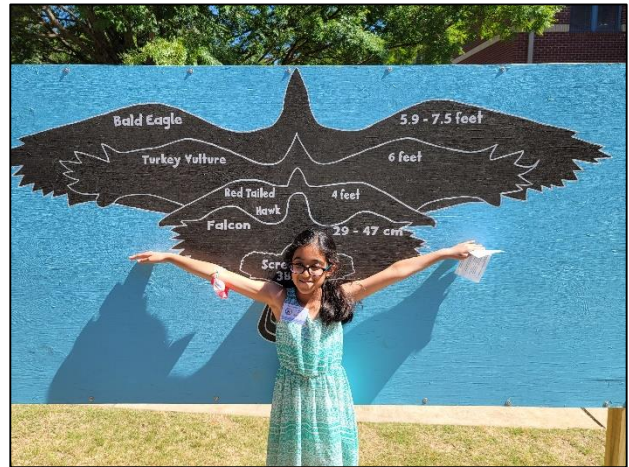




Outdoor Classroom Project Plan: Materials List & Budget for Measurement Walls

There are two types of Measurement Walls that you can include in your outdoor classroom:

- **Wingspan** – Students compare their “wingspan” to common birds found in Alabama. (**Note: The Alabama Wildlife Federation can provide free stencils for you to use to create the silhouettes of the birds and their wings.**)
- **Flowers** – Students compare their height to common wildflowers found in Alabama.



Example Wingspan Measurement Walls

(Note: If you choose to use fiber cement board, the tips of the bald eagle’s wingspan will be cut off due to the shorter length of the cement board unless you can find cement board that is 8 ft wide.)



Example Flower Measurement Walls

(Note: The example pic on the left is 6 ft x 8 ft, and the one on the right is 4 ft x 8 ft.)



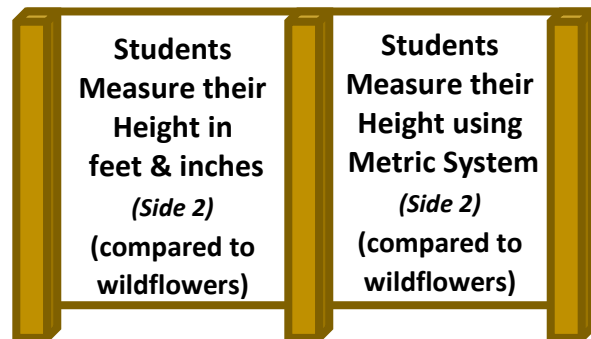
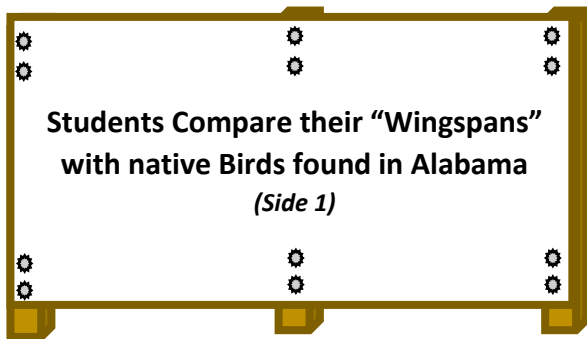
Example Measurement Wall Materials List & Budget continued...

You can paint the measurement wall(s) on **4 ft x 8 ft plywood** OR **3 ft x 5 ft fiber cement board**. The differences are:

- **3’x5’ Fiber Cement Board** – You must use 100% Acrylic Paint on cement board (no oil-based paints or stains). Cement board lasts longer outdoors than plywood, and the paint will stay more vibrant and last longer. However, the wing tips of the bald eagle will be missing on the wingspan measurement wall since its wings are between 5.9 – 7.5 feet unless you can find 4 ft x 8 ft fiber cement boards.
- **4’x8’ Plywood** – For plywood projects, use Exterior Wood Paint Primer first and then use water-based acrylic-latex paints or Epoxy paints. Opt for high-quality paint and apply with a quality brush for the best possible results. Plywood does not last as long outdoors as cement board and the paint will fade a little each year, but you can add a coat of polyurethane over the paint each year to help it last longer. The full wingspan of the bald eagle can be included on a 4 ft x 8 ft piece of plywood.

You can choose to do only one of the measurement walls, or you can create both. Either way, you will attach the wall(s) to three (3) 4 in x 4 in posts. IF you choose to create both versions of the measurement walls (the flowers & wingspans), then you have TWO (2) choices on how to construct it:

- **Option #1:** This option includes only (1) one piece of plywood/cement board that would be attached to (3) three 4”x4” posts as legs. See below. The plywood/board would be attached to all three 4”x4” posts on the “wingspan” side, so that you can use the full width. On the other side, the middle 4”x4” post would create (2) two ~2-3.5 ft panels for measuring the students’ height—one panel would be in feet and inches while the other panel would be metric measurements (meters & centimeters).



- **Option #2:** Use all three 4”x4” posts for support and attach TWO (2) pieces of plywood or fiber cement boards on both sides of the 4”x4” posts, which would create TWO 5-8 ft panels for the wingspan comparison on one side and for measuring the students’ height with the “flowers” theme on the other side.



Measurement Wall(s) Materials List & Budget

Est Cost: **\$285-\$530**

Learning Station	Materials & Supplies	Est. Cost	Source of Materials	Final Cost
MsrmtWall	(1 or 2) 3-ft x 5-ft x 1/2-in Hardie Backer Fiber Cement Water Resistant Backer Board @ ~ \$12.58 ea. <i>(to paint the measurement wall(s) on)</i> ...OR... (1 or 2) 3/4" (or 23/32") x 4' x 8' sheet of treated plywood @ ~\$46.78 <i>(to paint measurement wall(s) on)</i>	\$15-30 ...OR... \$45-95	Lowe's Item #60358 ...OR... Lowe's Item #195308	
MsrmtWall	(3) 4" x 4" x 8' treated posts <i>(to provide support for each end of the measurement wall)</i> @ ~\$10.78 ea.	\$35 total	Lowe's Item #552328	
MsrmtWall	(1) 2" x 4" x 12' treated lumber <i>(cut into two 6 ft pieces & use to stabilize your 4"x4"s in the holes while the Quikrete dries for 48 hrs)</i> @ ~\$7.48 ea	\$10	Lowe's Item #196496	
MsrmtWall	(1) Box of (50) 3.5" #10 exterior deck screws @ ~\$9.98 ea	\$10	Lowe's Item #9479	
MsrmtWall	<i>If you use plywood...</i> (2) 3M SandBlaster 2.5-in x 4.5-in 120-Grit Conventional Sanding Sponge @ \$~5.98 ea	\$10 total	Lowe's Item # 761288	
MsrmtWall	<i>If you use plywood...</i> (1) Pint Minwax Stainable Wood Filler @ ~\$12.48 ea	\$15	Lowe's Item # 164702	
MsrmtWall	(6) 50 lb bags of Quikrete Fast Setting Concrete Mix <i>(two bags per hole x 3 holes)</i> @ \$6.71 ea	\$40 total	Lowe's Item #10437	
MsrmtWall	(2) 3" Paint Brush <i>(for painting base)</i> @ ~\$16.98 ea	\$35 total	Lowe's Item #42706	
MsrmtWall	(2) Small paint brushes <i>(for details)</i> @ ~\$4.98 ea	\$10 total	Lowe's Item #105657	
MsrmtWall	(2) Paint Roller <i>(for smooth surface; base specifics on what type of paint you get)</i>	\$30	Need to ask Paint Store	
MsrmtWall	(1) Gallon of Exterior Wood Paint Primer	\$20	Need to ask Paint Store	
MsrmtWall	(1) Gallon Exterior/Outdoor Wood Polyurethane <i>(to seal the 4"x4" posts & plywood after they are painted)</i>	\$60	(depends on plywood or cement boards)	
You will need to choose your paint colors for the Measuring Wall(s)...				
<i>*Flowers Version: Below are four colors similar to the above pic, but you can change colors if you prefer.</i>				
MsrmtWall	(1) Gallon Exterior Paint – • Pale Turquoise (HexCode: # AFEEEE OR RGB: 175, 238, 238)	\$40	Need to ask Paint Store (depends on plywood or cement boards)	
MsrmtWall	(3) Quarts Exterior Paint – • Yellow (HEX # FFD300 OR RGB 255, 211, 0) • Green (HEX # OB6623 OR RGB 11, 102, 35) • Brown (HEX # 593C1 OR RGB 89, 60, 31)	\$60		



Example Measurement Wall Materials List & Budget continued...

<p><i>*Wingspan Version: You can get any background color you want, but we suggest you paint the silhouettes of the wing spans in black. If you prefer, you could use your school colors.</i></p>				
MsrmtWall	(2) Gallons Exterior Paint – Background Color & Wings Color	\$80	Need to ask Paint Store (depends on plywood or cement boards)	
MsrmtWall	(1) Quart Exterior Paint – Outlines & Text	\$20		
<p>TOTAL ESTIMATED COST: \$390 - \$570 <i>(depends on which of the two measurement wall(s) you build & if you choose to use cement board or plywood)</i></p>				