Secondary Science SBE
Lesson Plan Framework

Lesson Title: Chemical Weathering

Group 8_0 **Location** **Date/Time** 24th April /9h10 to 10h10

Learning Objectives
Pupils will learn…

- to look at how rainwater can affect rocks at the Earth surface.

Learning Outcomes

Pupils will be able…
- to understand that rain is slightly acidic and when the rain falls onto rocks it will react causing chemical weathering.

National Curriculum/Syllabus References
Ks3 Biology, Exploring science text book (pages 82-83), Rocks and Weathering. NC 4.

Links to other areas
Lesson will cross link with literacy science knowledge as well pupils will develop some investigation skills (exploring and obtaining results) by putting hands on work to make a practical investigation activity about weathering in rocks. Link also with ICT and numeracy (drawing a results table).

Previous assessment details informing this lesson.
Last lesson was useful to check and assess pupils' practical skills.

Differentiation
Level 3-4 class. I will use a practical activity that allows pupils from this level to develop further knowledge by exploring, developing and obtaining knowledge when developing investigational practical skill. Link with ICT.

Health and Safety
Lesson totally safe for pupils. See risk assessment attached.

Lesson Development

Timing (min)	Teacher activity	Pupil activity	# Resources	Assessment Items
2	Register	Pupils will pay attention to class register.	Teacher planner	-
2 10	Collecting the homework. Sharing the lesson aim and setting the starter activity. Pupils need to identify different types of rocks as well name some of them.	Pupils should hand in the homework sheets. The lesson aim will be to look at how rainwater (acidic) can affect rocks at the earth's surface. Pupils will have the opportunity to see some pictures of rocks as well volcanoes and label all of it as a way to make a review of the last lessons.	Homework sheet Small white board Computer Power point	Assessment using their previous knowledge about the subject (how much they already know about the topic, who knows more who knows less???)
10	Brief introduction about chemical weathering.	Pupils be listening to teacher explanation and interact with some Q+A. Class notes in their exercise books.	- white board -Computer - power point	Assessment by Q+A
15-20	Setting and giving instructions for practical activity	Pupils will be making carrying out a circus experiment by adding two drops of hydrochloric acid in some rocks examples, recording the results.	***Note: See risk assessment material to check all the items and procedure of the practical.***	Assessment by checking pupils work during the practical.

5	Giving tips for pupils to write circus experiment conclusion.	Pupils will write important information into their exercise books as conclusion. Visual, kinaesthetic activity.	***Books Computer***	
5	Plenary activity in Tim and Moby Flash File 'ask questions about the clip'	Pupils will pay attention to the video and try to answer to some of the questions. Class notes about understanding the meaning of chemical weathering.	Tim and Moby flash animation Computer books	Assessing pupils by Q+A about what is chemical weathering and what happens when we add acid to rocks.
3	Giving instructions' to pupils revise rocks topic on bite size website.	Pupils should revise rocks unit at home by visiting bite size website.	Computer Power point	-

PGCE & BSc. Secondary Science(School based Form)

Risk Assessment

Title of Practical Activity: Chemical weathering

Teachers and pupils involved: teacher, trainee teacher and 33 pupils (working by groups of three).

Substances hazardous to health - Chemicals regulated by COSHH	
1. Hydrochloric acid can be dangerous when >2M	**6.**
2.	**7.**
3.	**8.**
4.	**9**
5.	**10.**

Hazardous procedure or item of equipment.

Items: rocks examples (limestone, granite, marble, sandstone, basalt, slate, chalk and conglomerate), and hydrochloric acid.

Risk estimator >10 then risk is unacceptable; rethink control measures)

Likelihood of occurrence	**L Score**	**Severity of Outcome**	**O Score**
Highly unlikely	**1**	Slight inconvenience	**1**
May happen but rare	**2**	Minor injury	**2**
Does happen but rare	**3**	Medical attention required	**3**
Occurs time to time	**4**	Major injury leading to hospitalisation	**4**
Likely to occur often	**5**	Fatality or serious injury	**5**

Practical Risks

Hazard	L Score	O Score	Total (Lx O)	Control Measures
1	2	3	6	Teacher will aware pupils of risk assessment as well will make sure that pupils use properly hydrochloric acid by making a demonstration.

Lesson Evaluation

Lesson Rating – My Performance *(To be completed at the end of every lesson)*

Criteria	Very Good	Good	Satisfactory	Unsatisfactory
Knowledge				
Resources				
Lesson Objectives				
Behaviour Management				
Risk Assessment				
Differentiation				
Feedback to pupils				
Assessment				
Variety & Pace				
Level appropriate				
Visuals – high quality?				

General Comments (Improvements for your teaching and/or pupil learning)

Were your Outcomes Achieved? (Include details of Evidence)

Teachers Lesson Rating – (*To be completed at the end of every lesson)*

Criteria	Very Good	Good	Satisfactory	Unsatisfactory
Knowledge				
Resources				
Lesson Objectives				
Behaviour Management				
Risk Assessment				
Differentiation				
Feedback to pupils				

Assessment				
Variety & Pace				
Level appropriate				
Visuals – high quality?				

Teacher Comments