Daisyfield Primary School – Bucket School

Need: Buckets and imagination!

Rationale:
Advocates of outdoor learning, such as Monbiot (2016), Louv (2010) and Macfarlance (2017), describe our current generation as "nature-deficient". This cohort is growing up in an indoor world, lacking basic nature vocabulary and are obsessed with the digital world, meaning most are disconnected from the outdoors. Schools across the UK are keen to promote the outdoors across the curriculum.
Bucket Schools are versatile, portable and can be tailored to satisfy many areas of the Science National Curriculum (2014). The limits of Bucket Schools are the limits of one's own imagination! The most basic version of a Bucket School is taking the buckets and using them to create a teaching circle – an instant outdoor classroom! They can be something for the children to collect evidence in, they could be something to label or even something to launch rockets from!
There are endless possibilities with Bucket Schools and it should be used as a way of incorporating outdoor learning and giving the children an opportunity to get outside and engage with the world around them.

Here are some initial suggestions for how Bucket School can be incorporated into the Daisyfield Science curriculum.

KS1 – Cycle A	
Seasonal Changes	<u>Getting outside to observe</u> Take your buckets out and use them as seats for an outdoor classroom! Sit outside with your class and observe the weather! This is to be revisited throughout the year.
Everyday Materials	<u>Finding materials</u> Fill the buckets with label cards/label the buckets Labels: wood, plastic, glass, metal, water and rock Can the children label things that they find in the playground?

Animals including Humans	<u>Wild animals around me</u> Use the Pzaz resource "British Wildlife Cards" and label the buckets with the different animal types. Can the children sort the British Wildlife Cards into the correct buckets?
Plants	<u>Identifying plants in the playground</u> Fill the buckets with chalk and identification cards. Explore the flora and fauna of your school grounds and label what you see. At the end, go around and look at what everyone else has identified, did you find the same things?

LKS2 – Cycle A	
Animals including Humans	<u>Skeletons</u> Pzaz task – Introducing the Human Skeleton Take the buckets outside and use them to collect as many sticks as possible in the playground (might need some plant canes to sub in for the sticks) Children should use the sticks/canes to create a skeleton on the playground, the children should write any notes they know about the skeleton (names of bones, position, other facts) on their whiteboards and arrange them around the skeleton.
Forces	<u>Magnetic materials</u> Take the bar magnets and buckets outside – can the children investigate which materials in the playground are magnetic?
Rocks	<u>Different rock types</u> Fill 3 different buckets with each rock type, use the rest of the buckets as chairs Place them at different points of the playground, allow the children to investigate with the rocks – can the children make observations about the rocks and record them in some way?
Light	<u>Whole day shadow experiment</u> Attach a bamboo cane/opaque ruler to a bucket using masking tape. Place the bucket on a piece of paper (A3 or larger) and leave it outside on a sunny day. Every hour, send a child from each group outside to draw the shadow created on the paper. Next day – compare the shadows and ask if they can see a pattern between their results.
Plants	<u>Observations of plants outside</u> Use the buckets as stools and take the children outside to go and observe plants in the playground Can the children identify the different parts of each plant?

	If needed – place cones at the plants you want the children to study.

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Living Things and their Habitats	No outdoors link (microorganisms)
States of Matter	<u>Separating mixtures</u> Fill your bucket with a mixture of materials. Can the children separate the materials in the bucket?
Animals including Humans	<u>Comparing lifecycles</u> You will need images of the lifecycles of the chosen animals and some hoops from the PE cupboard Create a Venn Diagram using the hoops and get the children to cut up the life cycles and put them into the Venn diagram.
Pollination	<u>Observation of bees</u> Look at the role of bees – can you go outside and observe flowers and bees?
Living Things and their Habitats	TBC – Discussion with CT
Electricity	No outdoors link (Health and Safety)

UKS2 – Cycle A	
Forces	<u>Quickest submarine</u> Fill your buckets with water and complete the Quickest Submarine task from Pzaz outside!
Properties and Changes of Materials	<u>Reversible and irreversible changes</u> Take your buckets out and use them as seats around a campfire! Do some cooking over the campfire (making scrambled eggs, making toast etc.) and the children are to predict on their whiteboards if they think the change will be a reversible change or an irreversible change. Can you boil water over the fire? Is this reversible or irreversible? (tip – have prewarmed water or it will take too long on the fire!) Fun! Experiment with some toasted marshmallows – will this be a reversible or irreversible change?
Space	<u>Planetary sizes</u> Fill your buckets with the Pzaz equipment for planetary sizes Provide the children with a distance chart for the distances between the planets and a trundle wheel. Can the children put the planets in the correct order? – place their planets on top of the buckets!

KS1 – Cycle B	
Seasonal Changes	<u>Getting outside to observe</u> Take your buckets out and use them as seats for an outdoor classroom! Sit outside with your class and observe the weather! This is to be revisited throughout the year.
Animals including Humans	<u>Exercise challenges!</u> Link to Pzaz lesson on exercise – complete some tasks outside e.g. star jumps or running (one on a bucket can monitor the other child).
Use of Everyday Materials	<u>Float or sink?</u> Experiment (linked to Pzaz planning) on which items float or sink, do outside with buckets filled with water. <u>Build a boat</u> Fill the buckets with water, children are then to design a boat made from foil (linked to Pzaz planning) and test whether it floats in water. Add coins to see which one floats the best.
Living Things and Their Habitats	<u>Food chain</u> Fill the buckets with string and animal cards (linked to Pzaz planning) - create giant food chains with each child representing an animal. <u>Gazelles vs. Lions tig</u> Select 2 children to be lions, they are the “tiggers”, they are to then play tig, once a child is tug they are a lion, continue until all the children are lions. Class discussion: How long did that take? Was it easier when more children became lions? What will happen to the lions now they are no more gazelles?
Plants	<u>Growing</u> Grow some plants outside!

LKS2 – Cycle B	
Animals including Humans	<u>Animal Classification</u> Children to be given 3 cards each and they are to sort them into buckets labelled “predator”, “prey” and “producer”. Go through the cards in the bucket at the end to see what everyone else has come up with.
Electricity	No outdoors link (Health and Safety)
States of Matter	<u>The Water Cycle</u> Children are to go outside and observe where they can see the water cycle outside e.g. puddles, clouds, actual rain.
Living Things and their Habitats	No outdoors link
Sound	<u>How Far Will Sound Travel?</u> Children are to complete the investigation on how far sound travels outside.

UKS2 – Cycle B	
Animals including Humans	<u>Exercise and Breathing Rate</u> Children are to go outside with stopwatches and the buckets, they are to complete an investigation into amount of exercise (measured in minutes) and the effect of this on a person's breathing rate.
Light	No outdoors link
Living Things and their Habitats	TBC
Evolution and Inheritance	TBC

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Living Things and Their Habitats	<u>Food chain</u> Fill the buckets with string and animal cards.
Plants	<u>Growing</u> Grow plants outside! 😊