

# Science - Year 3 – Skills map

## Questioning

S1	I can <b>respond</b> to questions with scientific answers.	
S2	I can respond to questions with scientific answers and give reasons to <b>justify</b> answers.	

## Researching

S3	I can use the internet to <b>research</b> the answers to questions.	
S4	I can <b>choose</b> resources given in lessons to find the answers to questions.	
S5	I can <b>explore</b> the internet to find out about famous scientists and their contributions to society.	

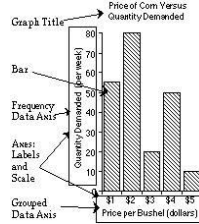
## Communicating

S6	I can <b>present</b> findings in the written form.	
S7	I can <b>present</b> findings to a small group of peers.	
S8	I can <b>present</b> findings to the class.	

## Testing

S9	I can know and <b>discuss</b> the process scientists use to perform experiments.	
S10	I can understand and <b>explain</b> the term "fair test".	
S12	I can <b>create</b> experiments directed by the teacher.	
S13	I can understand and <b>explain</b> the term "variables".	
S14	I can <b>compose</b> scientific questions to form an experiment.	
S15	I can <b>compose</b> effective predictions that I can prove or disprove.	

## Evidencing

S16	I can <b>draw</b> and <b>explain</b> diagram.	
S17	I can effectively <b>annotate</b> diagrams for clarity.	
S19	I can draw tables to <b>record</b> findings.	
S20	I can draw bar graphs to <b>record</b> findings.	

## Classifying

S21	I can group and <b>classify</b> things and <b>recognise</b> objects.	
S22	I can use Venn diagrams to <b>sort</b> objects.	
S23	I can use Carroll diagrams to <b>sort</b> objects.	
S24	I can <b>identify</b> the difference between igneous, sedimentary and metamorphic rocks.	
S25	I can <b>classify</b> plants and trees according to their observable characteristics.	
S26	I can <b>classify</b> materials as magnetic and non-magnetic.	

## Measuring

S27	I can <b>demonstrate</b> how to accurately use a ruler.	
S28	I can <b>accurately</b> use a measuring beaker/cylinder.	
S29	I can <b>accurately</b> use a data logger.	

## Concluding

S30	I can <b>write</b> a conclusion that refers to evidence.	
S31	I can <b>link</b> the conclusion to the question being tested.	

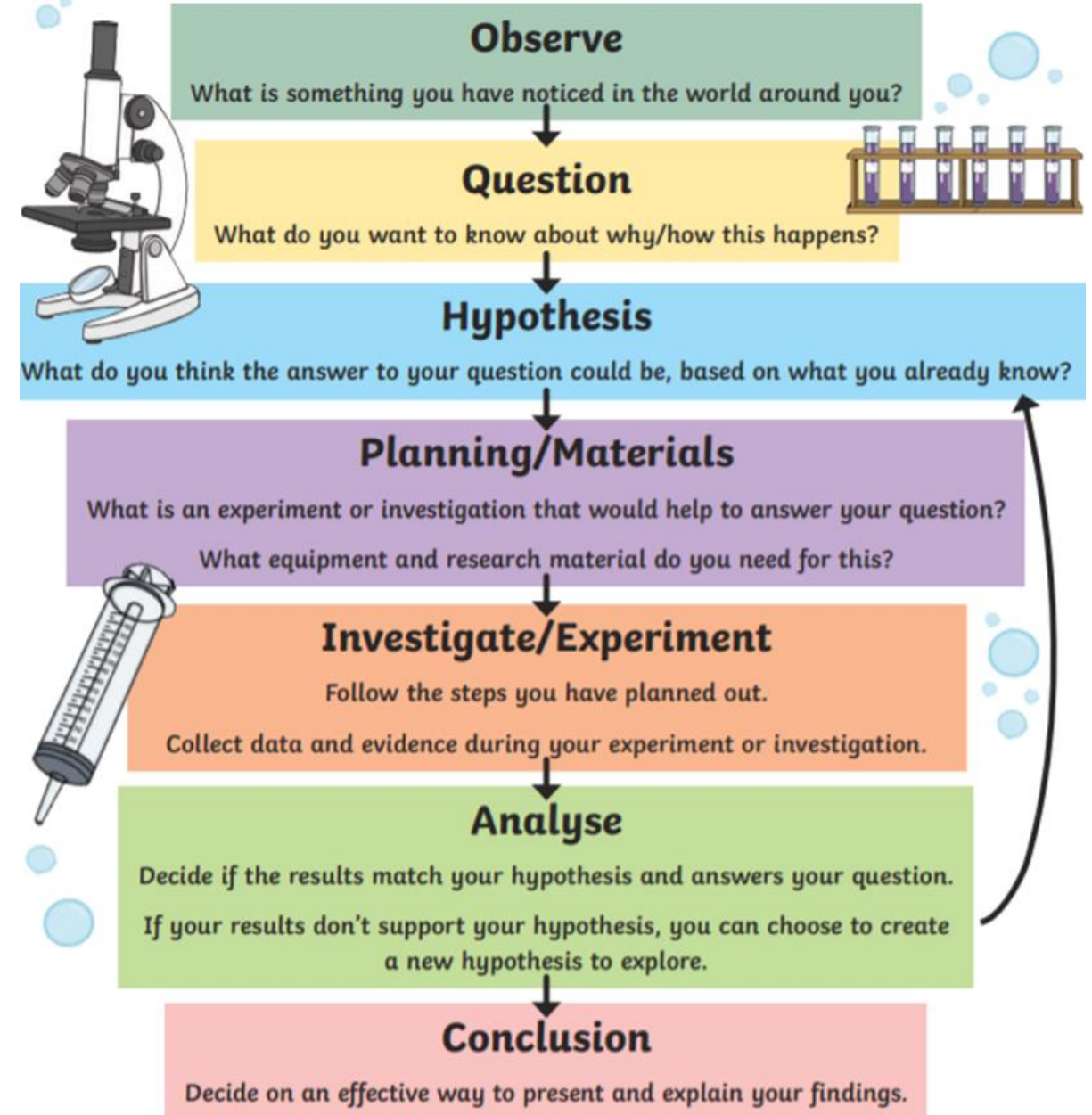
## Gathering Evidence

S32	I can <b>plan</b> how to <b>record</b> findings before starting to carry out the experiment.	
S33	I can <b>create</b> an effective scientific report in line with the scientific method.	

# Science - Year 3 – Skills map

Technical knowledge		
S34	I can understand and <b>explain</b> what a force is and identify different types (e.g. friction).	
S35	I can understand and <b>explain</b> the terms “repel”, “attract” and “magnetic poles”.	
S36	I can understand and <b>explain</b> the terms “opaque” and “transparent”.	
S37	I can <b>describe</b> what is meant by the term “reflection”.	
S38	I can <b>identify</b> ways in which humans can lead a healthy lifestyle.	
S39	I can <b>recognise</b> animals with and without skeletons.	
S40	I can understand and <b>explain</b> the terms “pollination” and “seed dispersal”.	
S41	I can <b>describe</b> the life cycle of a plant.	
S42	I can understand and <b>explain</b> how fossils are formed.	

# The Scientific Method



# Science- Year 4 – Skills map

## Questioning

S1	I can respond to questions and <b>debate</b> scientifically.	
S2	I can respond to questions with scientific answers and give reasons to <b>justify</b> answers.	
S3	I can <b>compose</b> my own questions that can be tested scientifically.	

## Testing

S10	I can know and <b>discuss</b> the process scientists use to perform experiments.	
S11	I can understand and <b>explain</b> the term “fair test”.	
S12	I can know and <b>explain</b> what the term “variable” means and identify the dependent and independent variables.	
S13	I can <b>compose</b> effective predictions to prove or disprove from a scientific question.	
S14	I can set up experiments and <b>investigate</b> questions directed by the teacher.	
S15	I can set up own experiments and <b>investigate</b> questions independently.	

## Measuring

S28	I can <b>demonstrate</b> how to accurately use a ruler.	
S29	I can <b>accurately</b> use a measuring beaker.	
S30	I can <b>accurately</b> use a data logger.	

## Researching

S4	I can use the internet to <b>research</b> the answers to questions.	
S5	I can <b>choose</b> resources given in lessons to find the answers to questions.	
S6	I can <b>explore</b> the internet to find out about famous scientists and their contributions to society.	

## Evidencing

S16	I can <b>draw</b> diagrams to provide explanations.	
S17	I can effectively <b>annotate</b> diagrams for clarity.	
S18	I can draw tables to <b>record</b> findings.	
S19	I can draw bar graphs to <b>record</b> findings and ensure the axis are labelled accurately.	
S20	I can draw line graphs to <b>record</b> findings and ensure the axis are labelled accurately.	

## Concluding

S31	I can <b>write</b> a conclusion that refers to evidence.	
S32	I can <b>link</b> the conclusion to the question being tested.	

## Communicating

S7	I can <b>present</b> findings in the written form.	
S8	I can <b>present</b> findings to a small group of peers.	
S9	I can <b>present</b> findings to the class.	

## Classifying

S21	I can group and <b>classify</b> things and <b>recognise</b> objects from observation.	
S22	I can use tree diagrams to <b>compare</b> and <b>classify</b> to sort objects.	
S23	I can use Venn diagrams to sort and <b>classify</b> objects.	
S24	I can use Carroll diagrams to sort and <b>classify</b> objects.	
S25	I can <b>classify</b> living things as invertebrates or vertebrates.	
S26	I can <b>classify</b> organisms as either fish, amphibian, reptile, bird, mammal or insect.	
S27	I can <b>classify</b> materials as either a gas, liquid or solid.	

## Gathering Evidence

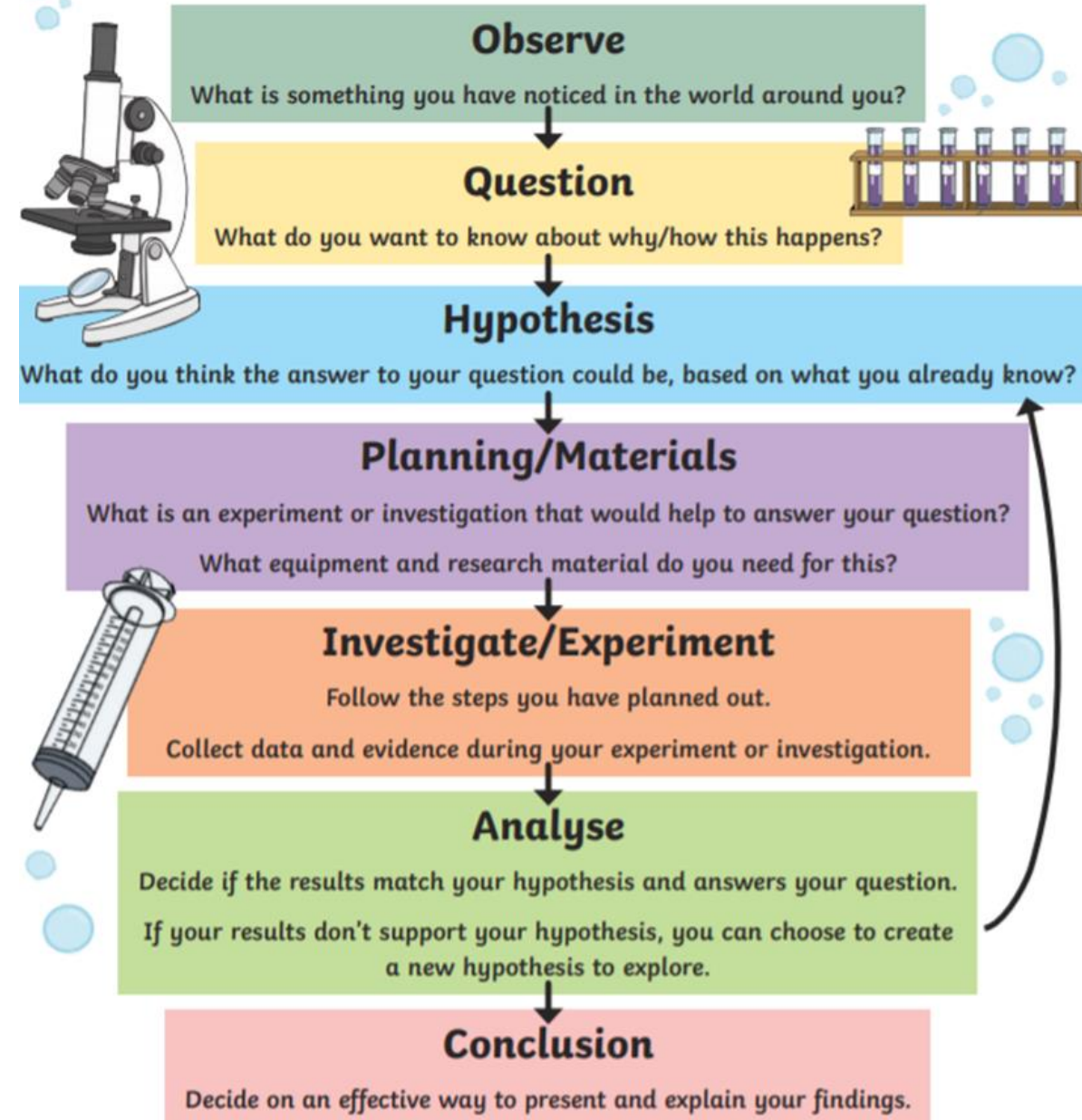
S33	I can <b>plan</b> how to record findings before starting to carry out the experiment.	
S34	I can <b>record</b> findings neatly and systematically whilst conducting experiments.	

# Science- Year 4 – Skills map

## Technical knowledge

S35	I can <b>identify</b> appliances that run on electricity.	
S36	I can understand and <b>explain</b> the terms “conductor” and “insulator”.	
S37	I can <b>explain</b> how to effectively troubleshoot an electric circuit.	
S38	I can understand and <b>explain</b> the term “series circuit”.	
S39	I can <b>construct</b> a complete circuit using a switch.	
S40	I can <b>debate</b> the difference between a consumer, producer, predator and prey of a food chain.	
S41	I can understand and <b>explain</b> the terms “herbivore”, “carnivore” and “omnivore”.	
S42	I can <b>describe</b> the adaptations of organisms to their habitats.	
S43	I can understand the term “endanger” and <b>explain</b> the processes by which habitats are endangered (e.g. pollution).	
S44	I can understand the term “particles” and <b>explain</b> what they refer to in states of matter.	
S45	I can understand and <b>explain</b> the terms “evaporation” and “condensation”.	
S46	I can <b>describe</b> the process of the water cycle.	
S47	I can <b>describe</b> the role of the teeth in digestion.	
S48	I can <b>identify</b> the different types of teeth and their functions (molar, canine, premolar and incisor).	
S49	I can understand and <b>explain</b> the terms “pitch”, “frequency” and amplitude” in sound.	
S50	I can understand and <b>explain</b> that vibrations travelling through medium is sound.	

# The Scientific Method



# Science - Year 5 – Skills map

## Questioning

S1	I can <b>respond</b> to questions with scientific answers.	
S2	I can <b>respond</b> to questions with scientific answers and give reasons to justify answers.	
S3	I can <b>compose</b> own questions that can be tested scientifically.	

## Testing

S11	I can know and <b>compare</b> the process scientists use to perform experiments.	
S12	I can understand and <b>explain</b> the term "fair test".	
S13	I can understand and <b>explain</b> the meaning of the term "variable".	
S14	I can know and <b>explain</b> the terms "independent" and "dependent" variable.	
S15	I can <b>identify</b> and know why it is important to change only one variable.	
S16	I can set up and <b>describe</b> experiments directed by the teacher.	
S17	I can set up and <b>describe</b> experiments independently.	

## Measuring

S29	I can <b>demonstrate</b> how to accurately use a ruler.	
S30	I can <b>accurately</b> use a measuring beaker/cylinder.	
S31	I can <b>accurately</b> use a force metre.	
S32	I can <b>accurately</b> use a data logger.	

## Researching

S4	I can use the internet to <b>research</b> the answers to questions.	
S5	I can use resources to <b>investigate</b> the answers to questions.	
S6	I can <b>explore</b> the internet to find out about famous scientists and their contributions to society.	

## Evidencing

S18	I can <b>draw</b> diagrams for clarity and <b>annotate</b> effectively.	
S19	I can draw tables to <b>record</b> findings.	
S20	I can draw line graphs to <b>record</b> findings.	
S21	I can draw bar graphs to <b>record</b> findings.	
S22	I can use the mean to <b>clarify</b> results.	
S23	I can <b>summarise</b> numbers in written form to inform the reader what they show.	

## Concluding

S33	I can write a conclusion that refers to and <b>explains</b> the results.	
S34	I can <b>comment</b> on the level of accuracy and fairness of an experiment.	
S35	I can <b>link</b> the conclusion to the question being tested and the predictions made.	

## Communicating

S7	I can <b>present</b> findings in the written form.	
S8	I can <b>present</b> findings to a small group of peers.	
S9	I can <b>present</b> findings to the class.	
S10	I can <b>justify</b> findings when questioned.	

## Classifying

S24	I can group and <b>classify</b> things and recognise objects based on observation.	
S25	I can use Venn and tree diagrams to <b>sort</b> objects.	
S26	I can identify and <b>classify</b> the difference between air/water resistance, friction, gravity, up thrust and lift.	
S27	I can <b>classify</b> materials as a solid, liquid or gas.	
S28	I can <b>classify</b> living things as mammals, amphibians, insects or birds and their life cycles.	

## Gathering Evidence

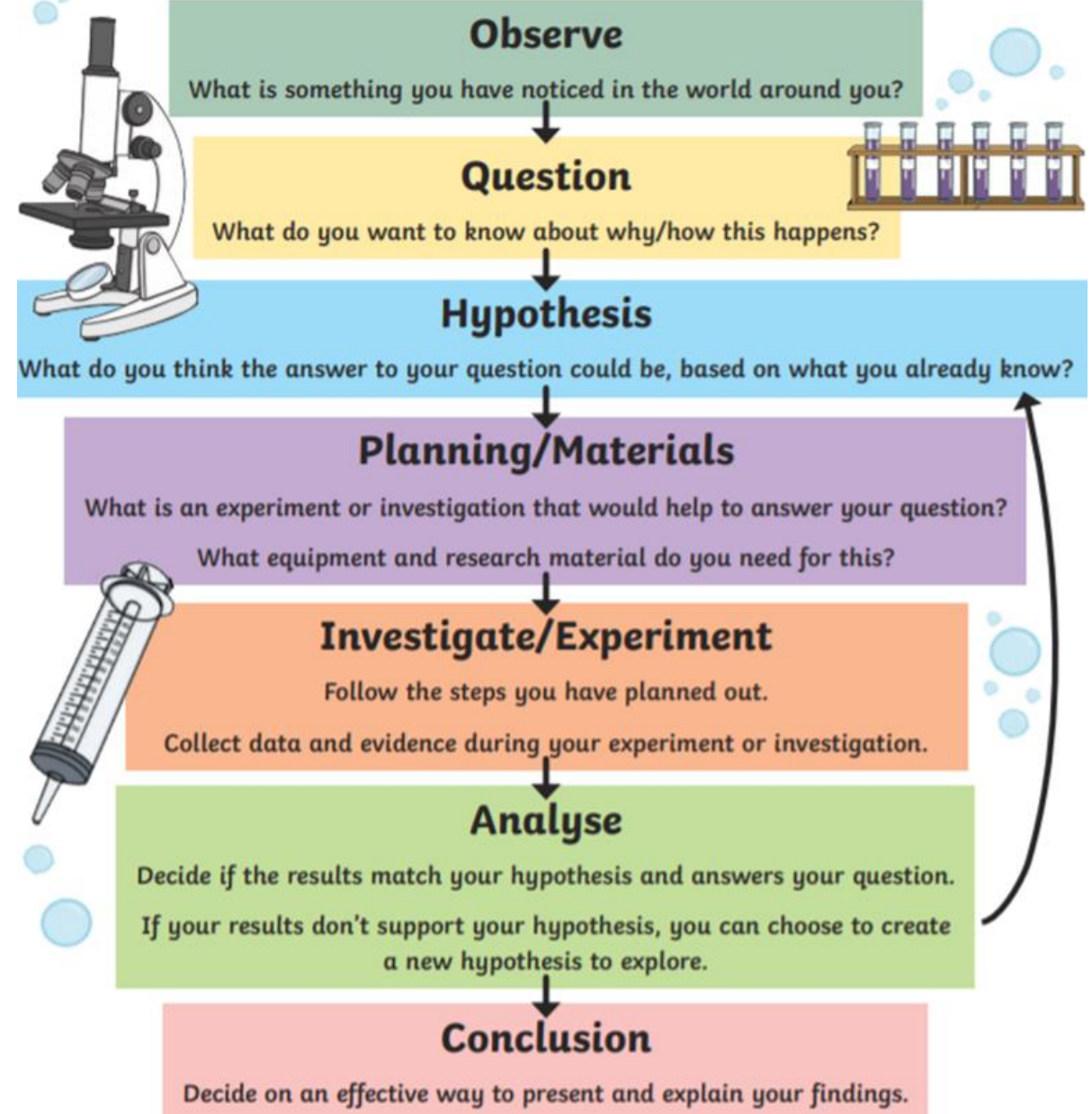
S36	I can <b>plan</b> how to record findings before starting to carry out the experiment.	
S37	I can <b>write</b> an effective scientific report in line with the scientific method.	

# Science - Year 5 – Skills map

## Technical knowledge

S38	I can understand and <b>explain</b> the term “biodiversity”.	
S39	I can understand and <b>explain</b> the term “ecosystem”.	
S40	I can understand and <b>explain</b> the terms “endangered” and “extinct”.	
S41	I can understand and <b>explain</b> the term “photosynthesis”.	
S42	I can <b>identify</b> and know the difference between a “stigma” and “stamen”.	
S43	I can understand and <b>explain</b> the term “seed germination”.	
S44	I can understand and <b>explain</b> the term “pollination”.	
S45	I can understand and <b>explain</b> the term “plant fertilisation”.	
S46	I can be able to <b>define</b> the term “orbit”.	
S47	I can understand and <b>explain</b> what a force is.	
S48	I can understand and <b>explain</b> the term “aerodynamics”.	
S49	I can <b>define</b> what is meant by “dissolve”.	
S50	I can <b>identify</b> what materials are soluble and insoluble.	
S51	I can understand and <b>explain</b> the terms “condensation” and “evaporation”.	
S52	I can recognise and <b>explain</b> reversible and irreversible changes to states of matter.	

# The Scientific Method



# Science - Year 6 – Skills map

## Questioning

S1	I can <b>respond</b> to questions and <b>debate</b> scientifically.	
S2	I can <b>respond</b> to questions with scientific answers and give reasons to <b>justify</b> answers.	
S3	I can <b>compose</b> own questions that can be tested scientifically.	

## Testing

S11	I can know and <b>compare</b> the process scientists use to perform experiments.	
S12	I can understand and <b>explain</b> the term "fair test".	
S13	I can understand and <b>explain</b> the meaning of the term "variable".	
S14	I can know and <b>explain</b> the terms "independent", "control" and "dependent" variable.	
S15	I can know and <b>discuss</b> why it is important to change only one variable.	
S16	I can set up experiments and <b>investigate</b> questions directed by the teacher.	
S17	I can set up own experiments and <b>investigate</b> questions independently	

## Measuring

S32	I can <b>demonstrate</b> that I can accurately use a ruler.	
S33	I can make accurate <b>measurements</b> use a measuring beaker/cylinder.	
S34	I can make accurate readings and <b>create</b> a scale.	
S35	I can accurately <b>use</b> a data logger.	

## Researching

S4	I can use the internet to <b>research</b> the answers to questions.	
S5	I can <b>choose</b> resources given in lessons find the answers to questions.	
S6	I can <b>explore</b> the internet to find out about famous scientists and their contributions to society.	

## Evidencing

S18	I can <b>draw</b> diagrams for clarity and <b>annotate</b> effectively.	
S19	I can draw tables to record and <b>deduce</b> findings.	
S20	I can draw line graphs and <b>interpret</b> findings.	
S21	I can draw bar graphs to <b>record</b> findings.	
S22	I can draw and <b>evaluate</b> scatter graphs to record findings.	
S23	I can use a line of best fit to <b>explain</b> results.	
S24	I can use the mean to <b>evaluate</b> results.	

## Concluding

S33	I can write a conclusion that refers to and <b>explains</b> the results.	
S34	I can <b>comment</b> on the level of accuracy and fairness of an experiment.	
S35	I can <b>link</b> the conclusion to the question being tested and the predictions made.	

## Communicating

S7	I can <b>present</b> findings in the written form.	
S8	I can present findings and <b>debate</b> to a small group of peers.	
S9	I can <b>compose</b> and present findings to the class.	
S10	I can <b>justify</b> findings when questioned.	

## Classifying

S25	I can group and <b>classify</b> things and recognise objects based on observation.	
S26	I can <b>design</b> my own system to classify objects.	
S27	I can use tree diagrams to <b>compare</b> objects and animals.	
S28	I can use Venn diagrams to sort and <b>classify</b> objects.	
S29	I can use Carroll diagrams to sort and <b>classify</b> objects.	
S30	I can use MRS GREN to <b>identify</b> things as living or non-living.	
S31	I can use and <b>evaluate</b> the Standard classification system.	

## Gathering Evidence

S39	I can plan how to <b>record</b> findings before starting to carry out the experiment.	
S40	I can <b>compose</b> an effective scientific report in line with the scientific method.	

# Science - Year 6 – Skills map

## Technical knowledge

S41	I can understand and <b>explain</b> the terms “conductor” and “insulator”.	
S42	I can know how to troubleshoot and <b>solve</b> problems in an electric circuit.	
S43	I can understand the term “series circuit” and <b>compare</b> it to a parallel circuit	
S44	I can understand and <b>explain</b> the terms “voltage” and “current”.	
S45	I can understand and <b>explain</b> the difference between a series and parallel circuit.	
S46	I can <b>explain</b> the process of fossilisation with correct vocabulary.	
S47	I can understand and <b>discuss</b> the terms “endangered” and “extinct”.	
S48	I can understand and <b>explain</b> the term “offspring”.	
S49	I can understand and <b>explain</b> the term “inheritance”.	
S50	I can describe and <b>debate</b> the process of Darwin’s natural selection and evolution.	
S51	I can understand and <b>describe</b> the term “taxonomy”.	
S52	I can understand and <b>explain</b> the terms “carnivore”, “herbivore” and “omnivore”.	
S53	I can understand and <b>compare</b> the terms “vertebrates” and “invertebrates”.	
S54	I can understand and <b>explain</b> the term “reflection”.	
S55	I can understand and <b>explain</b> the term “refraction”.	
S56	I can understand and <b>explain</b> the terms “opaque”, “transparent” and “translucent”.	
S57	I can <b>describe</b> the circulatory system and its purpose.	
S58	I can <b>describe</b> the digestive system and its function.	

# The Scientific Method

