PLAN
Planning for assessment

Examples of Work

Na’ilah

Rocks - Year 3

Primary Science
Education Consultancy

THE
Partnership

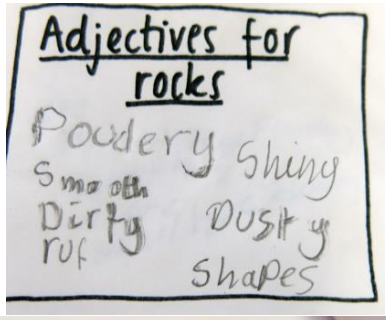
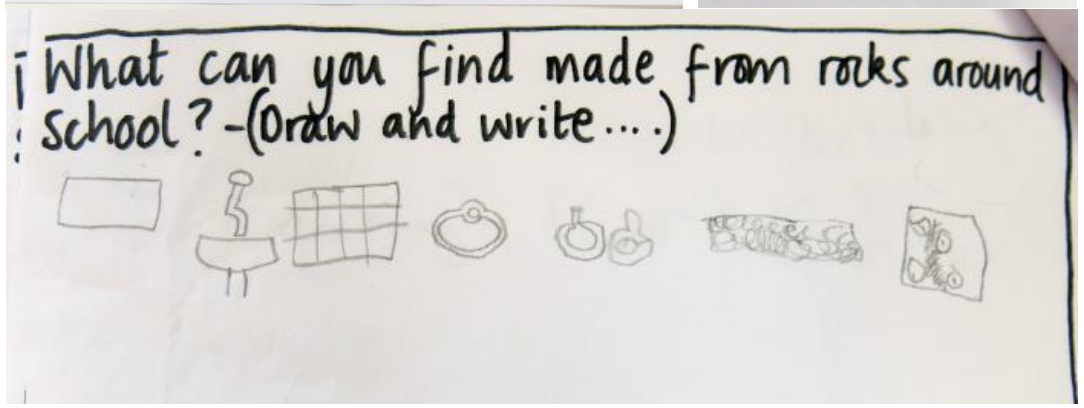
Year	3	Topic	Rocks

Focus of assessment (National Curriculum statements)

- Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.

Description of activity

The children started their rock unit within their own school grounds, participating in a rock detective walk to begin to recognise the different types of rocks, their physical properties and their uses. They began to describe the rocks and grow their vocabulary to do so.

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
	 	Na'ilah begins to use generic descriptive words to describe rocks in the school building and grounds and can identify objects made from rocks.
Teacher observations		Working scientifically
		

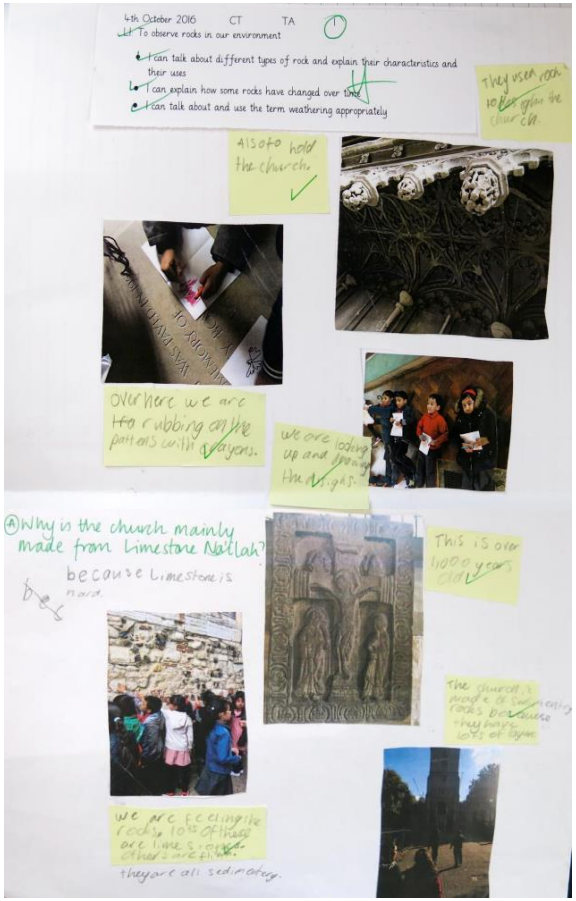
Year	3	Topic	Rocks

Focus of assessment (National Curriculum statements)

- Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.

Description of activity

The children continued their rock detective walk around the local environment, including visiting a local church and grounds.

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
"We saw lots of layers of different rocks on our walk. The church used lots of hard limestone in its building."		Na'ilah is beginning to associate rocks with certain places and functions in the local environment, including in buildings. She used a range of descriptive vocabulary orally during the walk to describe and name different characteristics, although this needs further development.
Teacher observations		Working scientifically

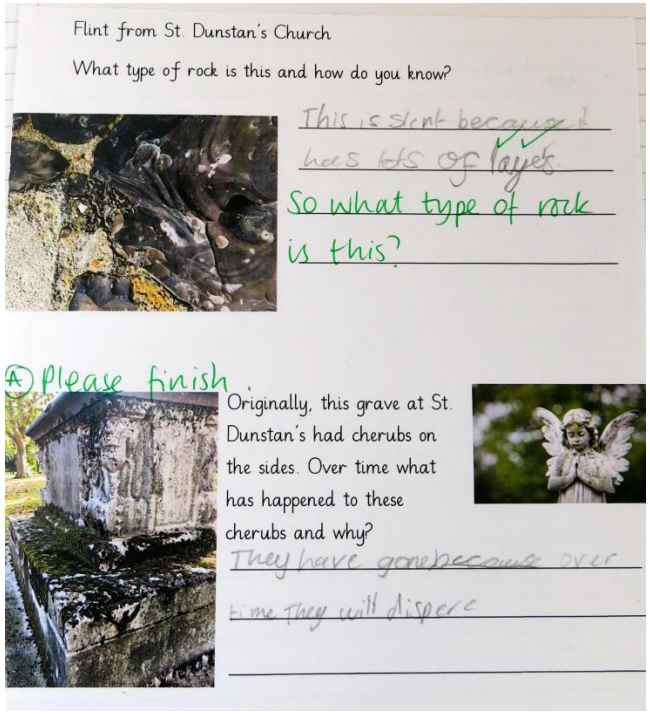
Year	3	Topic	Rocks

Focus of assessment (National Curriculum statements)

- Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.

Description of activity

The children visited a local church graveyard to look at the gravestones. They observed the range of rocks used for gravestones, naming any that they knew, and also observed how damaged or worn the gravestones were and considered this in relation to their age.

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
"Some of the detail on the cherubs has gone."	 	Na'ilah demonstrates that she recognises that changes occur to rocks over time and that this process is dependent on the type of rock. Her description of why these changes occur needs further consolidation, as here she records simply that "over time they (the rocks) will disappear".
Teacher observations		Working scientifically

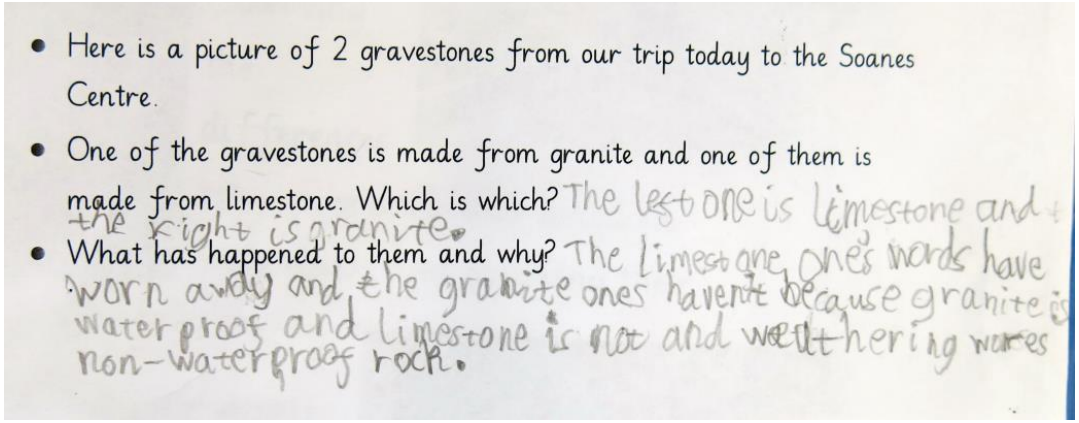
Year	3	Topic	Rocks

Focus of assessment (National Curriculum statements)

- Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.

Description of activity

The children then visited a local cemetery park to look at more gravestones. They looked particularly at two gravestones: one made of granite and one of limestone.

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
"The granite one still looks like new, but it is older than the limestone one."		Na'ilah is able to describe the link between properties of rocks and changes that have occurred to them over time.
Teacher observations		Working scientifically
		

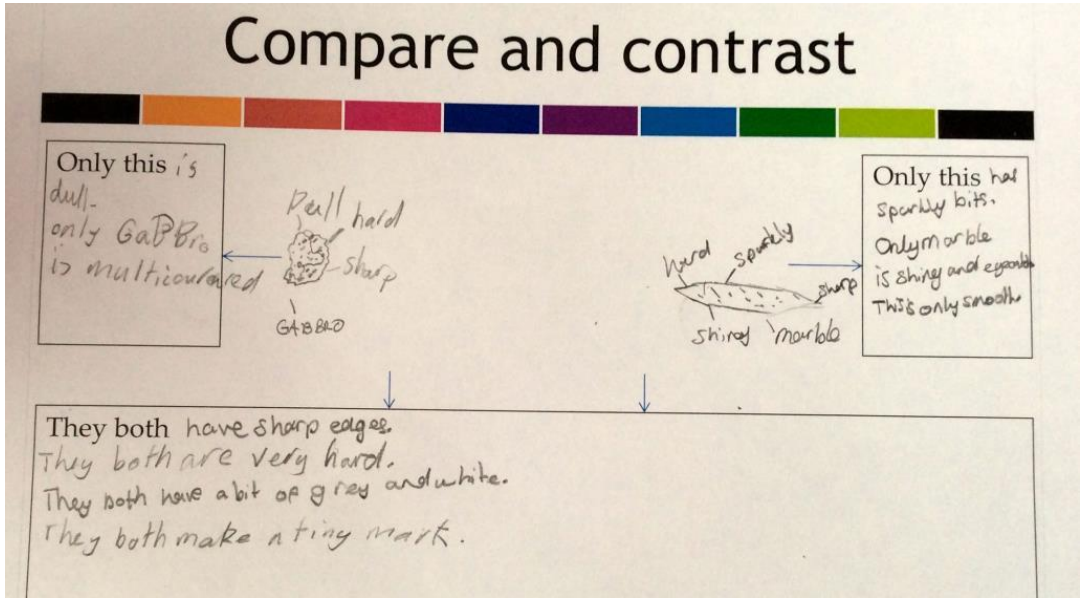
Year	3	Topic	Rocks

Focus of assessment (National Curriculum statements)

- Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.

Description of activity

In pairs, the children were given a range of rocks and asked to observe them closely using a magnifying glass. They spent time talking about the visual characteristics of each of the rocks. They were asked to sort them in different ways. They then completed a compare and contrast grid to demonstrate what they had observed about two rocks in particular.

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
"Me and my partner sorted rocks by which ones had sparkly bits, which Miss said were crystals. Some didn't have any crystals at all."		Na'ilah compares and groups rocks together in a number of different ways with increasing confidence and describes their simple properties, and sometimes talks about the effects of these differences.
Teacher observations		Working scientifically
		Na'ilah makes careful observations and record these using labelled diagrams.

Year	3	Topic	Rocks

Focus of assessment (National Curriculum statements)

- Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.

Description of activity

The children tested common types of rock for three properties: porosity, density and durability. They conducted simple observational investigations for each property and recorded the results in a table.

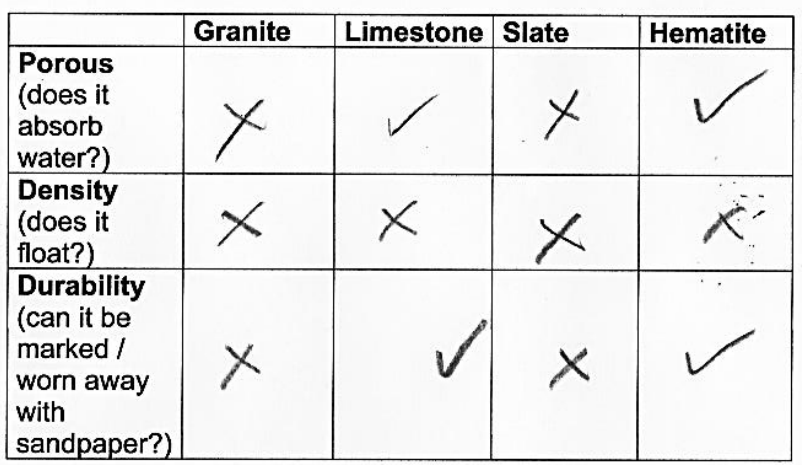
EVIDENCE OF LEARNING

Oral evidence

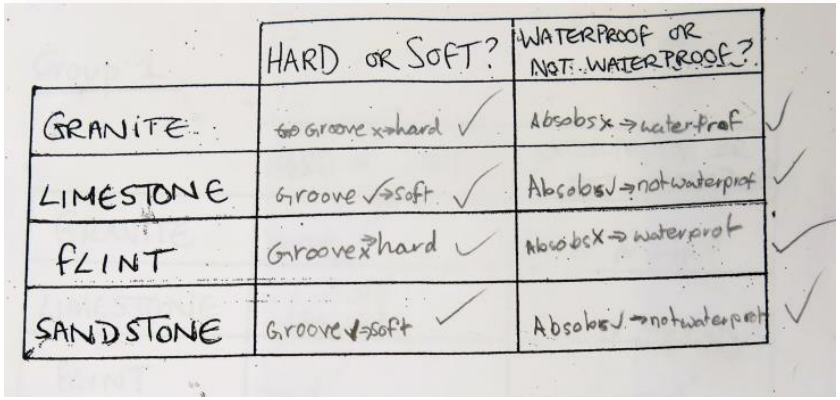
"We dropped water from pipettes onto our rocks to see if they absorbed any water or if it fell off the rocks. The limestone absorbed water and it could also be worn away with the sandpaper. This is like we saw on our trip to the church."

Teacher observations

Examples of work



	Granite	Limestone	Slate	Hematite
Porous (does it absorb water?)	X	✓	X	✓
Density (does it float?)	X	X	X	X
Durability (can it be marked / worn away with sandpaper?)	X	✓	X	✓



	HARD OR SOFT?	WATERPROOF OR NOT WATERPROOF?
GRANITE	no Groove x→hard ✓	Absobs x → waterprof ✓
LIMESTONE	Groove ✓→soft ✓	Absobs ✓→notwaterprof ✓
FLINT	Groove x→hard ✓	Absobs x → waterprof ✓
SANDSTONE	Groove ✓→soft ✓	Absobs ✓→notwaterprof ✓

ASSESSMENT

Knowledge

Working scientifically

Na'ilah conducts simple tests with her group to classify them by their properties. She records data from her tests using notes and tables.

Year	3	Topic	Rocks

Focus of assessment (National Curriculum statements)

- Recognise that soils are made from rocks and organic matter.

Description of activity

The children were given a sample of soil from their school grounds to explore. They mixed the samples with water and then observed them as they settled into different layers.

EVIDENCE OF LEARNING

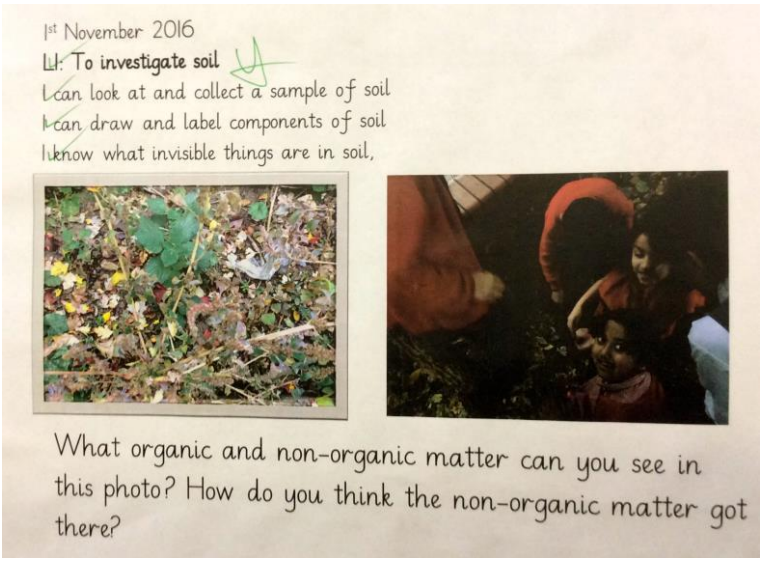
Oral evidence

"My soil has twigs and bits of leaves in it. It also has some little stones. The rocky soil went to the bottom of the jar and the sandy soil was on top of it."

Teacher observations

When questioned further, Na'ilah identified the dead twigs and leaves as organic matter. She explained that they may have come from plants which were once alive in the ground.

Examples of work



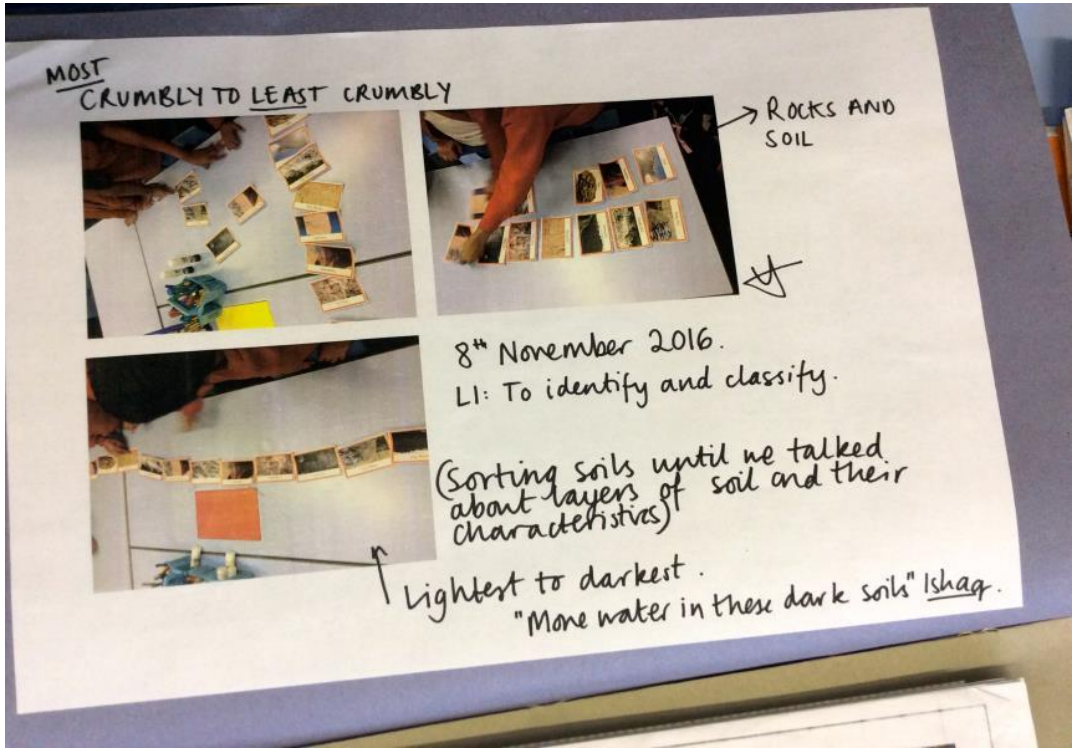
ASSESSMENT

Knowledge

Na'ilah recognises that soil is made from both rocks and organic matter.

Working scientifically

Year	3	Topic	Rocks
Focus of assessment (National Curriculum statements)			
• Recognise that soils are made from rocks and organic matter.			
Description of activity			
The children were asked to classify a range of soil samples.			

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
"Lots of the soils looked like ground down rocks. Some had other bits of stuff in them too like bits of plants. We found a bit of shell from a dead snail too."		Na'ilah recognises that soils are made up of a mixture of broken-down rocks and parts of dead plants and animals.
Teacher observations		Working scientifically
Na'ilah's group sorted them in a variety of ways including lightest to darkest and crumbliest to most solid.		Na'ilah and her group chose their own sorting criteria. Na'ilah offered simple explanations through discussion for differences in their groupings based on their learning to date in this unit.

	Year	3	Topic	Rocks
	Focus of assessment (National Curriculum statements)			
	• Describe in simple terms how fossils are formed when things that have lived are trapped within rock.			
	Description of activity			
	The children flattened plasticene in a small plastic pot to make the sea bed. They then imagined that a sea creature, represented by the dog biscuit (bone shaped), had died and fallen onto the sea bed. They next added the sea (salty, diluted food colouring) and shredded up kitchen roll to represent the sediment. (Continued on next page)			

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
"First we flattened the sea bed and added the dead sea creature and sea water. "Sediment is all made up of shells and bits of rocks and bits of dead animals and some sandy bits too. "I'm making the sediment. I'm pushing down the shells and bits of rocks into the sea bed but speeding it up millions of years."	   	
Teacher observations		Working scientifically

Year	3	Topic	Rocks

Focus of assessment (National Curriculum statements)

- Describe in simple terms how fossils are formed when things that have lived are trapped within rock.

Description of activity

Imagining they were an archaeologist, some thousands of years later, the pupils unearthed their fossils using a pick (tooth pick). They could identify imprints of fossils and they found the fossilised bones of the dead sea creature itself.

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
"I'm now digging with my tool through lots of sediment layers looking for bones and things from dead animals. The bones have changed to fossils because of the salt."	 	Na'ilah could recount the whole process of how fossils are formed when a once living creature is trapped within rocks from this modelling of the process.
Teacher observations		Working scientifically

Overall summary

Secure

Na’ilah has experienced a range of hands-on exploration activities that have helped her to understand the characteristics of a range of different rocks, including those commonly found in local buildings. She has an understanding of different uses for different rocks and also how they change over time. She has consistently demonstrated her use of the key vocabulary and can talk about both observable and testable features of rocks. She has been given the opportunity to take part in a range of off-site activities and a workshop to consolidate her understanding of this unit of work. She can recognise the difference between soils and can sort them according to different observable characteristics. She has identified organic (plant and animal matter) and inorganic (rock) material within soils. She has secured an understanding of how fossils are formed, through a hands-on modelling activity and was confident in retelling the whole sequence of events within the process.