Secondary Science SBE
Lesson Plan Framework

Lesson Title: Fizzy Drinks

Group: 7_0 Location: M21 Date/Time: 6th June 11h25 to 12h25

Learning Objectives: Pupils should learn:

- To plan and evaluate an investigation independently.

Learning Outcomes: Most Pupils should be able to:

- learn that a gas is not "weightless".
- know how to plan and evaluate a lesson.

National Curriculum/Syllabus References (incl. reference to previous KS)

Ks3, Sc3, Exploring Science Text book, topic about gas pressure, page 86 and 87, NC7.

Links to other areas

Literacy, kinaesthetic learning styles, and developing science thinking investigative skills.

Previous assessment details informing this lesson.

Last lesson main activity was useful to check if pupils can link some kinaesthetic styles with their learning, as well pupils developing science thinking skills.

Differentiation

By questioning
By support
By modelling

Health and Safety

Lesson safe for pupils but see risk assessment attached.

Lesson Development

Timing (min)	Teacher activity	Pupil activity	# Resources	Assessment Items
3	Taking the register	Pupils will pay attention to the register.	Teacher planner	
2	Sharing lesson aim	Pupils will be listening and writing the lesson aim about planning and evaluating an investigation independently.	Small white board books	-
10	Setting the **starter activity**.	As a starter activity pupils will take a look to the main question (What will happen if you opened the can of coke?) written on the board and try to suggest possible answers. Note. Pupils will have 2/3 minutes to write down some ideas. Going over the answers giving some feedback.	Books Pen White board	Assessing literacy and science thinking skills being developed. Assessing pupils on task.
8-10	Setting instructions for the **practical**.	The starter activity will get pupils into the practical. They will have a worksheet as guidelines that they need to follow bullet by bullet point, completing all the tasks.	Practical material (see risk assessment attached) worksheet	Q+A Assessing pupils developing predictions and investigative skills in science experiments.

		Per bench pupils will find all of the material already set up to start the activity (They need to open a can of coke, by measuring the mass of the drink, minute by minute during 5 minutes recording always the results.		
15	Setting instructions for **practical (part 2**).	After recording the results on a proper table, they need to start drawing the graph on the worksheet.	Practical items and worksheet.	Assessing pupils on task doing the practical investigative work.
5	Going over the benches to check pupils' progress on completing and doing the worksheet.	Pupils need already to have a graph drawn. ***Note: If graphs ok, pupils will write a main conclusion. If its not, teacher will give a brief explanation about drawing simple graphs.***	Worksheet White board	-
10	Setting plenary activity ***Note: Pupils will know that the teacher wants them to include in their conclusion important key words like gas pressure and particles.***	Giving pupils opportunity to write down their predictions for conclusion of the experiment after analysing the graph results. Going over the answers for learning.	Computer if necessary Worksheet White board	Assessing pupils' answers, being aware by questioning pupils that struggle with the topic. ***Note: Pupils will also cross linking with last lesson about mixing gases and liquids.***
5	Receiving last lesson homework and setting instructions to pupils pack away.	Pupils will be handing in their homework sheets and clean their desks to move to next lesson.	-	-

PGCE & BSc. Secondary Science(School based Form)

Risk Assessment

Title of Practical Activity: Always moving and mixing 2

Teachers and pupils involved: teacher, trainee teacher and 32 pupils

Substances hazardous to health - Chemicals regulated by COSHH	
1. Using the balance	**6.**
2.	**7.**
3.	**8.**
4.	**9**
5.	**10.**

Hazardous procedure or item of equipment.

Items: balance, can of coke cola, stop clock and rulers.

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	1	1	1	Pupils need to have careful when using the balance, so they will be warn of how to use a balance and the correct position at the middle of bench.