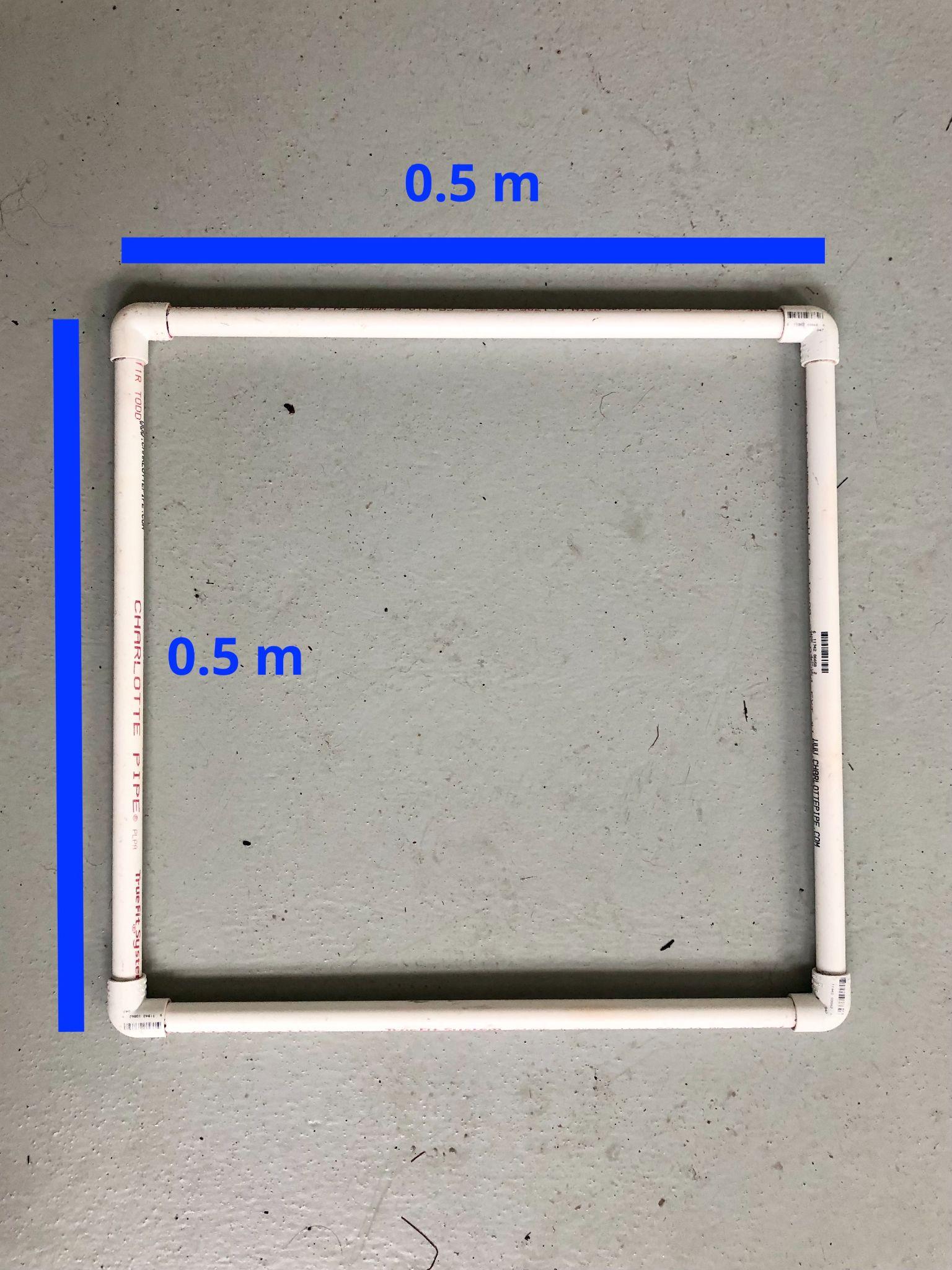
**SHELLFISH ECOSYSTEM SURVEY MATERIALS**

**0.25 m² Quadrat**

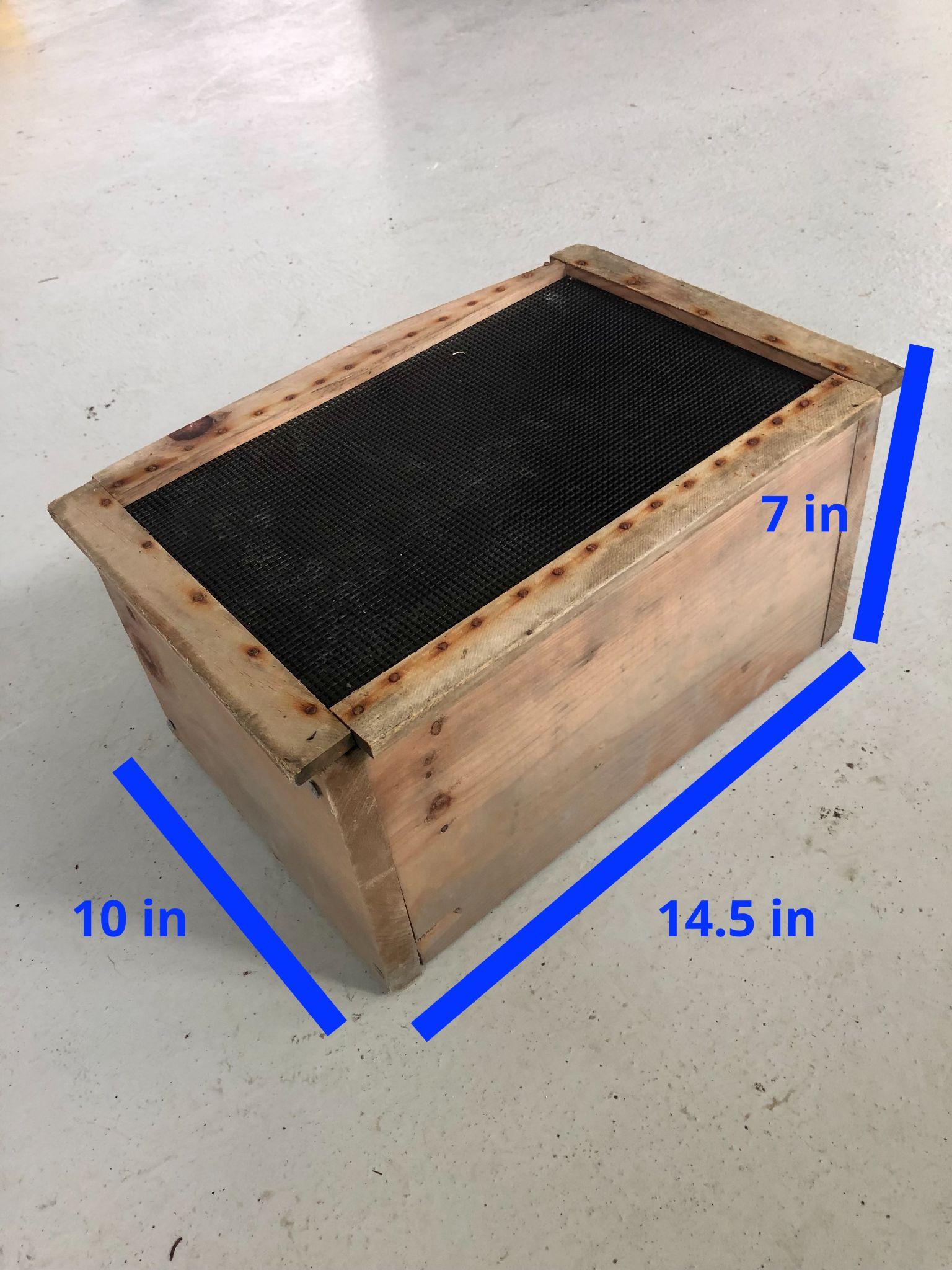
***Materials***

* ½” PVC - 7 ft
* ½” PVC elbows - 4 count
* PVC glue - 1 container

Each quadrat should measure 0.5 m x 0.5 m (or 19 ⅝ in x 19 ⅝ in). You will need about 7 ft total of ½” PVC. PVC is typically sold by the 10 ft, but can be cut down to size at your local hardware store.

Use a handsaw or circular saw to cut your four 0.5 m pieces. Attach the pieces together with the PVC elbows using PVC glue (follow the manufacturer's instructions), ensuring that the quadrat can lie flat on a level surface.

**Mesh Sieve**



***Materials***

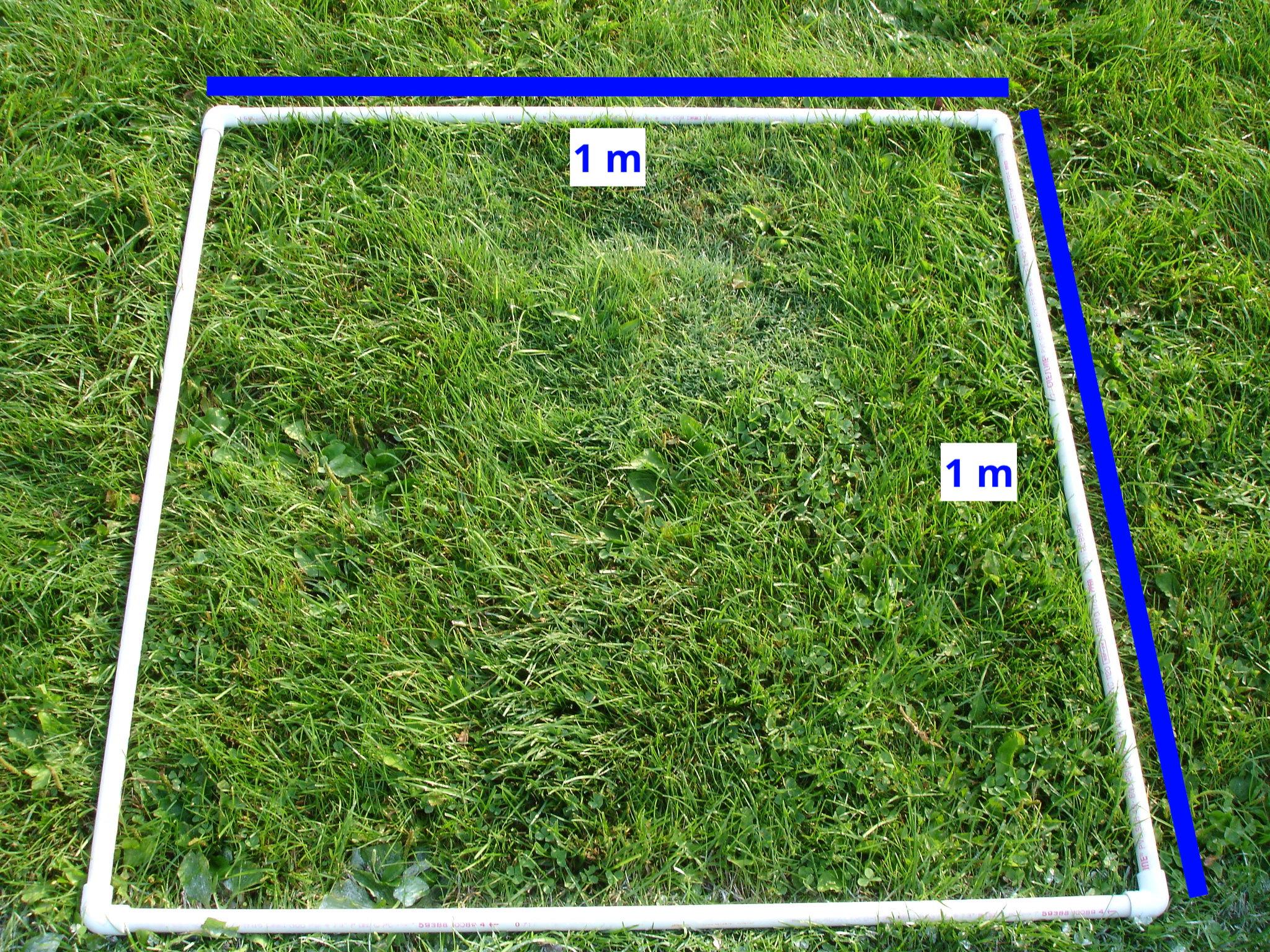
* 1 x 7 inch wood planks
* 5/16 x 1 ½ inch wooden lath
* Nails
* Mesh (0.25”)

Sieve dimensions are approximately 10”x 14.5”. Cut two 1”x 7” planks to 10” length and two to 13”. Nail together to create a 10”x 14.5” box. Cut a rectangle of mesh large enough to cover one side of the box. Attach the mesh to the box with two 10” and two 13” pieces of wooden lath.

**Clam Rake**

5-tine clam rakes are the classic rake of choice for many clammers and will serve the purpose of this survey protocol well. However, if you plan to survey in soft mud or clay a 4-tine rake may be more appropriate. Clam rakes can often be purchased at your local marine store (call ahead to check stock availability) or online (a Maine-based company [here](https://maineclamgear.com/products/5-tine-digger)).

**INTERTIDAL GREEN CRAB SURVEY MATERIALS**



**1 m² Quadrat**

***Materials***

* ½” PVC - 14 ft
* ½” PVC elbows - 4 count
* PVC glue - 1 container

Each quadrat should measure 1 m x 1 m (or 39 ⅜ in x 39 ⅜ in). You will need about 14 ft total of ½” PVC. PVC is typically sold by the 10 ft, but can be cut down to size at your local hardware store.

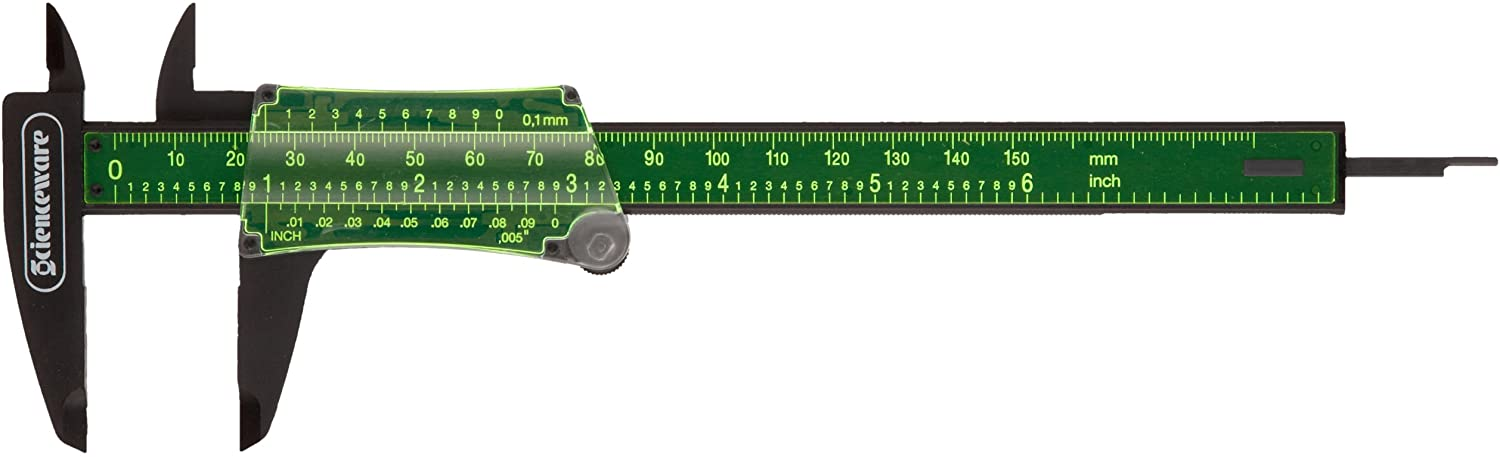
Use a handsaw or circular saw to cut your four 1 m pieces. Attach the pieces together with the PVC elbows using PVC glue (follow the manufacturer's instructions), ensuring that the quadrat can lie flat on a level surface.



**5-Gallon Bucket**

Any classic 5-gallon bucket will work for the survey to collect crabs (link [here](https://www.lowes.com/pd/United-Solutions-5-Gallon-General-Bucket/1000462835)).

**BOTH SURVEYS**



**Calipers**

All plastic calipers are best for intertidal habitats, as metal will quickly rust. SP Bel-Art Vernier Calipers (link [here](https://www.amazon.com/gp/product/B002VA5SAE/ref=ppx_yo_dt_b_asin_title_o03_s00?ie=UTF8&psc=1)) are a great option. 

**Meter Tape**

40-50 m length meter tape will work for both of these surveys. Again, try to purchase meter tape that uses as little metal as possible, as it will quickly rust. Tapes with large metal loops at the end are helpful because they can easily be attached to stakes in the mudflat (link for example [here](https://www.amazon.com/Komelon-6622IM-Measure-Fiberglass-200-Feet/dp/B008AGWPM2/ref=psdc_553292_t1_B001R1UFU6?th=1)).



**Waterproof Gloves**

Tight-fitting waterproof gloves are important for protection against sharp objects in the mud, like shells, and crab pinches. Waterproof gloves can be purchased from your local marine or garden store, or online (link [here](https://www.envirosafetyproducts.com/pip-g-tek-gloves-34-874.html?utm_source=bing&utm_medium=cpc&utm_campaign=**LP%20-%20Shop%20-%20Gloves&utm_term=4581252636709661&utm_content=(AW%20Conv)%20PIP34-874%20%7C%20%20ATG%20G-Tek%20Maxiflex%20Gloves%20Micro-Foam%20Nitrile%20Coated%20-%20Palm%20Coat%20%7C%20%242.99)).