



List of equipment for PALMS Year 3 Activities

Topic	Year 3 Activities	Equipment
1. Sun as a Source of Energy	Seeing is Believing	Teacher demonstration (1 set of equipment): <ul style="list-style-type: none">• Torch or weak point source of light• White paper or pale coloured wall• Clock or watch
	Light Print Paper	Per student or small group: <ul style="list-style-type: none">• A reasonably sunny day• Photosensitive paper. This is sometimes known as Sunprint paper• Scissors• Scrap paper, card, or small shapes• A bowl or tray of water• Ruler or rocks to hold paper in position while drying or plastic or glass Petri dishes• Student worksheet
	Sun Changed Paper	Per student or small group: <ul style="list-style-type: none">• A sunny day• Scissors• Ruler• Pen or pencil• An A4 sheet of white or coloured paper• 4 or 5 same sized strips of different white papers. (e.g. copy paper, kitchen towel, a paper napkin and the unprinted strip from the edge of a newspaper)• Glue• Student worksheet





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1. Sun as a Source of Energy	PPP - Think Ink	Take home activity - Equipment per student: <ul style="list-style-type: none">• Student worksheet• A sunny day• Scissors• Ruler• Pen or pencil• An A4 sheet of white or coloured paper• 4 or 5 different coloured sticky notes or highlighter pens
	What Colour is White Light?	Per student or small group: <ul style="list-style-type: none">• Fireworks glasses or diffraction glasses• Student worksheet Alternate activity: <ul style="list-style-type: none">• CD per student or small group
	Sunlight Source	Per student: <ul style="list-style-type: none">• Scrap paper• Student worksheet• SmartBoard, whiteboard, or blackboard
	Invisible Light	Per student: <ul style="list-style-type: none">• Hat• 1 x UV bead on half a pipe cleaner (Pale yellow beads are the least sensitive to UV light)• A UV torch (if possible)• Student worksheet





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1. Sun as a Source of Energy	Changing Christmas Baubles	Per student: <ul style="list-style-type: none">• Activity worksheet (colour print)
	Word Wall	Per student: <ul style="list-style-type: none">• Activity worksheet
	What is Hot?	Per student: <ul style="list-style-type: none">• Activity worksheet
	Parallax Error	Per pair of students: <ul style="list-style-type: none">• Ruler• Activity worksheet
	Cool School	Per student: <ul style="list-style-type: none">• Activity worksheet
	Prediction & Testing	Per student or small group: <ul style="list-style-type: none">• Thermometer• Rough map of school or classroom• Activity worksheet
	Heat from the Sun	Per student <ul style="list-style-type: none">• Activity worksheet
	Sunlight and Shade	(Quantities variable as this experiment is designed by students) <ul style="list-style-type: none">• Paper towel• Water• Teaspoons• Timer or clock• Activity worksheet





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2. Earth Spins	What the Sailor Saw	Per student: <ul style="list-style-type: none"> • Activity worksheet
	Earth Spins	Teacher demonstration (1 set of equipment): <ul style="list-style-type: none"> • Swivel chair • Short pendulum made from piece of string and a weight • Paper with large arrow drawn on it
	Time Words	Per student: <ul style="list-style-type: none"> • Activity worksheet
	Day & Night	Teacher demonstration (1 set of equipment): <ul style="list-style-type: none"> • Globe, round balloon or large round ball (e.g. basketball) • Bright light source (bright torch or lamp) • Several small figurines or paper people cutouts • Blu-tack or tape to attach figures to 'globe'
3. Timescales	Aboriginal Time	Per student: <ul style="list-style-type: none"> • Activity worksheet
	Day v Night	Teacher's notes (guided class discussion)
	Time Vocabulary	Teacher's notes (guided class discussion)
	Midday Around the World	Class demonstration (1 set of equipment): <ul style="list-style-type: none"> • A3 size (or larger) world map cut into 24 equal north/south strips (one is provided in resource) • Powerful torch
	12 Hours	None - teacher background information only



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3. Timescales	Timely Fractions	Per student: <ul style="list-style-type: none">• Activity worksheet
	Book of Hours	Per student: <ul style="list-style-type: none">• Activity worksheet• Coloured pencils/markers/crayons
	Relative Time Graph	Per student: <ul style="list-style-type: none">• Graph paper or activity worksheet• Three different coloured pencils
	Time Zones	Per student, small group or class: <ul style="list-style-type: none">• Student devices with internet access or projector linked to teacher computer
	Solar & Sidereal Day	2 people to demonstrate for class
4. Shadows	Investigating Shadows	Per pair of students: <ul style="list-style-type: none">• Sunny day• Outdoor area in the sun (remember Sun Safety!)• Activity worksheet
	Shadow Graph	Per pair or small group: <ul style="list-style-type: none">• Compass or school map to know which way is south• Sunny day• Hard smooth outdoor surface such as concrete, bricks or bitumen• Activity worksheet• Ruler or measuring tape• Watch or clock• Chalk



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4. Shadows	Shadows & Art	None - teacher background information
5. Sundials	Nodal Sundial	Per student: <ul style="list-style-type: none">• Activity worksheet (Optional - Card or flat wood to construct base of compass)• Small blob of Blu-Tack, plasticine or play dough• Pencil• Ruler Per class or small group: <ul style="list-style-type: none">• Compass (could be phone app) or school map showing compass directions• Clock or watch
	T Bar Sundial	Per student: <ul style="list-style-type: none">• Activity worksheet• Ruler• Pencil• Cardboard• Scissors• Masking or sticky tape• Chalk or marker Per class or small group: <ul style="list-style-type: none">• Compass (could be phone app) or school map showing compass directions



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5. Sundials	Gnomon Sundial	Per student: <ul style="list-style-type: none">• Activity worksheet• Blank paper• Protractor• Ruler• Pencil• Glue or sticky tape• Scissors Per class or small group: <ul style="list-style-type: none">• Atlas or internet access to find latitude
	PPP - Digital and Analogue Time	Per student: <ul style="list-style-type: none">• Activity worksheet
6. Sun, Earth & Moon	Getting the Right Perspective	Open space such as oval, undercover area or hall Per student: <ul style="list-style-type: none">• Activity worksheet Per pair of students: <ul style="list-style-type: none">• Ruler
	Modelling to Scale	Per student: <ul style="list-style-type: none">• Activity worksheet• Ruler



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6. Sun, Earth & Moon	Rotation and Orbit Models	Per student or small group of students: <ul style="list-style-type: none">• Three sheets or coloured paper or card (alternatively, paint or colour the finished model)• Pen or pencil• Ruler• Scissors• Three split pins• Nail or pin to pierce paper Per small group of students: <ul style="list-style-type: none">• Side plate (15-18cm diameter), cup, round bottle lid to trace around
	Worship the Sun	Per student: <ul style="list-style-type: none">• Student worksheet• Poster making materials