

# Science

	Week 1	Week 2	Week 3	Week 4	Week 5
	<p><b>Objective:</b> All living organisms need the sun as a source of energy.</p> <p><b>Success Criteria:</b> Support: I can identify organisms that are producers Core: I can investigate how organisms photosynthesise Extension: I can write the word equation for photosynthesis LOtC: Go outside and look at different things that may be producers. Green plants and Algae are producers.</p> <p><b>Suggested Activities:</b> The word equation for photosynthesis is Carbon dioxide + water → glucose + oxygen. Green plants and Algae absorb a small amount of light that reaches them and make glucose by photosynthesis. These organisms are called producers. Get some pond weed. This can be obtained from a pet shop. Weigh it down and put in a clear beaker of water. Using a meter rule put the pond weed one meter away from a spot light. Leave for a period of time 3 – 5 mins all the time counting how many oxygen bubbles rise from the pond weed. Move the beaker 10cm closer at a time and repeat. Record the bubble production on a table and use the results to draw a graph.</p>	<p><b>Objective:</b> Animals and plants may be adapted for survival in the conditions where they normally live.</p> <p><b>Success Criteria:</b> Support: I can identify where two different animals live using pictures. Core: I can say why some animals are adapted to their environment. Extension: I can identify the features that plants and animals have that enable them to live in their environment. LOtC: Look for organisms that live in the hedges or in our local area. Think why they are able to live in these places.</p> <p><b>Suggested Activities:</b> Fish dissection. Sprats or mackerel from the local supermarket are good for students to look at. Look at the way the fish is shaped look at its gills, scales, fins discuss why these enable a fish to live in water. The brave can dissect further and look under a microscope. Using maggots or woodlice make a choice chamber with a dark dry area a dark damp area and a light dry area and a light damp area. Observe which the organisms prefer.</p>	<p><b>Objective:</b> Feeding relationships can be represented by a food chain. A food web can be used to understand the interdependence of species in an ecosystem.</p> <p><b>Success Criteria:</b> Support: I can sort pictures into a simple food chain. Core: I can make a food chain for two different communities. Extension: I can make food chains involving four or more species and name the top predator. I can make a simple food web. LOtC:</p> <p><b>Suggested Activities:</b> Using pictures of animals and plants make food chains, these can be cut and stick or I have made mobiles previously. Remember that the arrow always points in the direction of energy flow. Not what eats what. Extension group can have a challenge of how long can a food chain be. Or to make a food web. <a href="https://www.google.co.uk/search?q=food+chains+and+food+webs&amp;safe=strict&amp;spv=2&amp;biw=1366&amp;bih=648&amp;tbn=isch&amp;imgil=Pj6wjwLqkeEcuM%253A%253BIVGXOilyCVqIAM%253Bhttp%25253A%25252F%25252Fwww.cadavies.com%25252Ffood-chains-and-food-webs.html&amp;source=iu&amp;pf=m&amp;fir=Pj6wjwLqkeEcuM%253A%252CIVGXOilyCVqIAM%252C&amp;usq=_nCTqAx98VkQVW_6uh3jV2KXdXIk%3D&amp;ved=0ahUKEwjioeqA6onQAhUslcAKHX4qCSAQyicIRA&amp;ei=KbsZWKipEKzCgAb-1KSAAg#imgsrc=Pj6wjwLqkeEcuM%3A">https://www.google.co.uk/search?q=food+chains+and+food+webs&amp;safe=strict&amp;spv=2&amp;biw=1366&amp;bih=648&amp;tbn=isch&amp;imgil=Pj6wjwLqkeEcuM%253A%253BIVGXOilyCVqIAM%253Bhttp%25253A%25252F%25252Fwww.cadavies.com%25252Ffood-chains-and-food-webs.html&amp;source=iu&amp;pf=m&amp;fir=Pj6wjwLqkeEcuM%253A%252CIVGXOilyCVqIAM%252C&amp;usq=_nCTqAx98VkQVW_6uh3jV2KXdXIk%3D&amp;ved=0ahUKEwjioeqA6onQAhUslcAKHX4qCSAQyicIRA&amp;ei=KbsZWKipEKzCgAb-1KSAAg#imgsrc=Pj6wjwLqkeEcuM%3A</a></p>	<p><b>Objective:</b> All materials in the living world are recycled to provide building blocks for future organisms.</p> <p><b>Success Criteria:</b> Support: I can see that food decays and has mould on it. Core: I can identify microorganisms help the decay of dead plants and animals. Extension: I can identify that microorganisms return carbon dioxide to the air during decay of animals and plants. LOtC:</p> <p><b>Suggested Activities:</b> Bring in some fresh fruit and decaying fruit ask students to identify what the differences are. Use some compost from a compost bin and look for any microorganisms in it. Investigate the change in temperature in grass cuttings as they decay. (this will have to be done over a period of time and will perhaps suit the extension group).</p>	<p><b>Objective:</b> Animals often compete with each other for food, mates and territory.</p> <p><b>Success Criteria:</b> Support: I can identify a change to an environment. Core: I can explain what will happen if there is a change in the environment. Extension: I can give an example of a living factor and a non-living factor of change. LOtC:</p> <p><b>Suggested Activities:</b> Support group. Looking at a change in the weather, what do we or animals and plants do in summer, winter, rain, snow etc. Talk about what would happen if all the shops ran out of food, clothes etc. or if there was a zombie attack. Would we all just sit and die? If animal's food runs out, what do they do? Introduce predators, change in weather or temperature.</p>
	Week 6	Week 7	Week 8	Week 9	Week 10
	<p><b>Objective:</b> Plants compete with each other for light and space and for water and nutrients.</p> <p><b>Success Criteria:</b> Support: I can sort big seeds from little seeds and big plants from little plants. Core: I can compare how well plants</p>	<p><b>Objective:</b> Pollution can occur in water, in air, on land. More people mean more pollution.</p> <p><b>Success Criteria:</b> Support: I can smell, hear, feel, see pollution. Core: I can identify three things that</p>	<p><b>Objective:</b> Darwin's theory of evolution. Natural selection, artificial selection.</p> <p><b>Success Criteria:</b> Support: I can identify the differences between a wolf and a dog. Core: I can explain why things that are best adapted to their environment are</p>	<p><b>Objective:</b> There are two types of reproduction; sexual reproduction and asexual reproduction.</p> <p><b>Success Criteria:</b> Support: I can show that a man and a lady are needed to make a baby. Core: I can identify that a male and a</p>	<p><b>Objective:</b> Humans have 23 pairs of chromosomes, which carry genes that control the characteristics of the body</p> <p>Success Criteria: Support: I can investigate whether finger length and height are linked. Core: I can investigate whether finger</p>

<p>grow in the dark and in the light.  <b>Extension:</b> I can compare the growth of plants when seeds are planted at different densities.  <b>LOtC:</b>  Find some seeds from different plants and identify what they grow into.</p> <p><b>Suggested Activities:</b>  Investigate the link between plant size and seed size. Use any kind of seed. Beans, cress, conkers, sunflowers. Ect.</p> <p>Plant cress seeds in two containers, place one in a dark place and one in a light place or one in a cold place and one in a warm place.</p> <p>Plant cress seeds in two containers, one densely planted and one sparsely planted and observe their growth over a few days.</p>	<p>cause pollution.  <b>Extension:</b> I can explain why more people cause more pollution and give examples.  <b>LOtC:</b>  Go outside the classroom and find some examples of pollution, i.e litter, smells, noise, smoke. Discuss is there is anything we can do to prevent this kind of pollution.</p> <p><b>Suggested Activities:</b>  <a href="http://tiki.oneworld.org/pollution/pollution_home.html">tiki.oneworld.org/pollution/pollution_home.html</a>  This website has some good questions about pollution.  Investigate the acidity in water taken from different locations. Look at trees in our local area for lichens, these are an indicator of pollution, the fewer lichens the more pollution.</p>	<p>most likely to survive.  <b>Extension:</b> I can explain the difference between natural selection and artificial selection.  <b>LOtC:</b></p> <p><b>Suggested Activities:</b>  Using a packet of strawberry shoelaces place them around the classroom at different heights.  Tell the class that the shoelaces are their only type of food and they need to collect as many as possible to eat. (you may want to ban them from climbing on things to get them). Give them a set amount of time to collect as many as they can. Count how many each person has, discuss why they have more or less than anyone else, who would survive? Why would they survive? What could they adapt to improve their chance of survival?</p> <p>Sequence evolution pictures.</p>	<p>female are needed to make a baby. I can identify that some plants make identical offspring called clones.  <b>Extension:</b> I can describe how a male and female are needed to create variety in offspring. I can describe how some plants create identical offspring called clones.  <b>LOtC:</b></p> <p><b>Suggested Activities:</b>  Discuss sexual reproduction this is only the science behind it. Not STI's or contraception. (this is not only humans).</p> <p>Asexual reproduction, look at spider plants or strawberry plants, which produce runners with identical offspring. Extension group can investigate if there is anything other than plants that are asexual.</p>	<p>length and height are linked.  <b>Extension:</b> I can investigate whether finger length and height are linked.  <b>LOtC:</b></p> <p><b>Suggested Activities:</b>  Introduce basic genetics, i.e. that genetic material in the nucleus of a cell, which is inside structures called chromosomes. Chromosomes carry genes that control the characteristics of the body. Half come from the father and half from the mother.</p> <p>TDA  Investigate whether or not finger length is linked to height.</p>
<b>Week 11</b>	<b>Week 12</b>			<b>Suggested Home Learning</b>
<p><b>Objective:</b> TDA</p> <p><b>Success Criteria:</b> Assessment</p> <p><b>Suggested Activities:</b>  Finger length and height. This can be done on a poster using photos for the core and support group.  Extension group should make a simple prediction, do the investigation and write a conclusion. This can be in any format, either a document on the computer, or a poster. This will be assessed.</p>	<p><b>Objective:</b> End of unit test.</p> <p><b>Outcomes</b></p>			<p>Interactive food chain game:  <a href="http://www.sheppardsoftware.com/content/animals/kidscorner/games/foodchaingame.htm">http://www.sheppardsoftware.com/content/animals/kidscorner/games/foodchaingame.htm</a>  <a href="https://www.brainpop.com/games/foodchaingame/">https://www.brainpop.com/games/foodchaingame/</a></p>