



Beverley Minster C of E Primary School

Y1 Science Targets (meeting expectations)

Biology

Plants

I can name a variety of common wild and garden plants.

I can name the petals, stem, leaf and root of a plant.

I can name the roots, trunk, branches and leaves of a tree.

Animals, including humans

I can name a variety of animals including fish, amphibians, reptiles, birds and mammals.

I can name a variety of animals that are carnivores, herbivores and omnivores.

I can describe and compare animals (*fish, amphibians, reptiles, birds and mammals, including pets*).

I can name, draw and label the main parts of the human body.

I can link the correct part of the human body to each sense.

Chemistry

Everyday materials

I can explain the difference between an object and the material it is made from.

I can name different materials (*including wood, plastic, glass, metal, water and rock*).

I can describe the properties of everyday materials.

I can compare and group objects based on the properties of materials.

Physics

Seasonal changes

I can observe and comment on changes in the seasons.

I can name the seasons and describe the weather in each season (*including day length*).



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Y1 Science Targets (exceeding expectations)

I can find out by watching, listening, tasting, smelling and touching.							
I can talk about similarities and differences.							
I can explain what I have found out using scientific vocabulary.							
I can make accurate measurements.							
I can classify animals according to a number of given criteria.							
I can point out differences between living things and non-living things.							
I can say why certain animals have particular characteristics.							
I can sort some plants by those that can be eaten and those that cannot.							
I can sort some animals on a simple branching diagram with features such as meat eaters and non meat eaters; can swim and cannot swim.							
I can explain what happens to certain materials when they are heated or cooled, (<i>for example, bread, ice, chocolate, jelly, etc</i>).							



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Y2 Science Targets (meeting expectations)

Biology

Living things and their habitats

I can compare the differences between things that are living, dead, and things that have never been alive.

I can describe how a specific habitat provides for the basic needs of things living there (*plants and animals*).

I can identify and name plants and animals in a range of habitats (*including micro-habitats*).

I can describe how plants and animals depend on each other in a habitat.

I can describe how animals get their food (*a simple food chain*).

I can name some different sources of food for animals.

Plants

I can observe and describe how seeds and bulbs grow into plants.

I can find out and describe what plants need so that they grow and stay healthy (*water, light & a suitable temperature*).

Animals, including humans

I can explain the basic stages in a life cycle for animals, including humans.

I can find out and describe what animals (*including humans*) need to survive.

I can describe why exercise, a balanced diet and good hygiene are important for humans.

Chemistry

Uses of everyday materials

I can identify and name a range of materials (*including wood, metal, plastic, glass, brick, rock, paper and cardboard*).

I can suggest and compare how suitable materials are for specific uses.

I can explore how materials can be changed by squashing, bending, twisting and stretching.

Physics- No content.



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Y2 Science Targets (exceeding expectations)

I can say whether things happened as I expected and if not, why not.							
I can suggest more than one way of grouping animals and plants and explain my reasons.							
I can use information from books and online sources to find things out.							
I can name some characteristics of an animal that helps it to live in a particular habitat.							
I can describe what animals need to survive and link this to their habitats.							
I can describe what plants need to survive and link it to where they are found.							
I can classify living things into groups according to a range of criteria I have been given.							
I can describe the properties of different materials using words like transparent or opaque, flexible, etc.							
I can say which materials are natural and which are man-made.							
I can tell which materials cannot be changed back after being heated, cooled, bent, stretched or twisted.							



Biology

Plants

I can describe the function of different parts of flowering plants and trees (*roots, stem/trunk, leaves, and flowers*).

I can explore and describe the needs of different plants for survival and growth (*air, light, water, nutrients from the soil, room to grow*) and how this varies from plant to plant.

I can explore and describe how water is transported within plants.

I can describe the plant life cycle, (*pollination, seed formation and dispersal*), particularly the importance of flowers.

Animals, including humans

I can explain the importance of a nutritious, balanced diet.

I can explain that animals cannot make their own food and that they get nutrition from what they eat.

I can describe and explain the skeletal system of a human.

I can describe and explain the muscular system of a human.

I can describe the purpose of the skeleton in humans and animals.

Chemistry

Rocks

I can compare and group rocks based on their appearance and physical properties.

I can describe how fossils are formed.

I can describe how soil is made.



Physics

Light

I can describe what dark is (*the absence of light*).

I can explain that light is needed in order to see.

I can explain that light is reflected from a surface.

I can explain and demonstrate how a shadow is formed.

I can explore patterns in the way that the size of shadows changes.

I can explain the danger of direct sunlight and describe how to keep protected.

Forces and magnets

I can compare how objects move on different surfaces.

I can explain how some forces require contact and some do not, giving examples.

I can observe how magnets attract and repel each other and how they attract some materials but not others.

I can compare and group together a variety of materials based on whether they are attracted to a magnet, identifying some magnetic materials.

I can describe magnets (*i.e. two poles*).

I can predict whether magnets will attract or repel, depending on which poles are facing.



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Y3 Science Targets (exceeding expectations)

I can record and present what I have found using scientific language, drawings, labelled diagrams, bar charts and tables.							
I can use my findings to draw a simple conclusion.							
I can explain how the muscular and skeletal systems work together to create movement.							
I classify living things and non-living things by a number of characteristics that I have thought of.							
I can explain how some living things depend on one another to survive.							
I can explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal							
I am beginning to relate the properties of rocks with their uses.							
I can investigate the strengths of different magnets and find fair ways to compare them.							
I can explain why lights need to be brighter or dimmer according to need.							
I can explain why a shadow changes when the light source is moved closer or further from the object.							



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Y4 Science Targets (meeting expectations)

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Biology

Living things and their habitats

I can group living things in different ways.

I can use classification keys to group, identify and name different living things (*the local and wider environment*).

I can create classification keys to group, identify and name living things (*for local plants and animals*).

I can describe how changes to an environment could endanger living things.

Animals, including humans

I can name the main parts of the human digestive system and describe their function.

I can describe the functions of the main parts of the human digestive system.

I can identify the different types of teeth in humans.

I can describe the functions of the different types of teeth in humans.

I can use food chains to identify producers, predators and prey.

I can construct food chains to identify producers, predators and prey.



Chemistry

States of matter

I can compare and group materials based on their state of matter (<i>solid, liquid, gas</i>).							
I can observe how some materials can change state when they are heated or cooled.							
I can measure or research the temperature at which materials change state (<i>degrees Celsius</i>).							
I can explain the part played by evaporation and condensation in the water cycle.							
I can investigate the effect of temperature on the rate of evaporation.							

Physics

Sound

I can describe how sound is made.							
I can explain how sound travels through a medium to the ear.							
I can find patterns between pitch and the object producing a sound.							
I can find patterns between the volume of a sound and the strength of the vibrations that produced it.							
I can describe what happens to a sound as it travels away from its source.							

Electricity

I can identify and name appliances that require electricity to function.							
I can construct a simple series circuit.							
I can identify and name the components in a series circuit (<i>including cells, wires, bulbs, switches and buzzers</i>).							
I can draw a circuit diagram (<i>pictorial representation</i>).							
I can predict and test whether a lamp will light within a circuit.							
I can describe the function of a switch in a circuit.							
I can describe the difference between a conductor and an insulator, giving examples of each.							



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Y4 Science Targets (exceeding expectations)

I can plan and carry out a scientific enquiry by controlling variables fairly and accurately.							
I can use test results to make further predictions and set up further comparative tests.							
I can record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models.							
I can report findings from scientific enquiries through written explanations and conclusions.							
I can explain how people, weather and the environment can affect living things.							
I can group and classify a variety of materials according to the impact of temperature upon them.							
I can relate temperature to the change of state of materials.							
I can work out which metals can be used to connect across a gap in a circuit.							



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Y5 Science Targets (meeting expectations)

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Biology

Living things and their habitats

I can describe the differences in the life cycle of a mammal, an amphibian, an insect and a bird.

I can describe the process of reproduction in plants.

I can describe the process of reproduction in animals.

Animals, including humans

I can create a timeline to indicate stages of growth in humans.

Chemistry

Properties and changes of materials

I can compare and group materials based on their properties (*e.g. hardness, solubility, transparency, conductivity, [electrical & thermal], and response to magnets*).

I can describe how a material dissolves to form a solution, explaining the process of dissolving.

I can describe and show how to recover a substance from a solution.

I can use knowledge of solids, liquids and gases to describe how materials can be separated (*i.e. through filtering, sieving and evaporating*).

I know and can demonstrate that some changes are reversible (*dissolving, mixing, changes of state*).

I can explain how some changes result in the formation of a new material and that this is usually irreversible (*including burning and the action of acid on bicarbonate of soda*).

I can use evidence from comparative and fair tests to give reasons why materials should be used for specific purposes.



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Y5 Science Targets (meeting expectations)

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Physics

Earth and space

I can describe and explain the movement of the Earth and other planets relative to the Sun.

I can describe and explain the movement of the Moon relative to the Earth.

I can explain and demonstrate how night and day are created.

I can describe the Sun, Earth and Moon (*including that they are approximately spherical*).

Forces

I can explain what gravity is.

I can identify and explain the effect of air resistance.

I can identify and explain the effect of water resistance.

I can identify and explain the effect of friction.

I can explain how some mechanisms (*including levers, pulleys and gears*) allow a smaller force to have a greater effect.



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Y5 Science Targets (exceeding expectations)

I can explore different ways to test an idea, choose the best way and give reasons.							
I can vary one factor whilst keeping the others the same in an experiment.							
I can use information to help make a prediction.							
I can explain (<i>in simple terms</i>) a scientific idea and what evidence supports it.							
I can create a timeline to indicate the stages of growth in certain animals, such as frogs and butterflies.							
I can observe my local environment and draw conclusions about life-cycles (<i>for example, the vegetable garden or plants in a shrubbery</i>).							
I can describe methods for separating mixtures, (<i>for example, filtration, and distillation</i>).							
I can compare the time of day at different places on Earth.							
I can describe and explain how motion is affected by forces (<i>for example, gravitational attractions, magnetic attraction and friction</i>).							
I can work out how water can cause resistance to floating objects.							



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Y6 Science Targets (meeting expectations)

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Biology

Living things and their habitats

I can classify living things into broad groups according to observable characteristics and based on similarities & differences (including micro-organisms, plants and animals).

I can describe how living things have been classified.

I can give reasons for classifying plants and animals in a specific way.

Animals, including humans

I can identify and name the main parts of the human circulatory system.

I can describe the function of the heart, blood vessels and blood.

I can discuss the impact of diet, exercise, drugs and lifestyle on health.

I can describe the ways in which nutrients and water are transported within animals, including humans.

Evolution and inheritance

I can describe how living things have changed over time.

I can explain how fossils can be used to find out about the past.

I can explain that living things produce offspring of the same kind, but that they normally vary and are not identical to their parents.

I can explain how animals and plants are adapted to suit their environment.

I can link adaptation over time to evolution.



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Y6 Science Targets (meeting expectations)

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Physics

Light

I can explain how light travels.

I can explain and demonstrate how we see objects.

I can explain why shadows have the same shape as the object that casts them (*use knowledge that light travels in straight lines*).

Electricity

I can explain how the number and voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer.

I can compare and give reasons for differences in how components work (*including the brightness of bulbs, the loudness of buzzers and the on/off position of switches*).

I can draw circuit diagrams using the correct symbols.



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Y6 Science Targets (exceeding expectations)

I can use information from different sources to answer a question and plan a scientific enquiry.							
I can make a prediction that links with other scientific knowledge.							
I can plan in advance which equipment I will need and I can use it appropriately.							
I can link my conclusions to other scientific knowledge.							
I can explain how some living things adapt to survive in extreme conditions.							
I can analyse the advantages and disadvantages of specific adaptations (<i>e.g. being on two rather than four feet</i>).							
I am beginning to understand about the nature of DNA.							
I can readily group animals into reptiles, fish, amphibians, birds and mammals.							
I can make a diagram of the human body and explain how different parts work and depend on one another.							
I can compare the organ systems of humans to those of other animals.							
I can use the ray model to explain the size of shadows.							
I can explain the danger of short circuits and what a fuse is.							