

THE EDUCATIONAL HORIZON

A SATURDAY FEATURE

PRESENTING NEWS AND VIEWS OF INTEREST TO TEACHERS AND ALL OTHERS SEEKING IMPROVEMENT IN EDUCATION

C. T. F. RELIEF FUND

The C. T. F. is renewing its appeal for funds for the relief of refugees from the conquered countries of Europe, now stranded in Great Britain, and for the relief of those in the bombed areas in that country. There is a danger that other theatres of war have taken our attention so that we may have forgotten the bombing and suffering which still goes on in England, Scotland and Northern Ireland. There is good reason to believe, too, that the present respite from large scale attacks on the Mother Country is only a temporary one, and that the need for ready relief may increase greatly. The Executive of the Prince Edward Island Teachers' Federation has taken the proper steps in renewing this appeal. Your Executive has appointed a committee to carry the campaign here—the only organized teacher effort of this kind in which members of the profession in P. E. I. have an opportunity to join. The committee is also pleased to state that an amount of money had been received from Ottawa which was earmarked to include an increase in teachers' salaries and possibly be supplemented by a considerable sum by the local Government.—Editor.

THE ESSENCE OF GREAT TEACHING

Noble ideals are the source of power to the individual and to the nation. They are the real and abiding things. Our master ideals—the brotherhood of man and the golden rule—have lived through all the ups and downs of life deep into the feelings and habits of the people. That is the essence of great teaching.

ENGLISH

- 1. (a) Strike out the incorrect form in the following so that what remains is a correct sentence. 1. She (set set) the sup on the bench. 2. She cannot get her bread to rise (raise). 2. Between you and (I me) he got just what he deserved. 4. There (was were) six oxen in the field. 5. Neither of the boys (was were) at school today. 6. I do not like (them those) cakes. 7. Tell me (who whom) it was you met down town. 8. When a person is well treated (he they) should feel grateful. 9. My brother's plan was different (than from) mine. 10. Every person should attend to (their his) own affairs.

- (b) Underline with a single line the word in brackets that means the opposite of the given word, and with double lines the word that means the same as the given word. 1. Danger (health, unity, peril, hope, safety). 2. Borrow (action, sickness, cost, usage, woe, object).

SILENT READING TEST

Read each selection carefully and choose the most suitable statement. (a) There was a wide difference between the idea of representation held by the colonialists and that held by the dominant English leaders. The colonialists insisted that they were not represented because there was no one in Parliament whom they had chosen. The English replied that the colonialists were in fact represented in Parliament. It is true that they had as much representation in Parliament as great cities of England such as Manchester and Birmingham. But since they were accustomed to choose their own representatives by districts, towns, or counties, the colonialists felt that they could not be represented in Parliament by persons whom they had not chosen.

- 1. The colonialists and the English leaders differed widely in their ideas of representation. 2. The English believed that the colonialists were represented in Parliament. 3. The colonialists held that they would not be represented in Parliament by people whom they had not chosen. 4. The colonialists were accustomed to choose their own representatives by districts, towns, or counties. (b) Each rural family produced much of the food it used. It made clothes from home-spun wool sheared from its own sheep and built houses from logs of the forest, home-hewn and fitted. Practically the only need for which it required the co-operation of others was the need for a road to the village. Each family living in a rural community of seventy-five years ago produced nearly all it needed. 1. In the rural family of seventy-five years ago, clothes were made from home-spun wool. 2. The need of a road was about

ARITHMETIC DRILL

For arithmetic drill especially to be used for the slower pupils. As schools where the teacher has many grades to teach, here is a good question: 69x2, x3, x4, x5, x6, x7, x8, x9. Then take your answer, and divide by 2, 3, 4, 5, 6, 7, 8, 9. This question gives complete drill on the multiplication tables from 2 to 9, and it would be easy to add 10, 11 and 12, if you wish. You can give a different question to each child simply by changing the number you start with. An easier number, such as 235, could

ENTRANCE EXAMINATIONS

RURAL SCIENCE The chief function of each: Root—to take in (in solution) raw materials from the soil. Stem (if any)—to hold up the leaves to the light and the flowers to the view of insects. Leaf—to make food. (The green

leaf is the world's food factory"). Flower—to produce seeds, i. e., to reproduce the plant. (b) The four main parts of a flower are—calyx (sepals), corolla (petals), androecium (stamens), pistil (carpel). The chief function of each: Calyx—to protect the other parts during the development of the flower bud. Corolla—to attract insects with its bright colour. Androecium—to produce pollen necessary in seed-formation. Pistil—to form new plants (contained in seeds). (c) Plants attract insects in order to effect pollination (and hence fertilisation). (d) Three kinds of hardwood trees native to P.E.I. are maple, birch, beech. (e) Two kinds of softwood trees native to P.E.I. are spruce, pine. Two annual flowers suitable for a garden are snapdragon, petunia. Two perennial flowers suitable for a garden are iris, delphinium. Three biennial vegetables are turnip, dog-tooth violet. (f) Three flowers that grow in the woods only are trillium, lady's slipper, dog-tooth violet. (g) Three covering plants that grow in ponds (and may be supplemented by blue-flag, wild iris), marsh marigold. Two kinds of clover commonly grown on P.E.I. are red clover, alsike. To promote the growth of clover the farmer uses oyster-mud or ground limestone on his fields. The new imported weed appearing on many of our farms this spring (1938) is called yellow-rocket (or yellow-cress). Two new rust-resistant varieties of cereals (grains) are coronation wheat and Erban oats 1939. The new imported variety of wild mustard appearing on P.E.I. this year (1940) is called Tumbling Mustard. (h) Three signs from nature of the approach of winter are birds flying south, hares changing color (brown or white), leaves turning color to red, brown, yellow. (i) Two kinds of fish found in our rivers and streams are salmon, trout. (j) Two shore birds of P.E.I. are Plover and Curlew. Two swallows of P.E.I. are bank swallow, barn swallow. Two kinds of game-birds imported here within recent years are Hungarian partridge, ring-necked pheasant. Two birds of prey, particularly good destroyers of mice and rats, are hawk and owl. Two sparrows of P.E.I. are song sparrow, vesper sparrow. Two water-game birds of P.E.I. are Plover and Curlew. Two song birds of P.E.I. are Hermit Thrush (Song sparrow, red-winged blackbird, etc.). Two ways in which birds are especially beneficial to man are—they destroy harmful insects and they delight us with their sweet songs. The chief food of most birds is insects. Four ways of attracting birds to our homes are by providing them with water, food (in winter), by providing them with shelter, by growing grooves and shelter belts. (d) The four stages in the life-cycle of an insect are (some have three)—egg, larva, pupa, adult. Two classes of injurious insects are—those with biting mouth-parts, those with piercing-and-sucking mouth-parts. The most destructive stage in the life-cycle of an insect is the larva. Two reasons why it pays a farmer to keep bees are—they produce honey, they pollinate flowers (fruit trees, clover, etc.). Arrange the following into fruit trees, man eats, squirrel, tiger-cat, fox, robin, thrush, flicker, woodpecker. The most important branch of fisheries is lobster-fishing. Of the light breeds of horses the standard-bred is trot or pace gaited, the thoroughbred is gallop gaited. From the breeds of horses are Clydesdale, Percheron, Belgian, Shire. The Clydesdale is a draft (heavy) type of horse, originating in Scotland, weighing about 2000 pounds and having color markings reddish brown with one or more white feet and a white stripe or star in the face. (b) Three best types of cattle, and distinguishing color (or colors) of each: Herefords—red with white faces. Aberdeen Angus—black. (c) Dairy breeds of cattle: Holstein, size, largest, color, black and white. Ayrshire size, smaller, color, red and white. Guernsey, size still smaller, color reddish fawn with white. Jersey, size, still smaller, color, fawn with black muzzle and black tip on tail. Holstein, quantity of milk, most quality of milk, lowest in butter fat. Ayrshire, quantity of milk, less quality of milk, richer. Guernsey, quantity of milk, still less, quality of milk, still richer. Jersey, quantity of milk, still less quality of milk, still richer. (d) The best hay for horses is timothy. The most suitable grain for hens is wheat. The most suitable grains for fattening hogs are barley and cracked corn (or cornmeal). The number of bushels of wheat sown per acre is 1-1-2 bushels. The two general classes of feeds are nitrogenous and non-nitrogenous. (Or, concentrate (grains) and roughage.) (e) The breed of hen most commonly raised on P. E. I. is Plymouth Rock. The breed of hogs most commonly raised on P. E. I. is Yorkshire. Two reasons why, apart from their sale value, it pays a farmer to keep sheep are: (1) they thrive on coarse roughage (straw, etc.) and (2) they destroy many troublesome weeds.

(f) Apple trees true to variety are secured by grafting branches of trees of desired variety on roots secured by planting apple seeds (or by root-grafting). Apple trees do not come true from seed. If placed in moist, acid soil blue limus paper turned red. Early cutting of a hay crop is preferable because the hay has then more food-value and weeds are killed before they can go to seed. The spray used in treating potatoes for blight is known as Bordeaux Mixture. Two diseases which attack grains are rust and smut. (2) Distinguish sandy soils and clay soils with regard to: (1) weight—sandy is the heavier. (2) Power to hold moisture—clay holds moisture better. (3) Ease of working—sandy is easier (easier) to work, (clay sticky). (4) Suitability for early crops—sandy warms up earlier. The four elements most likely to become limited in the soil are nitrogen, phosphorus, potassium, calcium. Four ways in which a farmers' club may be helpful to a community are: (1) Socially. (2) Educationally. (3) Inspirationally. (4) Financially.

CURRENT AFFAIRS

December 19.—Tokyo announced that Japanese forces had landed on the island of Penang. December 21.—Hitler removed General Field-Marshal von Brauchitsch as Commander-in-Chief of the German army, and assumed that post himself. December 22.—Prime Minister Churchill arrived in Washington to confer with President Roosevelt. December 24.—The Japanese landed strong forces south of Manila and claimed the capture of Davao. The United States admitted the loss of Wake Island. British forces occupied Bengal. December 25.—The United States announced the sinking of a Japanese submarine off the coast of California. The British and French operations in China. French Indo-China, and Thailand are to be under Generalissimo Chiang Kai Shek. January 4.—U.S. bombers sank a Japanese destroyer and struck a battleship off Davao. January 5.—The Chinese High Command announced the defeat of the Japanese in a three-day assault on Changsha with a loss of 52,000 Japs. January 6. In his address to Congress on "The State of the Union," President Roosevelt called for a \$50,000,000 war program for 1942, and declared that U.S. troops would be used on many fronts including Britain. The Japanese occupied the Kuantan air base, 190 miles (one hour's flight) from Singapore. January 8.—Russian forces compelled the Germans to raise the siege of Sevastopol. The U.S. Navy reported that the Japs lost one Cruiser four destroyers, one gunboat, and one submarine before they captured Wake Island. January 9.—The British Admiralty announced the loss of the Cruiser Galatia. January 11.—The Japanese invaded the Dutch East Indies at the Northern tip of Celebes and Tarakan Island off the east coast of Borneo. The Japs captured Kuala Lumpur, capital of the Federated Malay States. January 12.—German forces in Libya were reported to be making a stand on a line 300 miles east of Tripoli and running south from El Agheila to Maradei on the coast of Morocco. January 14.—The British acknowledged the loss of Sarawak on the north coast of Borneo, thus exposing the flank of Singapore.

Poisonous Plants to be Avoided

The principal poisonous plants, native or introduced, are the following, and for obvious reasons the general public should learn to distinguish them at sight: (1) Bitter poisons, for which acids, astringents, wine, spirits, or other correctives: Garden Celandine (Chelidonium majus; arrow-bane or Water-Hemlock (Cicuta maculata and C. bulbifera); (2) Acid poisons, which should be counteracted by powerful astringents as Peruvian Bark (a species of Cinchona), and afterwards the stomach restored by soft mucilaginous matters as milk, fat, broth, etc.; Garden Monkshood (Aconitum species); the Baneberries (Actaea rubra, A. alba) and the Poison Ivy (Rhus Toxicodendron). (3) Stupefying poisons to be counteracted by vegetable acids and emetics: Jimson Weed or Thorn Apple (Datura Stramonium); Bittersweet (Solanum Dulcamara, a casual); Lactuca species, and Apium graveolens, the last two plants afford, in a cultivated state, lettuce and celery, but wild, in hedges and ditches, they are poisonous, says the old English botanist Loudon. (4) Pot poisons, to be attacked by ether, wine, or acids: Garden

Foxglove, (Digitalis purpurea); Savin Juniper (Sabina). The above is a partial list, prepared by J.C. Loudon, well on to a century ago, and most useful in an emergency. There are, however, several poisonous plants growing on the Island which are not included, and upon which the present writer hopes to gather the necessary information.

The Island of Amboina has only lately been brought under general notice, is remarkable for its climate, productions, and its history. It is not large, being but 230 square miles in area; so that it is one eighth the size of our own Island. Geographically it is one of the Molucca or Spice Islands, and lies between Celebes and New Guinea. "The climate," says a text-book, "is comparatively pleasant and healthy and the average temperature is 80 degrees F., rarely sinking below 72 degrees." Just a trifle hot, but not so hot as might be expected of an island only 3-1-2 degrees from the Equator, and pleasant indeed to think about at this season of the year. But every bean has its black, is an old saying (attributed to Aesop) and Amboina has a very heavy rainfall in the monsoon season, and is subject to hurricanes and earthquakes. Being in the Tropics, it produces fruits and vegetables like the sago-palm, bread-fruit, coconuts, sugar-cane, maize, coffee, pepper and cotton. Cloves, however, form its chief product and the Dutch, to whom Amboina belongs, have always fostered its cultivation. Probably the annual production of this pungent "spice" is in the neighborhood of 500,000 lbs.

The naturalist will find little to interest him in the animals or birds of Amboina; the insects on the other hand are particularly numerous and rich in variety. Most of the population are Malays but there are besides the aborigines, Chinese, Dutch, and a few Portuguese. The Portuguese were the first white men to visit Amboina (1512). They established a factory there, but were driven out by the Dutch in 1606. About 1615 the British put in an appearance, and formed a settlement at a place called Cambello, which they retained till it was destroyed in 1623 by the Dutch who inflicted frightful tortures on the unfortunate settlers. I can recall, as a lad, reading in a magazine about the massacre at Amboina—such was the spelling of the name at that time. The Dutch victims hanging by their toes above slow-fires below their heads! Cromwell did not unparadoxically cruel things himself, but he made England's power felt abroad, and in 1654 he forced the Dutch to compensate the descendants of the Amboina victims with the gift of 300,000 pounds together with a small island, and Amboina was twice taken (by the British) (1796 and 1810) but each time it was returned to the

Dutch when peace was concluded. Since 1814 its history has been peaceful and progressive. Now the long peace has been broken and Amboina is under Japanese domination—for a time. The Observer's Handbook for 1942—a publication which ought to be in the hands of every amateur astronomer—has a brief account of the different kinds of time now in practical use. (1) Apparent Time is given by the sun-dial. Apparent noon is shown by the sun crossing the meridian, or in other words "being due south." Apparent time is there fore measured by the degrees that the sun is east or west of the meridian. But the interval between two successive apparent noons is never constant as you may find by comparing a sundial with an exact chronometer or watch. As a clock cannot be constructed to keep apparent time, mean time is used. (2) Mean Time: the length of the mean day is the average of all the apparent days throughout the year. The real sun moves at varying rates, about the ecliptic in one year, an imaginary mean sun is considered as moving uniformly round the celestial equator in one year. (Mean is an old word for average). The difference between the apparent days throughout the year, the mean sun crosses the meridian, and the Equation of Time or we might put it. Apparent Time minus Mean Time equals Equation of Time. The E. of T. is the correction which is applied to the sun-dial to give the local mean time, and the Observer's Handbook contains a useful table of such corrections. (3) The third variety is Sidereal Time and is determined from the stars. "In accurate time-keeping," says the Handbook, "the moment when a star is on the meridian is observed and the corresponding mean time is computed with the assistance of the Nautical Almanac." Sidereal time is probably the most accurate of all. (4) Standard Time: In everyday life we use still another kind of time. A moment's thought will show that in general two places will not



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have the same mean time; indeed difference in longitude between places is determined from their difference in time. "In travelling, however, the continual changing time from station to station, a system of Standard Time was introduced, to facilitate travel. Within a certain belt 10 degrees wide, all the clocks show the same time, and in passing from one belt to the next the hands of the clock are moved forward or backward hour.

(5) Daylight Saving Time is a standard time of the next belt (belt) moved eastward. The Handbook goes on to give separate calendars for each month embodying such items as the following: (Continued on page 12, Col. 6)

IT'S AN ILL-WIND— LONDON (CP)—The Germans seized the water shortage of a Suffolk village. For years villagers had to carry in buckets from miles away, but now they get a nearby spring of pure water.

LESS SUGAR FOR HEALTH BIRMINGHAM (CP)—An article in "Medical World" says that less sugar is consumed as a result of war conditions. It is gain in health and efficiency, especially for middle-aged and elderly people.

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OUT OUR WAY



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By George