



List of equipment for PALMS Year 2 Activities

Topic	Year 2 Activities	Equipment
1. Resources	Essential Resources	Per student: <ul style="list-style-type: none">• Activity worksheet*
2. Water (Above ground)	Making Rain	Teacher demonstration (1 set of equipment): <ul style="list-style-type: none">• Zip lock sandwich bag• Hot (not boiling) water• Basin or large beaker of ice water Per student: <ul style="list-style-type: none">• Activity worksheet*
	Water Always Flows Downhill	Per student or small group: <ul style="list-style-type: none">• Sloping waterproof surface (cement ramp or plastic tray propped up)• Activity worksheet*
	Rainwater Collectors	Per student: <ul style="list-style-type: none">• Activity worksheet (same worksheet used for all activities marked with *)
	Collecting Rainfall	Teacher demonstration (1 set of equipment): <ul style="list-style-type: none">• A piece of plastic, such as a garbage bag• Two cups/jars of equal size• Watering can or soft drink bottle with several pin holes in bottom• Measuring cylinder or jug or teaspoon• Water• Garden or sandpit



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2. Water (Under-ground)	Water Level	<p>Teacher demonstration (1 set of equipment):</p> <ul style="list-style-type: none">• A length of clear plastic tubing, such as aquarium tubing (approx. 1m is ideal)• Water (coloured if possible)• Jug and funnel <p>Per student:</p> <ul style="list-style-type: none">• Activity worksheet**
	Moving water	<p>Per small group: (may also be done as a teacher demonstration)</p> <ul style="list-style-type: none">• Beaker, jar or glass• Eraser or book to chock up container at an angle• Coloured water in jug to fill container approx. 1/3 full <p>Per student:</p> <ul style="list-style-type: none">• Activity worksheet**• Coloured pencil (same colour as coloured water if possible)



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2. Water (Under-ground)	Groundwater supplies	<p>Teacher demonstration (1 set of equipment):</p> <ul style="list-style-type: none">• Large transparent container, such as a fish tank, catering size jar or tall plastic storage container (1L capacity minimum)• Washed gravel or aquarium pebbles to 2/3 fill container• Length of tubing, reticulation pipe or garden hose (approx. half as long as the depth of your container)• Small plants with roots (weeds are fine)• Water (coloured if possible)• Syringe (without needle), Pasteur pipette, or narrow tubing (to fit inside tubing) <p>Per student:</p> <ul style="list-style-type: none">• Activity worksheet** <p>Optional: small animal figurines</p>
	Recharge	<p>Teacher demonstration (1 set of equipment):</p> <ul style="list-style-type: none">• Bucket• Glass• Teaspoon• Masking tape or permanent marker• Water <p>Per student:</p> <ul style="list-style-type: none">• Activity worksheet (same worksheet used for all activities marked with **)





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2. Water (Transfer to point of use)	Gravity Feed	Teacher demonstration (1 set of equipment): <ul style="list-style-type: none">• Funnel• Length of garden hose or tubing (approx. 2 metres long)• Small bucket of water
	Height Increases Water Pressure/Rate of Flow	Teacher demonstration (1 set of equipment): <ul style="list-style-type: none">• Empty soft drink bottle• Thumb tack or sharp nail• Blu-tack• Water
	Height Affects Water Flow	Teacher demonstration (1 set of equipment): <ul style="list-style-type: none">• 3 paper cups or zip-lock bags of same size• Large nail or scissors• 3 student volunteers• Outdoor area, such as sandpit or bitumen/concrete area
2. Water Treatment (Small Scale)	Springs, Wells Dams and Bores	Class discussion - Teacher's Notes for background information
	Settling and Decanting Water	Per small group (1 set of equipment per group): <ul style="list-style-type: none">• Screw top bottle or jar (clear glass or plastic soft drink bottles work well)• Beaker or container for clear water (white cup provides good contrast)• Teaspoon• Water to half fill bottle or jar• Newspaper or towels for desk• Activity worksheet



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2. Water Treatment (Small Scale)	Testing Water from Different Sources	Extension activity - students to collect water samples from local natural sources, such as ponds, rivers or dams. Ensure adult supervision during collection is stressed to students.
2. Water Treatment (Large Scale)	Sand Filtering	Teacher demonstration (1 set of equipment): <ul style="list-style-type: none"> • Empty soft drink bottle with top cut off (to make wider opening) • Drawing pin or small nail to pierce holes in bottom of bottle • Clean, washed sand to 1/3 fill bottle • Container for bottle to sit in/on to collect filtered water • Dirty water to filter
	Filtering Water	Per student or small group: <ul style="list-style-type: none"> • Funnel • 1 piece of filter paper • Beaker or container to collect filtered water • Container of mixed water and soil to filter Possible substitute equipment if above is not available: <ul style="list-style-type: none"> • Soft drink bottle with top 1/3 cut off to form a funnel and beaker • Strong paper towel, Chux cloth or thin cotton fabric, for filter
2. Precious Water	Essential Water	Per student: <ul style="list-style-type: none"> • Student worksheet
	Worth its Weight in Gold	Per student: <ul style="list-style-type: none"> • Student worksheet
	A Young Bush Hero	Story to read to class from Teacher's notes





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2. Saving Water	Saving School Water	Class discussion - Teacher's Notes for background information
	PPP - Water Saving at Home	Take home activity - Equipment per student: <ul style="list-style-type: none">• Tap set to drip• Container to collect drips• Measuring jug or teaspoon• Clock, watch or timer• Optional: food colouring• Toothbrush and toothpaste• Half a glass of water• Tap and basin with plug• Piece of masking or electrical tape
2. Water (Aboriginal Perspective)	A Sign for Water	Per student: <ul style="list-style-type: none">• Activity worksheet
	Petroglyph Design	Per student: <ul style="list-style-type: none">• Activity worksheet• Petri dishes, saucers, yoghurt pot lids or other flat dishes• Flour or sand• Spoon• Pencil• Coloured pencils or pens• Newspaper to cover desk





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2. Water (Aboriginal Perspective)	Way to Water	Extension activity. Equipment per student: <ul style="list-style-type: none">• Paper to paint on• Acrylic paint in jar lids• Blunt paint brushes or dowel, straws or ends of pencils
3. Soils (Introduction)	Soil Recipe	Teacher demonstration (1 set of equipment): (Approx. half a handful of each) <ul style="list-style-type: none">• Gravel, small pebbles or blue metal rocks• Sand• Dried leaves and grass (crushed if large)• Compost or potting mix• Water - approx. 2 tablespoons to moisten mixture• Mixing bowl
	Senses and Soils	Per student or small group: <ul style="list-style-type: none">• Activity worksheet• Newspaper to cover desks• Soil from school garden• Access to somewhere to wash and dry hands with soap• Optional: hand lens or magnifying glass
	What Do We Use Soils For?	Per student or small group: <ul style="list-style-type: none">• Scrap paper for draft• Student worksheet



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3. Soils (Humus)	Humus in Soils	Per student or small group: <ul style="list-style-type: none">• Student worksheet• Approx. 2 tablespoons of garden soil (from under any mulch layer)• Container with well-sealing lid such as small soft drink bottle or jar• Water to $\frac{1}{2}$ fill container• Paper and pencil
3. Soils (and Worms)	Willie the Worm	Per student: <ul style="list-style-type: none">• Student worksheet
	Worm Farm (option)	Per class: <ul style="list-style-type: none">• Old aquarium or large transparent container• Soil• Shredded newspaper• Vegetable waste• Box or cloth to cover worm farm
3. Soils	Save Our Soil Poster	Per student: <ul style="list-style-type: none">• Student worksheet
	Fishbone	Per student: <ul style="list-style-type: none">• Student worksheet



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3. Soils	PPP - Good Soil and Bad Soil	Take home activity - Equipment per student: <ul style="list-style-type: none">• Empty jar or soft drink bottle• Soil to 1/3 fill container• Water to 2/3 fill container• Two containers such as plant pots or yoghurt pots with holes for drainage• Permanent marker• Two different soils• Fast growing seed, such as alfalfa, mung beans or peas
4. Clean Air	Dust in Air	Teacher demonstration (1 set of equipment): <ul style="list-style-type: none">• Darkened room• Torch or light from data projector
	Pollution and Lung Problems	Class discussion, perhaps with input from Community Nurse on airway problems
	Dust in the Air	Per student or small group: <ul style="list-style-type: none">• Dry weather for the week prior• Student worksheet and pen• Map of school• 6 pre-cut squares of tissue (use tissues, toilet paper sheets or napkins)• Access to stapler or glue stick
	Smoking Signs	Per student: <ul style="list-style-type: none">• Student worksheet (same sheet as activity above)
5. Minerals	Everyday Uses	Teacher background information including how to borrow minerals kits from AusEarthEd (WA only) https://ausearthed.com.au/wa/earth-space-science/

