

(b.)

Water.—Pipes, taps, the fountain. Canals.
Rafts, boats, anchors.
Solids.—Teeth, nails and claws. Sand-paper.
Pins, needles, awl, gimlet. Hook and eye.
Powders.—Chalk, pencil.
Pastes.—Mud in streets, brick-making.
Things porous.—Brick, chalk, springs of water.
Things that melt.—Candle-making. Icicles.
Water.—Manufacture of salt from brine. Rain-drops, hail, spray, water-dust, the cloud.
Things that dissolve.—The manufacture of sugar.

Air.—The chimney, draughts. Waves and breakers. Winged seeds. Shuttlecock, arrow and kite.
Forms of Strength.—The ceiling. The arch.
Ladders.
Things that stretch.—A football.
Things that bend.—Cart-springs. Paper-clips.
Spider's web.
Machines.—Hoop, fly-wheel of sewing-machine. Mangle. Wagon. Bicycle.
Movements.—Swimming.
Musical Toys.—Musical-box. Drum.

(c.)

Water.—Siphon, pump. Oil, cream.
Solids.—Hinges, tires and axles. The grindstone. Screws and screw-drivers.
Powders.—Black-lead.
Pastes.—Pottery.
Things porous.—Blotting-paper, towels, wicks, earth.
Things that melt.—Lead, iron.
Water.—Salt lakes. Distillation of water. Clouds and rain.

Things that dissolve.—Crystals, hard water, varnishes.
Air.—The popgun, the fire-engine. Winds. A sailing-ship.
Forms of Strength.—The roof. Railway bridges. Cranes.
Things that bend.—Clock-spring. Chains.
Machines.—The loom. Threshing-machine.
Rolling iron rails. Coining.
Movements.—Flying.
Musical Toys.—Tin whistle. Sounds from stretched cord.

7. MEASURING, WEIGHING, AND TESTING.

A two-foot rule.
Measurements of length—first by eye, then with rule.
Easy measurements of a square—first by eye, then with rule.
Easy measurements of rectangles.
The wire-gauge.
Callipers.
Scales and weights.
Weighing of common objects—first by hand, then with scales. Weight in ounces only.
Weighing letters.
Plumb-line.
Spirit-level.
Steam—observations on boiling water; condensation of steam, &c.
Mercury—weight of; cf. drop of mercury and drop of water; effect of heat on mercury.

Alcohol—effect of heat on it; its evaporation.
Thermometer, its manufacture.
Thermometer—uses; readings in ice, in boiling water, under the tongue, in schoolroom.
A candle—its composition. The wick.
Candle under bell-jar over water; candle in narrow-necked bottle.
Chalk—where found; its origin.
Chalk—its treatment with acid.
Chalk—its reduction to quicklime with blow-pipe; lime-water.
Sugar heated in test-tube; wood heated in test-tube.
Sulphur heated in test-tube; lead heated in test-tube.
Magnet and iron filings.
The compass.

5.—SUITABLE OCCUPATIONS.

(Circular 374, to H.M. Inspectors.)

SIR,—

Education Department, Whitehall, London, S.W., 17th March, 1896.

1. Kindergarten occupations have for some time been used in our infant-schools, and manual instruction has also been given to the elder boys in many schools for older children, while the elder girls have similarly been taught cookery and laundry-work; but the scholars in the First, Second, and Third Standards have, as a rule, had hitherto no manual training, except in so far as it has been supplied in the forms of needlework and drawing. Manual instruction is a valuable part of school training, and my Lords desire to encourage managers of public elementary schools to introduce, where circumstances permit, a suitable course of manual occupations for the three lowest standards.

Kindergarten occupations as used in the infant-school are not suitable for the children in schools for older scholars. The mat-weaving, stick-laying, embroidery, tablet-laying, and building with bricks or cubes, which serve to give young children ideas of form and number, as well as to train hand and eye, seem trivial to the ordinary child of nine or ten years of age. On the other hand, few of the common workmen's tools can with safety be put into the hands of children under the age of eleven.

2. An occupation ought to satisfy several conditions:—

(a.) It must be educative, and should especially stimulate independent effort and inventiveness. Any work that provides a real training for hand and eye is in a true sense educative;