Medium Term Plan Adaptation

P levels

Performance attainment targets (P scales) and performance descriptors are used for pupils aged 5 to 16 with special educational needs (SEN) who are working below the standard of the national curriculum tests and assessments. PSTT recognises that the national curriculum levels used in this document are no longer current. We have had so many requests to return these materials to the website that they remain in the documents as a guide for those who have used them in the past. The written statements may be useful to others as an indication of children's development. For further information about P levels see: https://www.gov.uk/government/publications/p-scales-attainment-targets-for-pupils-with-sen

Disclaimer

PSTT is not liable for the actions or activities of any reader or anyone else who uses the information in this document or the associated classroom materials. PSTT assumes no liability with regard to injuries or damage to property that may occur as a result of using the information contained in these plans.

Primary Science Teaching Trust recommends that a full risk assessment is carried out before undertaking in the classroom any of the practical investigations contained in the plans.

Safety Note

PSTT advises teachers to refer to either CLEAPSS website or SSERC website for up to date health and safety information when planning practical activities for children.

Teacher's Notes: Adaptation

Big Questions

- Can animals live anywhere?
- Is it important to be different?
- Are toilet rolls bad for the environment?
- Are humans bad for the environment?
- Should we ban plastic bags?

Learning Objectives

Pupils will have opportunities:

- To explore different habitats
- To explore how different living things are adapted for their habitat
- To explore how humans can impact on the environment

Answers

- Animals can live in extreme environments if they have characteristics that enable them to survive there.
- It is good that there is variety within any species so that the species could survive if the environment changes. A particular variation might help some plants or animals survive when conditions change.
- Toilet tissue made from paper accounts for 15% of our world's deforestation. Toilet tissue made from bamboo and sugar cane waste could be an eco-friendly alternative.
- Humans have a had big impact on the environment: deforestation and waste from cars has increased CO_2 levels. This is a major factor in global warming.
- Plastic bags are useful and reusable but large amounts of plastic have been found in the oceans. Microplastics enter the diets of plants and animals including our own food.

Quick review activities

- Match an animal to a simple habitat
- Find a recycling symbols on different packaging e.g. the first one to find a certain symbol
- Sing recycling songs e.g. The Recycle Song (Cathy Fink): Recycle it! (Jenny Beeching)

Teacher's Notes: Adaptation

Vocabulary relevant to this topic

- Habitat –where a plant or animal lives
- Adapted – suited to the environment where plant or animal lives
- Decompose – break into smaller bits
- Thermometer – something we use to measure temperature
- Data logger – something we use to measure light or temperature or amount of wetness
- Quadrat – something we use to find out what is living in a big area

- Grow; Eat; Move; Dark; Light; Wet; Dry; Some minibeast names e.g. ladybird, beetle, spider, bee; insect; alive; living; plants; animals; legs; body; leaf; stem; shell; wings; antennae; litter

Background information about this topic

- Organisms are adapted to their habitat e.g. fish can breathe under water and pine trees have thin leaves. Smooth leaves so heavy snow slides off. Plants and animals are adapted to daily changes e.g. day and night. Most plants and animals are active in the day e.g. sunflower heads follow sun across sky but some are more active at night. Small animals are safer from predators at night although animals like owls and bats are adapted to hunt them. Owls have large eyes and sensitive ears and bats use echolocation. Plants and animals are also adapted to seasonal changes e.g. plants become dormant;birds migrate and some animals hibernate.
- Adaptations in hot and cold climates often include differences in ears and noses – these are often larger in hot climates to give a bigger surface area to lose heat from. Animals in hot climate often have a bigger surface area to volume ratio so again there is more surface to lose heat through for the size of animal. In cold climates animals have thicker fur and brown fat (this generates lot of heat quickly).

- Explaining adaptation is difficult. A lot of people think that plants and animals can change at will to match the environment which is not the case and was the view held by a scientist called Lamarck. Within any species there is variety. Sometimes a particular variation might help a plant or animal survive when conditions change. Others die off and usually do not live to breed. Over time and if conditions stay the same the plants and animals found there will be the ones most suited to the environment. For example, individuals vary in their resistance to particular diseases. If a virulent virus came along only humans with a variation to resist the disease would survive and produce children. They may or may not pass on their genes for resistance to their children but only children with the resistant gene would survive. Humans have become adapted to a new environment but not by choice but because some were lucky enough to have a particular variation.
- The type of place where an organism normally lives is a habitat. Within that there can be microhabitats e.g. a crack in a wall, underneath a stone. The collection of plants and animals in a habitat is called a community. A community and the environment form an ecosystem. Habitats must supply everything an organism needs i.e. food, shelter, water, oxygen
- The length of time for some things to decompose/ break down is given below. There is some slight variation on times on different sites but the relative times are the same:
  Banana Peel- 2 years; Orange peel- 2 years; Apple Core- 2 months; Paper Bag- 1 month; Cardboard- 2 months; Milk Cartons- 5 years; Newspaper- 6 weeks; Paper Towel- 2-4 weeks; Cotton Glove- 3 months; Nylon fabric -30-40 years; Tin Can- 50 years; Batteries -100 years; Aluminium Can- 200-500 years; Disposable nappies- 550 years; Plastic Bags- 20-1000 years; Glass- 1-2 million years; Cigarette Butts- 10-12 years; Leather shoes- 25-40 years; Rubber-Boot Sole- 50-80 years; Polystyrene packaging –forever (breaks into very small bits rather than decomposing); Wood -10-15 years; Plastic 6 pack cover – 450 years; Rope 3-14 months; Wool clothes -1-5 years.

Adaptation P1-3

Objective 1: To explore different habitats

Descriptions of intended outcomes at different levels of attainment

- Encounters some different habitats or aspects of them (P1i)
- Shows a random fleeting response to aspects of a habitat (P1ii)
- Shows interest in aspects of habitats (P2i)
- Shows consistent or differentiated response to exploring aspects of habitats (P2ii)
- Participates in shared activities exploring habitats with less support (P3i)
- Actively explores aspects of the habitats for more extended periods (P3ii)

Adaptation P1-3

Objective 1: To explore different habitats

Possible Activities:	Resources:
Touch different things found in habitats such as soil, rocks, grass, leaves or pupils could be laid on grass, feet put in leaves or soil etc	Some safe objects collected from environment

Optional activities you might like to try include:	Resources:
Vary the habitat so the things feel different e.g. pond plants such as bulrushes, pond weed, water lilies	Other safe objects from different environment
Vary the habitat so the things feel different e.g. woodland. By pushing pupils through woodland they experience a number of different senses	

Points to Note:

Pupils will need to focus on more tangible aspects of the environment e.g. food, drink, helpers, toilets

Be aware of allergic reactions

When working outdoors check there is no broken glass, dog faeces etc.

Wash hands after touching plants, animals or objects found outside

Adaptation P1-3

Objective 1: To explore different habitats

Possible Activities:	Resources:
Keep a minibeast in the classroom and regularly draw attention to it e.g. large land snails	African Land snails; glass tank;

Optional activities you might like to try include:	Resources:
Keep a different minibeast e.g. caterpillars to hatch into butterflies	Hatching Butterflies kit
Keep a different minibeast e.g. Meal worms or earthworms	

Points to Note:

CLEAPSS guidance on keeping African Land snails.

Meal worms can be kept in an open tank of bran. They go through complete life cycle and need to water or lid on the tank

Adaptation P1-3

Objective 1: To explore different habitats

Possible Activities:	Resources:
Make a model desert environment in the classroom using large sand trays and succulent plants	Large trays; sand of different coarseness; succulents

Optional activities you might like to try include:	Resources:
Make a model rainforest using lots of pot plants and hose pipe or watering can as rain or visit tropical house	Pot plants; enclosed area e.g. swimming pool area; hose pipe; watering can
Make a model North pole environment or turn the temperature really low in sensory room. This is good to do in summer as the contrast to outside if really noticeable	

Points to Note:

Check any possible issues with succulent plants e.g. aloe vera

Adaptation P1-3

Objective 1: To explore different habitats

Possible Activities:	Resources:
Talk about human's basic needs. Look at samples of food and drink pupils bring in. Explore school for places to find food, drink and shelter. Find the best place for a picnic.	

Optional activities you might like to try include:	Resources:
Make own mini habitats using logs or grow bags with plants in. Create a small sensory garden area even in the classoom	Logs; grow bags; plants like mimosa pudica (responds to touch), sundew, herbs, lavender; windchimes etc
Make own mini habitats for birds using bird table, bird bath, nesting boxes with camera inside	

Points to Note:

Be aware of allergic reactions

When working outdoors check there is no broken glass, dog faeces etc.

Wash hands after touching plants, animals or objects found outside

Adaptation P1-3

Objective 1: To explore different habitats

Possible Activities:	Resources:
Collect leaf litter and sort through to find minibeasts	Leaf litter; newspaper; magnifying glasses: photos or pictures of minibeasts

Optional activities you might like to try include:	Resources:
Take pupils pond dipping to collect pond animals	Pond nets; containers; simple identification sheets
Dig up soil form different environments and look for minibeasts in soil.	

Points to Note:

Be aware of allergic reactions

When working outdoors check there is no broken glass, dog faeces etc.

Wash hands after touching plants, animals or objects found outside

Adaptation P1-3

Objective 1: To explore different habitats

Possible Activities:	Resources:
Explore a safe way to collect some minibeasts such as tree beating, pooters or pond dipping. Name some of minibeasts found using pictures or photos to help	Large sheets; pond nets; pooters, containers to collect animals in; Photos or pictures of minibeasts

Optional activities you might like to try include:	Resources:
Explore a different way to collect minibeasts e.g. use pooters or pitfalls Name some of minibeasts found using pictures or photos to help	Pooters; apitfall is a pot sunk into the ground to catch small ground creatures; Photos or pictures of minibeasts
Explore a different way to collect minibeasts e.g. use nets Name some of minibeasts found using pictures or photos to help	

Points to Note:

Be aware of allergic reactions

When working outdoors check there is no broken glass, dog faeces etc.

Wash hands after touching plants, animals or objects found outside

Return minibeasts to environment where found

Adaptation P1-3

Objective 1: To explore different habitats

Possible Activities:	Resources:
Investigate if all the leaves on a bush are the same size. Talk about why they might be different sizes (make link to different habitats). Measure the amount of light.	Light meters; paper to draw round leaves; rulers to measure leaf length

Optional activities you might like to try include:	Resources:
Investigate what foods you could take on holiday with you to the North Pole linked to survival in a cold environment	Variety of foods; access to freezer; container or bags to put food in
Investigate whether plants grow the same in different types of soil	

Points to Note:

Be aware of allergic reactions

When working outdoors check there is no broken glass, dog faeces etc.

Wash hands after touching plants, animals or objects found outside

Adaptation P1-3

Objective 1: To explore different habitats

Possible Activities:	Resources:
Find out about a further afield environment e.g. desert and think about the why few people live there. Link this to creating a desert environment see P levels 4-6	Access to internet and books for research

Optional activities you might like to try include:	Resources:
Find out about a different further afield environment e.g. rainforest and think about the problems for humans. Link this to creating a rainforest environment see P levels 4-6	Access to internet and books for research
Find out about a different further afield environment e.g. polar and think about the problems for humans. Link this to creating a polar environment see P levels 4-6	

Points to Note:

Adaptation P1-3

Objective 2: To explore how different living things are adapted for their habitat

Descriptions of intended outcomes at different levels of attainment

- Encounters some different clothing for different weather (P1i)
- Shows a random fleeting response to aspects of clothing (P1ii)
- Shows interest in aspects of clothing (P2i)
- Shows consistent or differentiated response to exploring different clothing (P2ii)
- Participates in shared activities exploring clothing with less support (P3i)
- Actively explores aspects of the clothing for more extended periods (P3ii)

Adaptation P1-3

Objective 2: To explore how different living things are adapted for their habitat

Possible Activities:	Resources:
Experience different clothing for cold weather	Cold weather clothing

Optional activities you might like to try include:	Resources:
Experience different clothing for hot weather	Hot weather clothing
Experience other things humans do when the environment is not comfortable e.g. use sun cream, use a fan, use a heat bag; eat ice cream or hot soup	

Points to Note:

Be aware of food or sun cream allergies

Some children are allergic to fabrics containing wool or latex fabrics

Adaptation P1-3

Objective 2: To explore how different living things are adapted for their habitat

Descriptions of intended outcomes at different levels of attainment

- Encounters some different clothing for different weather (P1i)
- Shows a random fleeting response to aspects of clothing (P1ii)
- Shows interest in aspects of clothing (P2i)
- Shows consistent or differentiated response to exploring different clothing (P2ii)
- Participates in shared activities exploring clothing with less support (P3i)
- Actively explores aspects of the clothing for more extended periods (P3ii)

Possible Activities:	Resources:
Experience how different clothing looks in UV light	Light room or UV light; white and coloured clothing

Optional activities you might like to try include:	Resources:
Experience some aspects of safety clothing e.g. hard hats; reflective jackets; safety boots. Possibly linked to a sensory story	Safety clothing; make up simple sensory story to link clothing to
Experience using an umbrella and pouring water on it or erect a tent/ gazebo got pupils to sit in or experience being wrapped in different blankets	

Points to Note:

Adaptation P1-3

Objective 2: To explore how different living things are adapted for their habitat

Possible Activities:	Resources:
'Hide' objects in the classroom and ask pupils to find them. Talk about which were easy to find	Selection of objects of different sizes, shapes and colours to hide

Optional activities you might like to try include:	Resources:
'Hide' objects in one part of the school grounds and ask pupils to find them. Talk about which were easy to find	Selection of objects of different sizes, shapes and colours to hide
'Hide' objects in a different part of the school grounds and ask pupils to find them. Talk about which were easy to find Use the caterpillar camouflage activity	

Adaptation P1-3

Objective 2: To explore how different living things are adapted for their habitat

Possible Activities:	Resources:
Look at pictures and video clips of nocturnal animals e.g. owls, bats, hedgehogs. How are they different and why? Try the Bat and Moth game	http://www.tes.co.uk/teaching-resource/Adaptations-between-nocturnal-and-diurnal-animals-6174600/ http://www.tes.co.uk/teaching-resource/Nocturnal-animals-6175411/ Images of nocturnal animals

Optional activities you might like to try include:	Resources:
Look at pictures of trees in different seasons and look for changes.	Images of trees in 4 seasons
Look at pictures of the same animals in different seasons e.g. thicker fur, changing colour of coat	

Points to Note:

Bat and Moth Game
Stand the pupils in a circle. Choose someone to be a bat and another child to be the moth. Blindfold the bat, but not the moth. The bat takes one step and then says 'bat'. Then the moth takes a step away from the bat and says 'moth' (thus a sort of echolocation can be done). This is repeated until the bat has tagged (eaten) the moth.

Adaptation P1-3

Objective 2: To explore how different living things are adapted for their habitat

Possible Activities:	Resources:
Find out how to keep a polar bear cool in the desert. Make animal shapes in the freezer and use different materials to wrap them in. Place them in 'desert' and see which melts last. Or could make into a race and see which melts first!	Animal shape moulds; different materials; mock desert made form tray and sand and lamp

Optional activities you might like to try include:	Resources:
Find out the best sized camel feet to walk on sand	Silver sand; 'pretend camel made from plasticine with straw legs; cardboard to make different feet
Find out how well different seeds survive the winter Or find out which plants survive winter best by putting in freezer and comparing before and after	

Points to Note:

Adaptation P1-3

Objective 2: To explore how different living things are adapted for their habitat

Possible Activities:	Resources:
Talk about some simple adaptations that polar bears have. Bring adaptation nearer home and talk about dogs panting and then link to pigs rolling in mud to keep cool. Investigate if mud keeps an animal cool. Try thick and thin layers of mud.	Pictures or film clips of polar bears: cans; mud; thermometers or data loggers

Optional activities you might like to try include:	Resources:
Talk about some simple adaptations that camels have. Talk about hibernation. Find the best place in the school to keep a hedgehog warm	Pictures or film clips of camels: Hot water bottles to be hedgehog: themometers or data logger
Talk about some simple adaptations squirrels have Investigate in big ears help keep an animal cool. Make different sized ears out of foil and attach to tins	

Points to Note:

Be aware of allergies to mud. Wear gloves

It might be useful to show video clip of pigs rolling in mud (You tube)

Adaptation P1-3

Objective 2: To explore how different living things are adapted for their habitat

Possible Activities:	Resources:
Look at some unusual plants and how they are adapted by comparing to plants in the local environment	Insectivorous plants e.g. venus fly trap; pitcher plant; sundew; mimosa; air plants

Optional activities you might like to try include:	Resources:
Look at some aquatic plants and how they are adapted by comparing to plants in the local environment	Water lilies; pond weed; duckweed; bullrushes
Look at some hot climate plants and how they are adapted by comparing to plants in the local environment	

Points to Note:

Be aware of allergies to plants and some prickly plants

Adaptation P1-3

Objective 2: To explore how different living things are adapted for their habitat

Possible Activities:	Resources:
Explore how earthworms are adapted. Look at features: listen to bristles as they move over paper: find out if they react to light/ different coloured light. How do these things help them live underground?	Earthworms; containers; paper; magnifying glasses; torches; coloured filters or transparent sweet wrappers

Optional activities you might like to try include:	Resources:
Explore what conditions woodlice or meal worms like best. Woodlice will eat different coloured paper!	Woodlice or meal worms; containers: wet and dry leaves: paper to cover part of the container to make it dark; different coloured paper
Explore which food land snails prefer of which surfaces they prefer to walk over Research common features plants and animals have that live on land, in water or in air.	

Points to Note:

Adaptation P1-3

Objective 3: To explore how humans can impact on the environment

Descriptions of intended outcomes at different levels of attainment

- Encounters some materials that can be recycled (P1i)
- Shows a random fleeting response to Scavenger Hunt (P1ii)
- Shows interest in aspects of packaging or other items (P2i)
- Shows consistent or differentiated response to Scavenger Hunt or food packaging/ household items (P2ii)
- Participates in shared activities exploring the school for litter (P3i)
- Actively explores aspects of the food packaging/ household items for more extended periods (P3ii)

Adaptation P1-3

Objective 3: To explore how humans can impact on the environment

Possible Activities:	Resources:
Touch different food packaging that can be recycled	Food packaging

Optional activities you might like to try include:	Resources:
Touch different household items that can be recycled	Household items to recycle e.g. fabrics, shoes, plastic bags; clothes. Newspaper
Touch different items that can't be recycled through household recycling bin	

Points to Note:

Some pupils may be resistant to touching objects

Ensure that food packaging is clean and nothing is sharp.

Ensure children do not taste or put any of the products used in this practical activity near their mouths.

If children have cuts on their hands, cover them with waterproof plasters.

Adaptation P1-3

Objective 3: To explore how humans can impact on the environment

Descriptions of intended outcomes at different levels of attainment

- Encounters some materials that can be recycled (P1i)
- Shows a random fleeting response to Scavenger Hunt (P1ii)
- Shows interest in aspects of packaging or other items (P2i)
- Shows consistent or differentiated response to Scavenger Hunt or food packaging/ household items (P2ii)
- Participates in shared activities exploring the school for litter (P3i)
- Actively explores aspects of the food packaging/ household items for more extended periods (P3ii)

Possible Activities:	Resources:
Experience going on a 'Scavenger Hunt'	

Optional activities you might like to try include:	Resources:
Vary habitat for 'Scavenger Hunt'	
Make it a hunt for litter in school	

Points to Note:

Adaptation P1-3

Objective 3: To explore how humans can impact on the environment

Possible Activities:	Resources:
Walk around school to look for litter. Create a simple recording sheet with photos of different areas in school to tick if any litter found there	Simple recording sheet; photos of different areas round school

Optional activities you might like to try include:	Resources:
Find different places to put waste in school e.g. bins in classrooms, recycling bins, bins for medical waste, food waste	
Visit a local supermarket to see what recycling bins are present and symbols used	

Points to Note:

Adaptation P1-3

Objective 3: To explore how humans can impact on the environment

Possible Activities:	Resources:
Find out which packaging is best for the environment by testing which dissolve in rain Show pupils the McDonalds meal that after 14 years has not decayed http://www.telegraph.co.uk/news/worldnews/northamerica/usa/10015137/McDonalds-hamburger-looks-the-same-after-14-years.html	Different packaging materials e.g. polystyrene, cornstarch packaging, bubble wrap, tissue paper: Test to see which dissolve in rain.

Optional activities you might like to try include:	Resources:
Investigate how well different toilet papers break down in water.	Different brands of toilet rolls; containers to mix in; water;
Investigate of different coloured toilet papers break down differently	

Points to Note:

Adaptation P1-3

Objective 3: To explore how humans can impact on the environment

Possible Activities:	Resources:
Investigate the effect of 'acid rain' on seedlings. Could extend by varying the strength of the acid rain	Bean seedlings in pots; acid rain – use dilute hydrochloric acid or use vinegar and water: Water the seedlings regularly with same amount of acid rain or plain water. Observe over couple of weeks

Optional activities you might like to try include:	Resources:
Investigate how much dust is deposited on different walls outside. Give pupils a time line for things to decompose and let them find out how long some food packaging takes to break down	Sellotape; white paper; Press the sellotape onto different walls/ surfaces and stick onto white paper. Compare and suggest reasons for differences: Different types of food packaging; time line for decomposing
Investigate the effect of chemicals on pond life or brine shrimps Give pupils a time line for things to decompose and let them find out how long some other household items take to decompose	

Points to Note:

If appropriate use clip below showing acid and limestone http://www.earthscienceeducation.com/videos.htm

Adaptation P1-3

Objective 3: To explore how humans can impact on the environment

Possible Activities:	Resources:
Help pupils create a time line for things to decompose. Attach common everyday objects to the correct place in the timeline Discuss the idea of upcycling – turning things that might be thrown away into useful items e.g. toilet roll tubes as pencil holders. Show some common items we throw away and see if pupils can come up with ideas for them.	See teacher notes for some decomposition times for common materials. Selection of household objects that may be thrown away. Images of upcycled items

Optional activities you might like to try include:	Resources:
Find out which objects decompose and which only break into small pieces. Use this information to sort household materials into the two categories	Selection of household objects that may be thrown away
Investigate the best paper to make recycled paper. Also can vary paper by adding starch or colour: change temperature of water; try different ways of drying e.g. hairdryer, rolling over surface etc	

Points to Note:

Frames for making recycled paper can be made from old picture frames with metal screening stapled of duct taped onto it. Need to be like a flat sieve.

Adaptation P4-6

Objective 1: To explore different habitats

Descriptions of intended outcomes at different levels of attainment

- Shows interest in living things collected from habitat (P4i)
- Explores using vocalisation (P4ii)
- Shows anticipation of finding out about different aspects of a habitat (P5i)
- Responds to simple scientific questions (P5ii)
- Recognises distinctive features of living things in a habitat (P6i)
- Predicts where they might find some animals in an environment (P6ii)

Adaptation P4-6

Objective 1: To explore different habitats

Possible Activities:	Resources:
Walk round school grounds to look where plants and animals are living. Use pictures or symbols as clues.	

Optional activities you might like to try include:	Resources:
Walk round a local park to look where plants and animals are living. Use pictures or symbols as clues.	

Points to Note:

Be aware of allergic reactions

When working outdoors check there is no broken glass, dog faeces etc.

Wash hands after touching plants, animals or objects found outside

Adaptation P4-6

Objective 2: To explore how different living things are adapted for their habitat

Descriptions of intended outcomes at different levels of attainment

- Shows interest in living things or different clothing or hidden objects (P4i)
- Explores using vocalisation (P4ii)
- Shows anticipation of finding the hidden objects or putting on different clothing (P5i)
- Responds to simple scientific questions (P5ii)
- Recognises distinctive features of some nocturnal animals or seasonal changes (P6i)
- Records by putting objects easy to find in a pile (P6ii)

Adaptation P4-6

Objective 2: To explore how different living things are adapted for their habitat

Possible Activities:	Resources:
Give pupils different clothing and ask them to select what they would wear in the summer or winter	Range of different clothing or use images if not available

Optional activities you might like to try include:	Resources:
Give pupils different clothing and ask them to pick things that could keep them safe	Clothing to include safety helmet; wellingtons; reflective jacket; water wings etc
Give pupils different clothes and ask them to pick things that could keep them hidden in the desert? snow? Forest?	

Points to Note:

Some pupils may be sensitive to different fabrics

Adaptation P4-6

Objective 3: To explore how humans can impact on the environment

Descriptions of intended outcomes at different levels of attainment

- Shows interest in finding litter (P4i)
- Explores items provided (P4ii)
- Shows anticipation of finding out about litter or recycling (P5i)
- Responds to simple scientific questions (P5ii)
- Recognises what litter is or what tells them about recycling (P6i)
- Records where they found litter in school (P6ii)

Adaptation P4-6

Objective 3: To explore how humans can impact on the environment

Possible Activities:	Resources:
Look at different food packaging. What can be recycled? What helps you know? use this to begin to sort packaging	Variety of food packaging

Optional activities you might like to try include:	Resources:
Look at other household items. What can be recycled? What helps you know?	Household items such as newspaper, waste food, cleaning stuff containers, old mugs, old clothes
Look at items in the classroom or around school. What can be recycled? What helps you know? Or sort items into glass, metal, plastic – great fun if you use real ‘ bins’	

Points to Note:

Do not take rubbish out of existing bins. Items may be sharp or contain hazardous materials.

Adaptation P7-8

Objective 1: To explore different habitats

Descriptions of intended outcomes at different levels of attainment

- Begins to name some minibeasts (P7i)
- Observes some features of living things (P7ii)
- Describes some basic needs of animals (P8i)
- Sorts objects found in different habitats (P8ii)

Adaptation P7-8

Objective 1: To explore different habitats

Possible Activities:	Resources:
Go for a walk round school grounds and collect different plants. Look at some of the features of the plants. Take photos!	Trowels; trays to collect plants in; photos or pictures to name plants; digital camera

Optional activities you might like to try include:	Resources:
Give pupils some different pond plants. Look at some of the features of plants	Pond plants either form school pond or bought from garden centre.
Give pupils some different herb plants or vegetables. Look at some of the features of the plants.	

Points to Note:

Be aware of allergic reactions

When working outdoors check there is no broken glass, dog faeces etc.

Wash hands after touching plants, animals or objects found outside

Pupils can grow own vegetables. Also many do not think of vegetables as plants.

Adaptation P7-8

Objective 2: To explore how different living things are adapted for their habitat

Descriptions of intended outcomes at different levels of attainment

- Communicates simple observations (P7i)
- Record some features that help animals be camouflaged (P7ii)
- Describes what makes good/bad camouflage (P8i)
- Makes suggestions for planning and saying what they found out (P8ii)

Adaptation P7-8

Objective 2: To explore how different living things are adapted for their habitat

Possible Activities:	Resources:
Find the best background to hide different animals or make camouflage and decide which is best	Pre-prepared animal shapes; paint; paper; materials; range of different backgrounds

Optional activities you might like to try include:	Resources:
Design the best camouflage clothes for a for a person to hide in the school garden	Person shapes; paints; materials; scissors;
Design a butterfly so that it can hide on a tree trunk without being spotted by birds	

Points to Note:

If appropriate you could use Elmer the Elephant story

Adaptation P7-8

Objective 3: To explore how humans can impact on the environment

Descriptions of intended outcomes at different levels of attainment

- Observes some changes in investigations (P7i)
- Records simply different types of litter or times to decompose (P7ii)
- Describes some problems with litter for animals (P8i)
- Sorts objects found on Scavenger Hunt (P8ii)

Adaptation P7-8

Objective 3: To explore how humans can impact on the environment

Possible Activities:	Resources:
Go on a 'Scavenger Hunt' and collect objects that might not belong in the habitat. Talk about how they could be dangerous to animals.	http://www.youtube.com/watch?v=Se12y9hSOM0 shows problems of plastic Gloves; containers; newspaper

Optional activities you might like to try include:	Resources:
Vary habitat for 'Scavenger Hunt'	Gloves; containers; newspaper
Under take a litter hunt in school. Record most common type of litter	

Points to Note:

Use gloves when collecting litter and beware of sharp objects

Adaptation L1-3

Objective 1: To explore different habitats

Descriptions of intended outcomes at different levels of attainment

- Records, with help, plants and animals found in a habitat (L1i)
- Makes sensible suggestions about how to find the answer to a question (L1ii)
- Compares two different habitats (L1iii)
- Identifies some physical features of an environment (L2i)
- Plans simply what to do in an investigation (L2ii)
- Records independently plants and animals found in habitats (L2iii)
- Describes some different aspects of further afield environments (L3i)
- Plans how to find the answer to a question including what equipment and what observations the will make (L3ii)
- Identifies what results show and any patterns in results (L3iii)

Adaptation L1-3

Objective 1: To explore different habitats

Possible Activities:	Resources:
Use simple instruments(with help as needed) to measure aspects of two different habitats. Compare the two habitats. Which has the most plants? Minibeasts? Which is the most common plant? (This can be done without knowing names of plants e.g. take a photo, tick on identification sheet) Compare 2 habitats using photographs and discuss why it isn't always possible to visit some habitats and what information they can and cannot get from a photo	Thermometer, rain gauge, light meter or data loggers, simple identification sheets, camera

Optional activities you might like to try include:	Resources:
Use a quadrat to sample plants growing on the school field or in the park. Compare mown and unmown areas	Quadrats or simple wooden frames, simple identification sheets, camera
Use a quadrat to find out how the number of one or two types of plants changes as you move away from a tree or a wall. Use the quadrat every 2 metres from the tree	

Points to Note:

Be aware of allergic reactions

When working outdoors check there is no broken glass, dog faeces etc.

Wash hands after touching plants, animals or objects found outside

Use a grid to help pupils to compare two habitats

Adaptation L1-3

Objective 2: To explore how different living things are adapted for their habitat

Descriptions of intended outcomes at different levels of attainment

- Describes simply some ways animals are adapted (L1i)
- Records results in pre-drawn tables (L1ii)
- Describes simply what they found out (L1iii)
- Compares unusual plants to local plants (L2i)
- Records results in an ordered way (L2ii)
- Begins to identify simple patterns in results (L2iii)
- Explains how adaptations help animals or plants to survive (L3i)
- Constructs tables to record their results (L3ii)
- Explains what their results show (L3iii)

Adaptation L1-3

Objective 2: To explore how different living things are adapted for their habitat

Possible Activities:	Resources:
Investigate the best bird beak for picking up seeds. Tweezers are used as bird beaks and pupils see how many of different sized seeds they can pick up in a minute. Show You tube clip on Adaptation Rapping Camel http://www.youtube.com/watch?v=YpGg-m8wyY4	Different types and sizes of tweezers, clothes clips or forceps; small and large seeds; timer

Optional activities you might like to try include:	Resources:
Investigate why animals huddle together. Link to polar bears and penguins	Tins cans to represent animals; hot water; thermometers or data logger; timer
Investigate if white is the best colour for keeping polar bears warm	

Points to Note:

Care with hot water and that pupils do not put seeds into ears or nasal passages

If appropriate can link bird beak activity to Darwin's Galapagos Island Finches

Adaptation L1-3

Objective 3: To explore how humans can impact on the environment

Descriptions of intended outcomes at different levels of attainment

- Links materials to time to decompose with help (L1i)
- Records in pre-drawn tables the results of the litter survey (L1ii)
- Begins to suggest how to collect evidence to answer a question (L1iii)
- Links materials to time to decompose correctly (L2i)
- Records results in pre- drawn tables in ordered way (L2ii)
- Plans simply how to find the answer to a question with some support (L2iii)
- Explains some of the problems with stuff we put in the bin (L3i)
- Records results independently (L3ii)
- Suggests how to improve their investigation (L3iii)

Adaptation L1-3

Objective 3: To explore how humans can impact on the environment

Possible Activities:	Resources:
Undertake a Litter survey in the school and display results	Recording sheet for survey

Optional activities you might like to try include:	Resources:
Undertake a litter survey in the school grounds and display results	
Undertake a litter survey in the local environment and display results	

Points to Note:

Children should wear gloves to pick up litter
They should not pick up broken glass or animal faeces