

Best Bubbles – Curriculum Links

By Louise Lopes

Science Understanding – Chemical Sciences

Year 7

Mixtures, including solutions, contain a combination of pure substances that can be separated using a range of techniques

- recognising the differences between pure substances and mixtures and identifying examples of each
- identifying the solvent and solute in solutions

Year 8

Chemical change involves substances reacting to form new substances

- identifying the differences between chemical and physical changes

Year 9

Chemical reactions involve rearranging atoms to form new substances; during a chemical reaction mass is not created or destroyed

- identifying reactants and products in chemical reactions
- describing observed reactions using word equations

Energy transfer through different mediums can be explained using wave and particle models

- exploring the properties of waves, and situations where energy is transferred in the form of waves, such as sound and light

All Grades – Science Inquiry Skills

QUESTIONING AND PREDICTING: Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge.

PLANNING AND CONDUCTING : Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed. Measure and control variables, select equipment appropriate to the task and collect data with accuracy.

PROCESSING AND ANALYSING DATA AND INFORMATION: Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate. Summarise data, from students' own investigations and use scientific understanding to identify relationships and draw conclusions based on evidence. The students learn how to use develop a method that is safe, and follow that method to achieve reliable results. Students will use digital technology to record their results and produce the graph

EVALUATING: Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improvements.

COMMUNICATING: Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate.

	Demonstrated inquiry	Prescribed inquiry	Structured inquiry	Guided inquiry	Open inquiry
Questions	No question	Teacher provides question	Learner sharpens question	Learner selects question	Learner poses questions
Plans	No planning	Teacher provides procedure	Teacher discusses possible plans	Learner guided while planning	Learner determines plans
Conducts	Teacher conducts	Learner told how to conduct and record	Learner sharpens plan and conducts	Learner guided while conducting and recording	Learner conducts and records
Analyse	Teacher analyses	Learner told how to analyse data	Teacher discusses possible analyses	Learner guided in analysis	Learner analyses data identifying trends
Problem Solve	No problem solving	Teacher provides reasoning and links	Teacher discusses reasoning and conclusion	Learner guided in reasoning and formulate conclusion	Learner reasons to formulate conclusions
Communicate	No conclusion	Teacher writes conclusion	Learner writes conclusion	Learner guided on justifying findings and communicating	Learner justifies findings and conclusions