboniferous Limestone host rock; Peak District	T. Microdiorite [intermediate igneous intrusive rock with feldspar and amphibole (ferromagnesian mineral)], Charnwood Forest, Leicestershire
O. Ripple marked sandstone; Triassic; Penarth, South Wales	U. Colonial coral, Carboniferous Limestone; Peak District
P. 6-sided pyramidal quartz crystals from a mineral vein; locality unknown	V. Ironstone nodule with bivalve fossil preserved in pyrite; locality unknown
Q. Breccia composed of angular limestone fragments, loosely cemented with calcium carbonate; Ecton; Peak District	W. Ice-scratched limestone cobble; Lake District
R. Belemnites in a cobble of Jurassic mudstone. Loose on a beach on the Yorkshire coast	X.. Crinoidal limestone; Peak District

Table 1: Descriptions of the geological specimens. (These could be printed off and cut up for pupils to match up physically to the photos).

The back up

Title: A forgotten rock garden - 2

Subtitle: Help a geologist identify a treasured outdoor collection

Topic: An exercise in matching a set of photographs to their descriptions and locating them on an overall scene

Age range of pupils: 14 years and above

Time needed to complete activity: 20 minutes

Pupil learning outcomes: Pupils can:

- examine photographs of geological specimens carefully and match them to a written description;
- spot the appropriate specimens among a wider variety of material;
- enhance their observational skills as a prelude to field work;
- explain the importance of labelling the names and locations of specimens promptly.

Context: This could form a useful revision activity, once pupils have acquired experience of a range of rocks, minerals and fossils. Answers to the matching exercise are: 13Q, 14N, 15R, 16U, 17T, 18W, 19M, 20X, 21P, 22V, 23S, 24O.

Answers to the labels on the photograph, clockwise from top left are: S, W, R, P, N, T, Q, O, M, U, X, V

Following up the activity: Use any of the Earthlearningidea activities in the "Picturing…" series to heighten students' skills in identifying geological phenomena from photographs. e.g. https://www.earthlearningidea.com/PDF/396_Picturing_igneous_rocks_2.pdf

Underlying principles: This strategy provides training in careful observation and interpretation of all relevant features.

Thinking skill development: Construction skills are developed during the matching of descriptions to the photographs, with some metacognition where there is debate over the correct assignation.

Resource list: (per small group of pupils)

- a set of photographs
- an enlarged copy of the photo of the rock garden
- a set of description cards, preferably cut up to allow physical matching with the photos.

Useful links: See Following up the activity above.

Source: Written by Peter Kennett of the Earthlearningidea team. All photographs by Peter Kennett.