

Year 6 Knowledge progression	Children working towards national standard...	Children working at national standard...	Children working beyond national standard... <i>*(taken from KS3 NC)</i>
Animals, including humans	<ul style="list-style-type: none"> -identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat -describe the simple functions of the basic parts of the digestive system in humans -identify the different types of teeth in humans and their simple functions. 	<ul style="list-style-type: none"> -identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood (including the pulse and clotting). -recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. -describe the ways in which nutrients and water are transported within animals, including humans 	<ul style="list-style-type: none"> -<i>explain the mechanism of breathing to move air in and out of the lungs, using a pressure model to explain the movement of gases...</i> -<i>describe the content of a healthy human diet: carbohydrates, lipids (fats and oils), proteins, vitamins, minerals, dietary fibre and water, and why each is needed</i> -<i>describe the consequences of imbalances in the diet, including obesity, starvation and deficiency diseases</i> -<i>describe the effects of recreational drugs on behaviour, health and life processes</i>
Evolution and inheritance	<ul style="list-style-type: none"> -recognise that environments can change and that this can sometimes pose dangers to living things 	<ul style="list-style-type: none"> -recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago -recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents -identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution 	<ul style="list-style-type: none"> -<i>identify differences between species</i> -<i>explain that the variation between species and between individuals within a species means some organisms compete more successfully, which can drive natural selection</i> -<i>describe how changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction</i>
Living things and their habitats	<ul style="list-style-type: none"> -recognise that living things can be grouped in a variety of ways -explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment 	<ul style="list-style-type: none"> -describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals -give reasons for classifying plants and animals based on specific characteristics 	<ul style="list-style-type: none"> -<i>identify differences between species</i> -<i>describe the variation between individuals within a species being continuous or discontinuous...</i>
Light	<ul style="list-style-type: none"> -recognise that they need light in order to see things and that dark is the absence of light -notice that light is reflected from surfaces -recognise that shadows are formed when a light source is blocked by a solid object -find patterns in the way that the size of shadows change 	<ul style="list-style-type: none"> -recognise that light appears to travel in straight lines -use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye -explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes -use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them 	<ul style="list-style-type: none"> -<i>use of ray model to explain imaging in mirrors...</i> -<i>describe the transmission of light through materials; absorption, diffuse scattering and specular reflection at a surface</i> -<i>explain colours and the different frequencies of light, white light and prisms (qualitative only)</i>
Electricity	<ul style="list-style-type: none"> -construct a simple series electrical circuit identifying and naming the basic parts of a simple electrical circuit, including cells, wires, bulbs, switches and buzzers -identify whether or not a lamp will light in a simple series circuit based on whether or not the lamp is part of a complete loop with a battery -recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit -recognise some common conductors and insulators, and associate metals with being good conductors 	<ul style="list-style-type: none"> -associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit -compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches -use recognised symbols when representing a simple circuit in a diagram 	<ul style="list-style-type: none"> -<i>talk about electric current...</i> -<i>describe potential difference, measured in volts, battery and bulb rating...</i> -<i>describe differences in resistance between conducting and insulating components</i>