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THE
UNIVERSAL PRECEPTOR;
 BEING A
GENERAL GRAMMAR
 OF
ARTS, SCIENCES,
 AND
USEFUL KNOWLEDGE.

BY THE REV. DAVID BLAIR;
 Author of the Class-Book, English Grammar, Models of
 Juvenile Letters, Reading Exercises, and Grammar
 Of Natural and Experimental Philosophy.

X THIRD AMERICAN EDITION, WITH ADDITIONS AND
 IMPROVEMENTS.

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District of Pennsylvania, to wit :

BE IT REMEMBERED, that on the 5th day of November, in the forty-second year of the independence of the United States of America, A. D. 1817, Edward and Richard Parker, of the said district, have deposited in this office the title of a book, the right whereof they claim as proprietors, in the words following, to wit :

"The Universal Preceptor; being a general Grammar of Arts, Sciences, and Useful Knowledge. By the Rev. David Blair; author of the Class-Book, English Grammar, Models of Juvenile Letters, Reading Exercises, and Grammar of Natural and Experimental Philosophy. Third American edition, with additions and improvements."

In conformity to the act of the congress of the United States, entitled "An Act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies, during the times therein mentioned;" and also an act entitled, "An Act supplementary to an act entitled, 'An act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies, during the times therein mentioned,' and extending the benefits thereof to the arts of designing, engraving, and etching historical and other prints."

D. CALDWELL,

Clerk of the District of Pennsylvania.

Garrett Biblical Institute

Evanston, Illinois,

PREFACE

TO THE

THIRD AMERICAN EDITION.

THE Publishers of the third American edition of this valuable work of the Rev. D. Blair, and which is taken from the eighth British edition, feel gratified in believing that they are rendering to the American public a service of no inconsiderable value. From the prosperous state of science in the United States, its growing energies and the increasing number of seminaries for the education of youth, both of a private and public nature, it is obvious, that nothing can be more important and useful than an able and well-digested system, embracing in a clear, correct, and comprehensive form the first rudiments of the various sciences. This desirable object appears to be at length fully effected in the work now offered to the public. The number of editions through which it has passed in England, is a proof of the estimation in which it is there held; and the Publishers must be allowed to state, that in this edition, not only the errors incident to all works of so comprehensive a nature have been diligently corrected, but that several gentlemen of science, impressed with the utility of the work, have bestowed much pains not only in the corrections, but in contributing additional matter and entirely new-modelling many of the heads and sections, and thus rendering the whole work decidedly superior to all the foreign editions.

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Rev. Geo. W. W. W.

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PREFACE.

THE author of this work has been many years anxious to achieve his present undertaking. His experience, reason, and feelings, prove to him, that, in the progress of education, young persons ought to be enabled to acquire correct general views on all subjects, which may serve as food for the mind in after-life, and as the basis of further studies in such branches of knowledge, as, at a future period, may gratify their tastes, or accord with their interests.

Early education cannot make adepts in any branch of science; at least, without sacrificing every other subject to one: it ought, therefore, to embrace the elements of general knowledge, as the true means of enlarging and exercising the understanding, and qualifying it to engage with advantage in any peculiar pursuit.

To fill the storehouse of the memory, is the rational business of education; and, at a season of life, when the powers of reason have not acquired a useful degree of action. Nor will such general instruction interfere with particular stu-

dies, if the tutor be provided with a Text-Book, embracing the foundations of human learning: such, it is presumed, will be found in the following pages.

When the author compiled his CLASS-BOOK, he was actuated by similar principles; and he believes it is generally felt, that great advantages have accrued to young persons, from the perusal of that work.—Every tutor must be sensible, however, that the Class-Book, as a means of enlarging the sphere of knowledge, is rather to be considered as a commentary, than as a key to the temple of Science itself. The CLASS-BOOK has its superior uses; but, through its medium, the building can only be viewed at a distance; the object, then, in the present work, is to lead the young student up the steps of the portico, open the doors to him, and usher him into that superstructure, which raises man above his fellows, and places him in contact with the good and the illustrious of his species!

Without interfering with particular branches of education, all the parts of this work may be rendered familiar within two years: one paragraph may be committed to memory every day. When this task has been finished, what an ac-

cession of varied knowledge will have fallen to the lot of the pupil! How stored, will be his mind, with interesting ideas for contemplation and conversation! and how comparatively blank must be the minds of others, who have not enjoyed the same advantages!—Yet, particular studies, at the same time, need not be neglected! This book may, indeed, be collateral in labour; although it will prove primary in effect!—But the author may be said to be sanguine; he, therefore, forbears to say all that his hopes prompt him to; and leaves his book to speak for itself, and prove its worth, by its actual effects on the rising generation.

D. B.

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N. B. The Solar System should face the Title; and the Map of the World, the Article Geography, at Page 107.

THE
UNIVERSAL PRECEPTOR;
 OR,
 GRAMMAR
 OF
 GENERAL KNOWLEDGE.

I. *Introductory Particulars.*

1. **KNOWLEDGE** is either necessary and useful, or ornamental and luxurious.

It distinguishes civilized from savage life. Its cultivation in youth promotes virtue, by creating habits of mental discipline; and by inculcating a sense of moral obligation.

Knowledge is, therefore, the best foundation of happiness.

2. *Necessary* **KNOWLEDGE** is that which simply provides man with food; and with the means of sustaining life.

3. *Useful* **KNOWLEDGE** is that which teaches the arts of agriculture, clothing, building, restoring health, preserving social order, maintaining national independence, and rendering the produce of all climates subservient to the wants of our own.

4. *Ornamental* **KNOWLEDGE** relates to subjects of taste; as drawing, painting, poetry, grammar, geometry, eloquence, history, music, dancing, dramatic representation, and the living languages.

5. *Lucurious* KNOWLEDGE includes abstract enquiries; as physics, metaphysics, many branches of experimental philosophy, heraldry, antiquities, and the dead languages.*

6. Man is an animal endowed with powers of communication, memory, association, imitation, reflection and reasoning;—talents given him by his Maker; for the good use of which, he is accountable in a future state.

7. In his unimproved and uncivilized condition, man is naked, without habitation, without means of defence or offence, and possessed of no means of subsistence, besides the wild fruits and spontaneous produce of the earth.

8. To this day, many nations live naked in caverns under ground, perform no labour, and depend for their subsistence on the spontaneous products of the earth, and on the flesh of animals, which they destroy by simple stratagems.

Observation.—Such, are many of the nations of Africa; the inhabitants of New Holland; of many of the South Sea Islands; the natives of Hudson's Bay; and some of the Siberian nations; of whom, very curious particulars will be found in books of voyages and travels, and in Goldsmith's popular system of Geography.†

9. Till the Romans invaded England, the Britons lived naked, chiefly under ground, painting their bodies of various colours, bestowing no cultivation on the soil, and depending for sub-

* This division of knowledge is unavoidably imperfect; and is little respected in the details of this work.

† The observations are not to be committed to memory; but to be read by the pupil to the tutor, or by the pupil alone.

sistence on acorns, berries, and roots, and upon their skill and success in hunting and fishing.

Obs.—The people of England are indebted to the wild ambition of Julius Cæsar, for the introduction into these islands, of those arts of civilization, which had travelled from the Ganges into Persia, thence into Egypt, from Egypt to Greece, and from Greece into Italy: whence, by the lust of conquest, they were spread over Europe. In like manner, at this day, the English are the instruments, from the same causes, of reflecting back the arts of civilization, amended by a true religion, to the banks of the Ganges; and of disseminating the same blessings, to the Africans; the Americans; and the insulated people of the South Sea Islands.

10. The Romans introduced among the Britons, all the arts and knowledge which they had themselves received from the Greeks; and laid the foundation of that social state, in which we find ourselves in England, after the lapse of nearly two thousand years.

Obs.—To take a view of knowledge, as it has extended itself from the most barbarous and uncultivated ages, down to this age of literature, science and philosophy; and to render the whole, plain and familiar to young minds, and to the meanest capacities, are the objects of the present work.

II. Of the Simple Arts of Savage Life.

11. The arts of savage life were those which were possessed by the ancient Britons; and which are witnessed at this day, among all barbarous people. They include the arts of swimming, hunting, taking aim with missile weapons, and procuring fire.

12. The art of swimming, depends first, in

keeping the arms and hands under the water; in protruding only the face and part of the head out of the water; and then using such action, as will direct the body in any particular course.

Obs.—All animals swim without instruction; because they are unable to lift their fore-legs over their heads. The secret of this art depends, then, on keeping down the hands and arms, and acting under the water with them. The parts of any body which rise out of the water, sink the parts that are immersed within it.

13. Hunting is performed by most savage nations on foot, and with many of them the principal weapon is the club.—Therefore the swiftest and strongest usually become chiefs.

Obs.—Hence, Hercules, the Hero of antiquity, is drawn with no other weapon than a club; with which, alone, he is said to have performed all his wonderful exploits. Some nations, nothing removed above savages, are, however, found to have acquired the use of bows and arrows.

14. In taking aim with missile weapons, the precision which savage nations have attained, is wonderful. In throwing a stone, they seldom miss the smallest mark; they transfix fish in the water; knock down birds on the wing; and strike every enemy with unerring exactness.

Obs.—Every one is acquainted with the success of the shepherd David, in killing Goliath. Even such is the precision of the South Sea islanders at the present day.

15. One of the great attainments of savage life, was the procuring of artificial fire; but this was an art not known to all barbarous people. The inhabitants of the Ladrões considered fire as an invisible monster, when the Spaniards first introduced it among them.

16. The Persians, and other eastern nations,

after they had once acquired, or discovered fire, made its preservation a religious duty; and fire was continued in their temples, without being once extinguished, for many hundred years.—Hence, they became, or were considered, fire-worshippers.

17. Among savages, the usual mode of producing fire, is, by the rapid friction of two pieces of wood till they produce flames. Having no metals, they do not possess the simple method of communicating a spark to tinder, by the violent collision of flint and steel.

18. The clothing of savage nations has reference solely to the inclemency of the weather: and consists generally of the skins of animals, or of the natural products of vegetables, prepared by the most ingenious processes.

19. A precarious mode of subsistence is so unfavourable to the human species; that it is found, that savage tribes, in a series of ages, do not increase their numbers; and that they often become altogether extinct.

20. In the back settlements of North America, the souls in the various savage tribes, do not exceed twenty thousand; while, on an equal space of country in China, two or three hundred millions, aided by the arts of civilization, are much better fed and provided for.

21. The wretched Indians who reside in the districts that surround Hudson's Bay, often pass many days together without food; and frequently die of want, during the chase of an animal.

Obs.—Hence, the origin of hospitality and social meetings kept up in civilized life, for purposes of pleasure;

but originating in ages, when to divide with friends and neighbours the produce of the chase, was the first and the kindest of duties.

22. If there are some privations to be borne in society; if the successful emulation of industry and talents, creates great inequalities of enjoyment; and if the laws are abused, and sometimes bear oppressively on weak individuals, the worst condition of social and civilized man, is better than the best condition of the untutored savage.

Obs.—Such is man, in his native and original state, in all countries; and such are the boundaries of knowledge, among all aboriginal people: let us now consider him, in a better, happier, and more respectable condition.

III. *Of Farming, or Agriculture.*

23. The first step, from savage towards civilized life, is the acquirement, protection, and recognition of property. In early ages this consisted only, of what was essential to the immediate wants of man.

24. The first property consisted of sheep, goats, and oxen; and first husbandmen were shepherds, who tended their flocks, and drove them without restriction from pasture to pasture.

Obs.—We have a beautiful picture of the pastoral life, in the book of Genesis: Abraham, Isaac, Jacob, and their families, were shepherds or husbandmen of the earliest ages. It will be seen, that their wealth consisted in their flocks and live stock; and that they roamed over the country to find pasture.

25. In the pastoral ages of husbandry, there

was no property in land: all the country, was open and common to any occupier; and no one assumed to himself a property in the soil, or considered as his own, the produce of any particular spot.

26. In Africa, among the native Americans, and in most parts of Asia, there exists to this day, no property in the land; hence, in those countries, there is little cultivation; and subsistence is precarious; notwithstanding the fertility of the soil, and the genial character of the climates.

27. The recognition and protection of property in the soil, is the basis of industry, plenty, and social improvement; and is, therefore, one of the most important steps in the progress of man, from the savage, to the civilized state.

28. As soon as any man could call a spot of ground his own, and could secure to his family the produce of it; he would carefully cultivate, sow, and plant it; knowing that he should reap the reward of his labour in the season of harvest.

29. Countries, however, in general, lie open; with nothing but banks and ditches to divide the land of every husbandman: but in all civilized countries, each separate farm is divided from others by hedges and fences; and the farms themselves, are sub-divided into small enclosures.

30. In France, Germany, Italy, Spain, and most other nations, the land still remains unenclosed, in large open fields; and those countries in consequence, present a dreary appearance.

31. Enclosures greatly improve the climate of a country, by protecting it from inclement winds; they pleasantly sub-divide the labours of the far-

mer; and, by restraining the exercise of cattle, they occasion them to get fat much sooner.

32. Farmers are called *arable farmers*, when they are chiefly employed in raising corn and grain; and *pasture or grass-farmers*, when they are engaged in rearing and fattening sheep, and other live stock.

33. Farms vary in size, from fifty to one thousand acres. Arable farms are generally smaller than those employed in pasture, or grazing. Those, from one to two hundred acres are the most beneficial to the occupiers and the public.

34. Soils are divided into clayey, loamy, chalky, sandy, gravelly, peaty, and moory. The clayey and loamy are called stiff or strong soils; and the sandy and gravelly, light soils.

35. Soils are barren, when they consist of too much of one kind of material, do not hold moisture, or are too shallow. They are fertile, when they contain a due mixture of several primitive earths with vegetable and animal matter.

36. To render a barren soil fertile, it requires to be frequently turned up to the air, and to have manures mixed with it: which manures consist of animal dungs, decayed vegetables, lime, marl, sweepings of streets, &c.

37. In cultivating the soil, the chief implements of the gardener are the spade, the hoe, and the mattock; and of the farmer, the plough, the barrow, the roller, the scythe, and the sickle.

38. As a succession of the same crops tends to impoverish the soil, a rotation of different crops

is necessary. Potatoes, grain, and white crops, are exhausting; but, after them, the soil is ameliorated by tares, vetches, turnips, and green or covering crops.

39. On stiff soils, clover, beans, wheat, cabbages, and oats, may be cultivated in succession; and on light soils, potatoes, turnips, pease, or barley, may succeed each other. The general rule, is one crop for man, and one for beast.

Obs.—This plan of varying the crops, is a new discovery. Formerly, land lay long in fallow; that is to say, was not worked every third or fourth year; but now, it is usual, by varying the crops, to get two or three crops in a year from the same soil, without its being exhausted; and fallowing is consequently, found to be unnecessary.—See *Young's Farmer's Calendar*.

40. *Wheat* is sown in September or October; but the spring-wheat is sown in March. It ripens in July and August, when it is reaped, housed, and threshed. After being ground at the mill and sifted, wheat forms flour: the flour mixed with water and yeast, and baked in an oven, becomes *Bread*.

41. *Barley* is sown in April and May: it is made into malt, by being heated to a state of germination, and then broken in a mill. If the malt be infused in hot water, the infusion, with the addition of hops, may be fermented into beer, ale, and porter.

42. *Oats* are sown in February or March; when ground, they form *oat-meal*, and mixed with water, fermented and baked, the meal becomes oat-bread; but unground, they are the favourite food of horses.

43. There are other species of grain cultivated, as rye, pease, and beans. The former makes dark

but wholesome bread; and the latter are well known as delicious and wholesome food. Rice, a very nutritive grain, is much cultivated in warm climates; and preferred to other kinds of grain for the food of man.

44. Modern husbandry has sub-divided grass into nearly a hundred several kinds; of which, there are two principal divisions; natural grasses, and artificial grasses. The several sorts are sown and cultivated together, or separately; according to the nature of the soil, or the object of the cultivator.

45. The natural grasses are very numerous; and are preferred for lands intended to be kept in grass. The artificial grasses are ray grass, red clover, trefoil, sainfoin, lucern, orchard grass, timothy, &c.

46. On many farms, cows are kept for the milk they yield; and for the purpose of making butter or cheese. Butter is made from cream by agitating it in a churn; and is the oily part of the cream. Cheese is made from milk by curdling it with rennet; and the curd is then pressed, shaped, and dried.

Obs.—The rennet is the inside of the stomach of a calf; and is kept in pickle for the purpose of setting the curd. The cheese would be white, if the milk were not previously coloured with Spanish arnotta. The largest cheese-farms in England, are in Cheshire and Denbighshire; and on some of these, 500 milch cows are kept. In the United States, the largest dairies are in New England and New York.

47. Of late years, selections have been made of breeds of cattle, sheep, &c., from among those

which fatten the quickest, which have the best flavoured flesh, best wool, &c.

48. Among oxen, the kinds that have been preferred in England, are the middle-horned, or Devonshire, for working; and the short-horned, the spotted, and the Alderney, for milking.

The long-horned, the Welch, the Kyloc, and the Fifeshire, have also their separate purposes and recommendations.

49. Among the improved breeds of sheep, the favourite is the South Down; but the Tees-water, Dartmoor, and Romney-marsh-breeds, are the largest; the new Leicester and Lincoln are the next. The fleece of the Lincoln weighs 11 lbs.

50. Those sheep which produce the finest wool, are the Merino, the Ryeland, and the Shetland; but their fleeces weigh only from 2 to 3 lbs.

A male sheep is called a *tup* or *ram*; and a female, a *ewe*. They are usually shorn in May or June; and are called one-shear, two-shear, or three-shear sheep, according to their ages.

51. Horses are divided into blood-horses or racers; hackney or riding-horses; coach-horses; Cleaveland-bays; Suffolk-punches; Clydesdales; and heavy-blacks: each of them adapted to distinct purposes of use or pleasure.

52. Hogs are severally of Berkshire, Hampshire, Shropshire, Gloucestershire, Chinese, white, and swing-tailed breeds; all different in their shapes and character.

53. Numerous other productive animals are also objects of the farmer's care; as poultry for eggs; geese, ducks, turkeys, Guinea-fowls, and pigeons; bees for honey; and fish stocked in

ponds. Farmers likewise extract cyder from apples; perry from pears; and delicious wines from various fruits.

54. Every farm-house is provided with a kitchen-garden, for the cultivation of vegetables and fruits. The Art of Gardening forms also one of the most useful and delightful branches of rural employment. Besides kitchen-gardens for raising vegetables, there are fruit-gardens, or orchards, flower-gardens, and pleasure gardens.

55. By the art of Gardening, the fruits of one part of the world, are propagated and cultivated in other climates, to which, at first, they seemed to be ill-adapted.*

Thus, in England, the only native fruits were the acorn, the blackberry, the alder-berry, hips, and haws; but it now enjoys gooseberries, currants, apples, pears, plums, apricots, peaches, nectarines, and grapes—all exotics, and first cultivated in England, about three hundred years since.

56. Within a few years, the bread-fruit tree has been transplanted from the islands of the South Seas to the West Indies; and all the rare spices, natives of the East Indies, are now cultivated in the West Indies.

57. The Potatoe, so considerable and wholesome a portion of our food, was unknown in Europe, about two centuries ago; and was brought from America by sir Walter Raleigh. The period is on record (500 years before Christ,) when the

* In the present edition, the long paragraphs have been purposely broken, for the ease of junior students; but the numbers remain the same.

first wheat was brought into Europe, from Asia Minor. Peas, beans, and all other grain, are exotics in England.

58. Such, also, is the art of man, that he improves whatever he cultivates. By grafting buds of superior fruits on ordinary stocks, he amends, and even alters, the natural produce of the tree; and by managing and selecting his seeds, he improves and enlarges every vegetable production.

59. By the art of Gardening, two, three, or four persons may derive ample subsistence, from every acre of ground in cultivation; but there is in no country, without cultivation, above one human inhabitant to two square miles; and even on that space, subsistence is obtained with difficulty; such are the triumphs of art over nature!

60. In England and Wales there are *ten* millions of inhabitants; and *forty-seven* millions of acres of ground; of which, nearly *forty* millions are cultivated, or are employed in grazing cattle; the other eight are waste.

There are, consequently, four acres of cultivated ground to every person; and nearly another acre, of that which is uncultivated.

Obs—It having been ascertained, that an acre of land employed as a garden, will produce regular subsistence for four persons; it follows, that if the ground in England was thus cultivated, it would support a population of 160 millions; and with various allowances, at least 100 millions, or ten times its present number. The ground still uncultivated, might, perhaps, be made to maintain the present number of inhabitants in plenty.

61. Each of the people consume in every year, one quarter of wheat, (eighteen bushels) being the produce of half an acre; three bushels of barley

in beer, being the growth of the eighth of an acre; one sheep, one-eighth of an ox, one-third of a lamb, calf, and pig, being the produce of two acres; and in vegetables and fruits, the produce of the eighth of an acre.

Obs.—Hence, every human inhabitant uses the produce of three acres; and the remainder of his share is consumed by horses; or engaged for buildings, roads, hedge-rows, or pleasure-grounds, or occupied in water.

62. Of the forty millions of cultivated land, twelve millions are employed in arable farming; twenty millions, in grazing cattle; two millions, in woods and hedge-roads; two millions, in roads, water, and buildings; and one million, in hop, garden, and pleasure-grounds; and the remainder lie in fallow.

Obs.—The eight millions of waste consist chiefly of commons or heaths; and it is computed, that five millions of them are equal to any purpose of cultivation; the other three are in mountains; or have no depth of vegetable soil.

63. The number of bullocks killed, annually, in England and Wales, are at least a million; of sheep, nine millions; and of lambs, calves, and pigs, nine millions; besides thirty millions of poultry and game; and innumerable small birds and fishes.

The number of horses are nearly two millions; of which a million and a half are employed in agriculture and commerce.

Obs.—It is calculated, that horses consume one-fifth of the entire produce of the land, *i. e.* the produce of four acres per horse on the whole of the land, or two acres each, of that 12 millions employed in raising corn.

64. On an average, each man, woman, and child, consumes ten ounces per day, of animal

food, or 220 lbs. in the year; which, in animal food, is the annual produce of two acres of land.

It is found, however, that the same two acres, cultivated in potatoes, would yield, on an average, upwards of ten tons per acre, or forty-four thousand pounds weight; and, consequently, afford one hundred and twenty pounds of potatoes, per day, the year round!

65. If cultivated in wheat, the produce of the same two acres, (which produce but 220 pounds of animal food,) would produce 4000 pounds weight of grain; or afford ten pounds of wheat, per day, leaving sufficient for seed.

Peas and beans yield in the same proportion. Turnips and carrots are as productive as potatoes! but parsnips actually double the weight of potatoes!

Obs.—Mr. Middleton well observes, “that every acre would support its man well, on vegetable food; but,” says he “only let him change his diet to one meal per day of animal food; and he will require the produce of four acres!” The same author observes also, “that the starch or nourishment of a potatoe, is one-fourth of its entire weight; and that the quantity of starch or nutriment, on an acre of potatoes, is four times greater than in an acre of wheat.” Those who seek further information on agricultural subjects, should consult *Young's Farmer's Kalender*; a work which ought to be found in every farm-house.

IV. Metallurgy.

66. Before man could till the ground, dig it, hoe it, or plough it, he required the aid of something harder than the ground itself; that is to say, he wanted iron or metals. Without iron, he

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291. Such are the divisions of the earth arising from the phenomena and effects of the Sun, the source of Light, Heat, and Life. They give rise to all the varieties of climates, productions, colour, and habits of man; and are, therefore, the key to a further and more correct knowledge of his habitation, the Globe of the Earth.

GEOGRAPHY.

292. The natural divisions into lands and waters have already been noticed. The other great divisions, founded on local views only, are called EUROPE, ASIA, AFRICA, and AMERICA; each quarter is divided into kingdoms; and each kingdom into provinces, principalities, or counties.

293. This last division gives national denominations to men: but the climates or zones fix their colour or character. These divide man into at least six varieties, produced by habit, and the effects of heat and cold during a series of ages.

I. *The dwarfish inhabitants of the polar regions;*

II. *The flat-nosed, olive-coloured tawny race;*

III. *The blacks of Asia, with European features;*

IV. *The woolly-haired negroes of Africa;*

V. *The copper-coloured native Americans, with black hair and high cheek-bones.*

VI. *The white European nations.*

294. Man is at the head of the animated creation; and unites all the advantages of strength, beauty, and structure, which are but partially possessed by other animals. His Creator has also

endowed him with the faculty of reasoning, and with the power and will to adapt all the contrivances of other animals, to his own wants and luxuries.

295. Man supports his body erect; and his face turned towards the heavens, displays the dignity of his nature. His soul is painted in his visage; and his majestic and resolute steps, announces the nobleness of his rank. His arms and hands were not given him for support, but to second the intentions of his will, and to adapt to his purposes all the gifts of nature.

296. What animals effect by natural instinct, man effects by reason, invention, and by combined power. Birds build their nests; bees their cells; and beavers their habitations; with unvarying uniformity; but the works of man possess every possible variety; and afford evidence of his possessing a mind and soul distinct from the body.

Obs.—Man, however, disgraces his intellectual character by engaging in frequent wars of aggression, malice, and ambition. Nor are such wars confined to the savage tribes of his species; but are often wantonly and lightly engaged in, by nations which boast the highest civilization.

297. Men are to be found, however, in every stage of improvement throughout Europe generally. In India, China, and some other Asiatic nations, and in the cultivated parts of North and South America, man appears to have advanced towards the summit of his powers. But in Africa, Siberia, and among the Aborigines of America, the inhabitants are still in a state below that in which the Romans found the Britons two thousand years ago.

298. Man, in point of natural intellect, is nearly equal in all countries; notwithstanding the differences of colour and gradations of civilization. Those differences are the effects of climate, habit, and education; and there is little doubt, but the whole human race sprung from one stock, as recorded in the Scriptures.

299. Considering man, as we find him, scattered over the earth, the Laplanders, the Esquimaux, the Samoides, the Greenlanders, the Nova Zemblanians, and the Kamschatkadales, appear to be of one family, inhabiting the northern frigid zone.

Vast regions, dreary, bleak, and bare!
There, on an icy mountain's height,
Seen only by the moon's pale light,
Stern Winter rears his giant-form,
His robe a mist, his voice a storm;
His frown, the shivering nations fly,
And, hid for half the year, in smoky caverns, lie.

SCOTT.

ICE-MOUNTAINS, &c. OF THE FRIGID ZONE.



300. No inhabited land has yet been discovered in the southern frigid zone; but the climate and habits of living, the effect of climate, render all the inhabitants of the northern frigid zone of a deep brown colour approaching to blackness. Their statures are shrunk by cold to a diminutive size; and their countenances are as ferocious, as their manners are savage.

301. Their usual height is four feet, and the tallest are not above five feet; their voices are thin and squeaking; their heads large; their cheek-bones high; their eye-lids drawn aside; their mouths large; and their lips thick, and turned outward.

Obs.—Yet, they account themselves the handsomest and most civilized people in the world; and the Greenlanders, when they compliment a stranger, say, he is almost as well-bred as a Greenlander.

The following is Dryden's description of the Polar regions:

The sun from far peeps with a sickly face,
Too weak, the clouds and mighty fogs to chase;
Swift rivers are with sudden ice constrained;
And studded wheels are on their back sustain'd—
The brazen caldrons with the frost are flav'd;
The garment stiff with ice at hearths is thaw'd.
With axes first they cleave the wine; and thence
By weight, the solid potions they dispense.
From locks uncomb'd, and from the frozen beard,
Long isicles depend, and crackling sounds are heard.
Meantime, perpetual sleet and driving snow,
Obscure the skies, and hang on herds below.
The starving cattle perish in their stalls,
Huge oxen stand inclos'd in wint'ry walls.
Of snow conceal'd, whole herds are buried there,
Of mighty stags, and scarce their horns appear.
The dextrous huntsman wounds not these afar

With shafts or darts, or makes a distant war
With dogs, or pitches toils to stop their flight;
But close engages in unequal fight,
And while they strive in vain, to make their way
Through hills of snow, and pitiful decay;
Assaults with dint of sword, or pointed spears,
And homeward, on his back, the burthen bears.
The men to subterranean caves retire,
Secure from cold, and crowd the cheerful fire;
With trunks of elms and oaks the hearth they load,
Nor tempt th' inclemency of heav'n abroad.
Their joyal nights in frolic and in play
They pass, to drive the tedious hours away.

302. Their food consists of dried fish, and the flesh of bears, reindeer, and other wild animals. Their drink is water, or train-oil as a luxury, when they can get it.

Obs.—Two inhabitants of Nova Zembla were brought to Copenhagen a few years ago; and they pined for want, till they met with some train-oil, which they drank with the same relish as we would drink chocolate or wine; and they danced in ecstasy, when they found they were to be sent back to their own country.

303. The next variety of the human species are the Tartars, the Chinese, and the Japanese, who inhabit all that space of Asia from the great ocean to the Caspian Sea. They have broad foreheads and narrow chins, small sunk eyes, high cheek-bones, short and flat noses, large and separated teeth, short set statures, and olive complexions.

304. The Tartars have no settled habitation; but wander from place to place, and live with their horses and herds under tents covered with hides. The Chinese are the most numerous peo-

ple in the world, inhabit one of the finest climates of the earth, and cultivate with success most of the arts and sciences.

The Japanese inhabit certain large islands, and are not inferior to the Chinese in industry and ingenuity; but wisely allow little or no intercourse with meddling foreigners.

305. Another distinct family of the human race, are the black and swarthy inhabitants of India, and of the islands of the Indian Ocean. They have European features, long black straight hair, and slender shapes. Their manners are effeminate; but their dresses and houses are very elegant.

Many millions of them, called Gentoos, never eat flesh, or any thing that has lived: but subsist chiefly on rice and fruits, and enjoy health, strength, and long life.

306. The peaceable habits of the Hindoos have in all ages, rendered them a prey to foreign invaders. The Tartars have frequently invaded and plundered them.

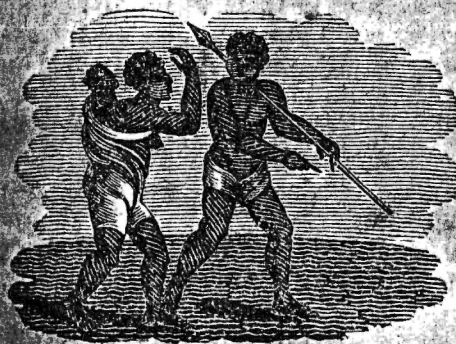
Latterly, the European nations, particularly the English, have established themselves among them; but though they have sometimes committed excesses, yet they are happily introducing among the natives, the arts, philosophy, and the religion of Europe.

307. The fourth variety of the human species, and the most remarkable of the whole, are the Negroes of Africa. Their black colour, their woolly heads, their flat noses, and thick lips, are well-known among us.

For many ages an infamous and most shocking traffic was carried on in these poor people, who were torn from their country to work in the sugar-plantations of the West-Indies; but, happily, the slave-trade is now nearly abolished.

308. These simple people inhabit all the coasts and interior of Africa between the tropics, and have been retained in a barbarous state by the effects of the slave-trade; which induced their tribes and nations to make war on each other, for the purpose of stealing the people, and selling them for slaves to Europeans.

AFRICANS.



L

GEOGRAPHY.

HOTTENTOTS.



309. The next distinct family of men, are the native American Indians, spread in small tribes over the whole of that vast continent. They are of a dark copper-colour, have black hair, and small black eyes, high cheek-bones, and frequently flat noses.

NATIVE AMERICANS.



GEOGRAPHY.

310. The sixth variety of the European race, are the English, the French, the Germans, Italians, Spaniards, and other modern nations.— These had their origin partly from the Scandinavians, (Swedes and Goths,) characterized by light hair and blue eyes; and from the Germans, distinguished by black eyes and black hair. The Swedes, English, Irish, Scotch, and French, are very fair; but the Italians, French, Spaniards, and other nations occupying the south of Europe, are of brown complexions.

SPANISH.





311. The clear complexion of the Europeans is best adapted to express the passions of the soul and the health of the body; while the energy of their understandings, and the vigour of their corporeal frames, qualify them to carry all the arts to perfection: and to raise man to that scale of eminence, to which he seems to have been fitted and destined by his Creator.

312. Such are the natures and the varieties of men, as scattered over the face of the earth.— Their numbers united are supposed to be nearly eight hundred millions: of whom, in Europe, every square mile contains 34; in Asia, 36; in Africa, 6; and in America, 3 individuals.

The whole number of human beings being renewed every 32 years, on the average, 25 millions must die and be born every year, *i. e.* 3000 every hour, or 50 every minute.

Like leaves on trees, the race of man is found;
Now green in youth, now withering on the ground.
Another race the following spring supplies,
They fall successive, and successive rise.

So generations in their course decay,
So flourish these, when those are past away.—POPE.

313. As men have divided by chance or design, into separate governments, they have assumed the names of Nations, Republics, Kingdoms, or Empires; and the knowledge of these constitutes a leading feature of geographical study.

The most populous nations are, the Chinese of 500 millions, the Hindoos of 40 millions, the French of 40 millions, and the Russians of 36 millions. The most extensive are the Russian, Chinese, Turkish, and French empires.

314. From north to south, Europe is divided into Russia, Sweden, Denmark, Prussia, Poland, Saxony, Westphalia, France, Wurttemberg, Bavaria, Switzerland, Austria, Turkey, Italy, Naples, Spain, Portugal, and Great Britain and Ireland.

Obs.—It will be highly proper that tutors point out all these countries to the pupil on the map of the world, and render him expert in pointing to them himself. He ought also to be directed to write out the boundaries and latitude and longitude of, each from the map. Nothing can be so ridiculous, as to compel children to commit verbal descriptions of the boundaries of countries to memory. The only guide is a good map; and that they ought to trace or copy, till they can answer any question that is put to them. No one need blush for ignorance of geography, after he has twice or thrice traced or copied the annexed map. The scale of mountains should also be copied in like manner, and the lines of comparative sizes deserve some consideration. The best exercises in geography, however, are in the Geographical Copy-Books and the Royal School-Atlas.

315. The following is an enumeration of the names, capitals, and population of the countries of Europe:

Nations.	Chief Cities.	Population.
Sweden	Stockholm	3 millions
Russia in Europe	Petersburgh	30 do.
Denmark	Copenhagen	3 do.
Prussia	Berlin	8 do.
Poland	Warsaw	6 do.
Batavia	Amsterdam	3 do.
Germanic States	Dresden	18 do.
Austria	Vienna	23 do.
Turkey in Europe	Constantinople	8 do.
France (proper)	Paris	32 do.
Switzerland	Berne	2 do.
Italy	Milan	4 do.
Etruria	Florence	2 do.
Pope's States	Rome	2 do.
Naples	Naples	6 do.
Portugal	Lisbon	4 do.
Spain	Madrid	11 do.
G. Britain & Ireland	London	17 do.

316. Europe has three inland seas : the Mediterranean, the Baltic, and the White Sea ; and its shores are washed by the Atlantic, the Bay of Biscay, the English Channel, the Northern Ocean, St. George's Channel, and the German Ocean.

317. The great European rivers are, the Danube, the Rhine, the Elbe, the Weser, the Maine, and the Oder, in Germany ; the Wolga and the Nieper, in Russia ; the Rhone, the Garonne, and the Seine, in France ; the Thames, the Severn, and the Humber, in England ; the Clyde, in Scotland ; and the Shannon, in Ireland.

Obs.—The rivers of South Britain are thus described :—

From his oozy bed,
 Old father *Thames* advanc'd his rev'rend head :
 Around his throne the sea-born brothers stood,
 Who swell with tributary urns his flood.
 First, the fam'd authors of his ancient name,
 The winding *Isis* and the fruitful *Tame* !

The *Kennet* swift, for silver-eels renown'd ;
 The *Loddon* slow, with verdant alders crown'd.
Cole, whose dark streams his flow'ry islands lave ;
 And chalky *Wey* that rolls a milky wave ;
 The blue transparent *Vandalis* appears :
 The gulphy *Lee* his sedgy tresses rears :
 And sullen *Mole* that hides his diving flood :
 And silent *Darent* stain'd with Danish blood.—*Pope*.

318. The mountains of Europe are, the Alps, of Switzerland ; the Pyrenees, between France and Spain ; the Dofrafelds, in Norway ; the Welsh, in Wales ; and Ben-Nivis and Ben-Lomond, in Scotland. It has also three volcanoes, or burning mountains ; viz. Etna, in Sicily ; Vesuvius, near Naples ; and Hecla, in Iceland.

319. The British empire is composed of two large islands, Great Britain, and Ireland, and several small ones, as the Isle of Man, Isle of Wight, the Hebrides, the Orkneys, Jersey and Guernsey, and the Scilly-Islands. Great Britain is 700 miles long, and 250 broad ; and Ireland 300 long, and 200 broad. Great Britain includes Scotland on the north, Wales north-west, and England on the south, east, and west.

320. England is subdivided into 40 counties, as follow :

Counties.	Chief Towns.	Counties.	Chief Towns.
Northumberland	Newcastle	Lincolnshire	Lincoln
Durham	Durham	Rutland	Oakham
Cumberland	Carlisle	Leicestershire	Leicester
Westmoreland	Appleby	Staffordshire	Stafford
Yorkshire	York	Warwickshire	Warwick
Lancashire	Lancaster	Worcestershire	Worcester
Cheshire	Chester	Herefordshire	Hereford
Shropshire	Shrewsbury	Monmouthshire	Monmouth
Derbyshire	Derby	Gloucestershire	Gloucester
Nottinghamsh.	Nottingham	Oxfordshire	Oxford

<i>Counties.</i>	<i>Chief Towns.</i>	<i>Counties.</i>	<i>Chief Towns.</i>
Northampton.	Northampton	Kent	Canterbury
Buckinghamsh.	Aylesbury	Surry	Guildford
Bedfordshire	Bedford	Sussex	Chichester
Huntingdonsh.	Huntingdon	Berkshire	Reading
Cambridgesh.	Cambridge	Hampshire	Winchester
Norfolk	Norwich	Wiltshire	Salisbury
Suffolk	Bury	Dorsetshire	Dorset
Essex	Chelmsford	Somersetshire	Wells
Hertfordshire	Hertford	Devonshire	Exeter
Middlesex	London	Cornwall	Launceston

321. Wales is divided into 12 counties, as beneath.

<i>Counties.</i>	<i>Chief Towns.</i>	<i>Counties.</i>	<i>Chief Towns.</i>
Flintshire	Flint	Radnorshire	Radnor
Denbighshire	Denbigh	Brecknocksh.	Brecknock
Montgomerys.	Montgomery	Glamorganshire	Cardiff
Anglesea	Beaumaris	Pembrokeshire	Pembroke
Caernarvonsh.	Caernarvon	Cardiganshire	Cardigan
Merionethshire	Harlech	Carmathensh.	Carmathen

322. Scotland is divided into 33 counties, as follow :

<i>Shires.</i>	<i>Chief Towns.</i>	<i>Shires.</i>	<i>Chief Towns.</i>
Edinburgh	Edinburgh	Argyle	Inverary
Haddington	Dunbar	Perth	Perth
Merse	Dunse	Cincardin	Bervie
Roxburgh	Jedburgh	Aberdeen	Aberdeen
Selkirk	Selkirk	Inverness	Inverness
Peebles	Peebles	Nairne and ?	Nairne and
Lanerk	Glasgow	Cromartie	Cromartie
Dumfries	Dumfries	Fife	St. Andrew's
Wigtown	Wigtown	Forfar	Montrose
Kirkcudbright	Kirkcudbri.	Bamff	Bamf.
Ayr	Ayr	Sutherland	Strathy Darnoc
Dumbarton	Dumbarton	Clacmannan	Clacmannan
Bute & Caithness	Rothsay	Kinross	Kinross
Renfrew	Renfrew	Ross	Tain
Stirling	Stirling	Elgin	Elgin
Linlithgow	Linlithgow	Orkney	Kirkwall

323. Ireland is divided into four provinces; Ulster to the north, Leinster to the east, Munster to the south, and Connaught to the west; and these are subdivided into 32 counties.

<i>Counties.</i>	<i>Chief Towns.</i>	<i>Counties.</i>	<i>Chief Towns.</i>
Dublin	Dublin	Antrim	Carrickfergus
Louth	Drogheda	Londonderry	Derry
Wicklow	Wicklow	Tyrone	Omagh
Wexford	Wexford	Fermanagh	Inniskilling
Longford	Longford	Donegal	Lifford
East Meath	Trim	Leitrim	Ballinrobe
West Meath	Mullingar	Roscommon	Roscommon
King's County	Philipstown	Mayo	Carrick on Shannon
Queen's Co.	Maryborough	Sligo	Sligo
Kilkenny	Kilkenny	Galway	Galway
Kildare	Naas and Athy	Clare	Ennis
Cadlow	Carlow	Cork	Cork
Down	Downpatrick	Kerry	Tralee
Armagh	Armagh	Limerick	Limerick
Monaghan	Monaghan	Tipperary	Clonmell
Cavan	Cavan	Waterford	Waterford

Obs.—For the particulars of the British Empire, see Goldsmith's British Geography.

324. ASIA includes countries the most populous and fertile of any on the globe. It was, besides, the first peopled, was the residence of our first parents, the scene of scripture-history, and in Canaan, Jesus Christ worked his miracles, and promulgated the doctrines of revelation and a future state.

325. Modern Asia contains Siberia, Tartary, China, Birmania, Malacca, Hindostan, Thibet, Persia, Arabia, Syria, Turkey in Asia, besides the vast islands of Japan, Borneo, Sumatra, Ceylon, New Holland, the Philippines, Formosa, &c.

326. The internal seas of Asia are the Red Sea, the Persian Gulph, the Caspian Sea, the Japanese Sea, and the Yellow Sea. Its coasts are

washed besides by the Great Ocean, the Indian Ocean, the Chinese Sea, the Northern Ocean, the Bay of Bengal, and the Arabian Sea.

327. Its great rivers are, the Ganges, the Euphrates, the Indus, the Amur, the Kian Ku, and the Koan Ho; and the mountains where these rise are, the Uralian, the Gaults, those of Caucasus, Taurus, and Thibet.

328. British India, or countries governed by Great Britain in India, are those immense and fertile districts watered by the Ganges, of which Calcutta is one of the capital towns; nearly the whole of the coasts of the peninsula of India and the island of Ceylon.

Where sacred Ganges pours along the plain,
 And Indus rolls to swell the eastern main,
 What awful scenes the curious mind delight;
 What wonders burst upon the dazzled sight!
 There giant-palms lift high their tufted heads;
 The plantain wide his graceful foliage spreads;
 Wild in the woods the active monkey springs;
 The chattering parrot claps her painted wings;
 'Mid tall bamboos lies hid the deadly snake:
 The tiger couches in the tangled brake;
 The spotted axis bounds in fear away;
 The leopard darts on his defenceless prey.
 'Mid ready pools and ancient forests rude,
 Cool, peaceful haunts of awful solitude!
 The huge rhinoceros rends the crashing boughs,
 And stately elephants untroubled browse.
 Two tyrant-seasons rule the wide domain,
 Scorch with dry heat, or drench with floods of rain;
 Now feverish herds rush madd'ning o'er the plains,
 And cool in shady streams their throbbing veins;
 The birds drop lifeless from the silent spray,
 And nature faints beneath the fiery day;
 Then bursts the deluge on the sinking shore,
 And teeming Plenty empties all her store.

329. China is one of the most ancient, most extensive, most populous, and well-regulated empires in the world. In it are more than 300 millions of people; and its laws and government have subsisted, with very slight changes, for upwards of 3000 years.

330. It is covered with canals, and almost every acre of its soil is cultivated. To secure it from invasion, it is separated from Tartary by a wall 1500 miles long, and so thick, that five horsemen may every where ride abreast on it; yet the Tartars conquered China about 150 years ago, and still retain its government.

331. The chief cities of China are, Pekin, Nankin, and Canton, each of which contains more inhabitants than London, and they are rather more extensive. Canton is the only port where foreigners are allowed to trade; and from hence, are brought the teas and other Chinese commodities for the supply of Europe and America.

CHINESE.



332. The Birman empire, of which the capitals are Ava and Pegu, separates China from India. Persia, celebrated in ancient history, has for many years been torn in pieces by civil wars. Arabia is famous for the exploits of Mahomet; and for the wandering character of its inhabitants.

O'er Arabia's desert sands
 The patient camel walks:
 Mid lonely caves and rocky lands
 The fell hyena stalks.
 On her cool and shady hills,
 Coffee shrubs and tam'rinds grow:
 Headlong, fall the welcome rills
 Down the fruitful dells below.
 The fragrant myrrh and healing balm
 Perfume the passing gale:
 Thick hung with dates the spreading palm
 O'ertowers the peopled vale.
 Locusts off, a living cloud,
 Hover in the darken'd air;
 Like a torrent dashing loud,
 Bringing famine and despair:
 And often o'er the level waste,
 The stifling hot winds fly;
 Down falls the swain with trembling haste:
 The gasping cattle die.
 Shepherd-people on the plain
 Pitch their tents and wander free;
 Wealthy cities they disdain;
 Poor—yet blest with liberty.

333. The land of Canaan, now called Syria, has been for four centuries in the hands of the Turks: and, like other parts of their empire, has become almost a desert. Jerusalem, Bethlehem, and the places recorded in the Old and New Testaments, are now supported chiefly by pilgrims

from Catholic countries, and there are still chapels for their reception.

334. The following is a summary of the great divisions of Asia:—

Nations.	Chief Cities.	Population.
Turkey	Aleppo	12 millions.
Russia	Astracan	10 do.
China	Pekin and Nankin	300 do.
Japan	Jeddo	30 do.
Birman Empire	Ava	17 do.
Siam	Siam	5 do.
Hindustan	Calcutta	60 do.
Persia	Ispahan	10 do.
Tartary	Samarcand	12 do.
Arabia	Mecca and Medina	10 do.

335. AFRICA is that quarter of the world which lies, for the chief part, within the torrid zone; and its soil is therefore much parched and dried up by the extreme heat of the sun. It abounds with deserts and extensive barren sands, and also with various species of ferocious and poisonous animals.

336. It was in Africa, on the shores of the Mediterranean that the famous city of Carthage was situated. This city was in ancient times the rival of Rome, and for ages the mistress of the commerce of the world; and through all history, Egypt has been famous as the nursery of the Sciences, and the Emporium of Commerce. At present, Carthage lies in ruins; and Egypt is a prey to civil anarchy.

337. The northern coasts are inhabited by the Moors, at whose head is the despotic Emperor of Morocco. The piratical states of Algiers,

Tunis, and Tripoli, are also on these coasts. At present, the Cape of Good Hope, the southern promontory, and an English settlement, is the only part of Africa adapted to the enjoyment of man.

338. From the northern coasts, to the Cape of Good Hope, the whole of this great continent is inhabited by innumerable tribes of Blacks; many of them in a state of absolute barbarism, and few possessing any considerable degree of civilization.

339. The rivers of Africa, are,—the Nile, the Niger, and the Senegal. The mountains are those of Atlas and the Moon. The islands are—Madagascar, the Cape Verd, and the delightful Canaries, in one of which is the lofty Peak of Teneriffe.

340. The following is a survey of those parts of Africa which are perfectly formed:—

<i>Nations.</i>	<i>Chief Cities.</i>	<i>Population.</i>
Abyssinia	Gondar	2 millions.
Egypt	Cairo	3 do.
Morocco	Morocco	2 do.
States of Barbary		3 do.
Savage Tribes		50 do.

341. Till the discovery of the powers of the magnetic needle, navigators dared not to venture out of sight of land; but, about 200 years after that discovery, Columbus, a Genoese, aware that the earth was round, conceived, that if he sailed from Europe westward, he should in time arrive at the East Indies, without having to sail around Africa.

342. He sailed accordingly from Cadiz, in the autumn of the year 1492, across the Atlantic;

and, on the morning of the 12th of October, one of his anxious and mutinous crew spied land; which proved to be the island of San Salvador, and which is sometimes called Cat Island, one of the Bahamas, and part of a new world, till then unknown to the other three-quarters.

343. In fact Columbus could not reach the Indies in this direction; because the continent of America intervened from the North Pole almost to the South. America, and all its islands, were found, at this time to be peopled by the race described in Art. 309; and among them were established the two extensive and populous empires of Mexico and Peru.

344. Unhappily these empires, and many other parts of this new world, abounded in gold and silver; and, as the inhabitants knew not the use of gunpowder, and the repacity of the Spaniards had no bounds, they destroyed nearly thirty millions of the natives, in a few years, to get possession of their riches.

345. The bloody success of the Spaniards, however, led other European nations to embark in the same enterprize; and, within a century, the Portuguese established themselves in the Brazils, the English in Virginia, and the French in Canada.

Soon after, the fine islands called the West Indies, were successively colonized by different powers, for the sake of their produce in sugar, rum, and other tropical luxuries.

346. At length, in 1776, the populous English colonies in North America declared themselves independent; and, after a contest of seven years,

they were recognized as a new empire under the title of the United States of America, then thirteen, but now *twenty* in number, as follows, viz.

	Counties.	Population.
New Hampshire, subdivided into	6	214,460
Massachusetts, including Dis. of Maine,	22	700,743
Vermont,	13	217,895
Rhode Island,	5	76,931
Connecticut,	8	261,942
New York,	47	959,049
New Jersey,	13	245,562
Pennsylvania,	50	810,091
Delaware,	3	72,674
Maryland,	19	380,564
Virginia,	97	974,622
North Carolina,	62	555,500
South Carolina,	36	415,113
Georgia,	40	252,433
Kentucky,	57	406,511
Tennessee,	38	261,727
Ohio,	43	230,760
Louisiana,	00	76,534
Indiana,	10	24,520
Mississippi,	2	40,352
Also the Territories of Alabama,	1	12,282
Illinois,	1	4,762
Michigan,	1	20,815
North West,	1	24,021
Missouri,	1	24,021
And the District of Columbia,	1	7,239,903

N. B. The above population is according to the Census of 1810, including 1,121,564 Slaves.

347. These States under a free, prudent, and wise government, form now the happiest and most flourishing countries in the world; and are

the refuge of people driven from the various nations of Europe, by ruinous wars and political revolutions. Their head is called a President; he is chosen for four years, and governs according to laws made by two houses of legislature.

348. Among the chief towns are Washington, Philadelphia, New York, Boston, Baltimore, and Charleston. The chief rivers are, the Delaware, the Chesapeake, the Hudson, the Mississippi, the Ohio, and the Missouri.

349. North and westward of the United States, lie Upper and Lower Canada, still subject to the British empire; the capitals of which are Quebec and York, the former situated on the river St. Lawrence, and the latter on Lake Ontario.

Obs.—The river St. Lawrence is the great outlet to five lakes of fresh water, the largest in the world; and between two of them are the grand falls of Niagara.

350. Southward of the United States, lies the Gulf of Mexico; and the islands called the West Indies—as Cuba, St. Domingo, Jamaica, Porto Rico, Barbadoes, Martinico, Guadaloupe, Tobago, St. Kitts, &c.

351. By turning to the Map, it will be seen that North America is joined to South America by a long slip of land called the Isthmus of Darien, occupied or governed by the Spaniards, as well as the greater part of South America itself, ever since the discoveries of Columbus.

352. In this great continent, the three Spanish viceroys of Mexico, Peru, and Buenos-Ayres, have for three centuries governed countries each more extensive than all Europe, and abounding in gold and silver, and various valuable productions.

353. South America is watered by the largest rivers in the world, as the Amazons, La Plata, and Orinoco. In the Andes, it possesses the highest chain of mountains, some of them four miles high: and among them are the most productive gold and silver-mines in the world.

354. South of Peru is Chili; and south of Chili the inhospitable and frozen regions of Patagonia, Terra del Fuego, or the Land of Fogs, is the most southerly region of America, and Cape Horn is its extreme point.

355. The following is an enumeration of the organized districts and countries of America:—

NORTH AMERICA.

Nations.	Capitals.	Population.
United States,	Washington, about	7 millions.
Spanish Dominions,	Salvador,	6 ditto.
British Possessions,	Quebec,	1 ditto.
Native Tribes,		2 ditto.

SOUTH AMERICA.

Spanish dominions,	Lima,	9 ditto.
Portuguese Dominions,	Rio Janeiro,	2 ditto.
Native Tribes,		4 ditto.
South Sea Islands,		2 ditto.

356. The Pacific Ocean contains numerous clusters of islands, called the Society Islands, the Friendly Islands, the Sandwich Islands, Phillips's Island, &c. all discovered by the English within the last fifty years. The inhabitants live in a savage state; and the history and anecdotes of their simple manners form the charm of the voyages of Wallis, Cook, and others.

357. Maps are exact delineations of the surface of the earth, viewed as from an eminence, or laid down according to a scale, in which every part retains its exact proportion.

The top of a map is generally the *north*, the bottom the *south*, the right-hand is the *east*, and the left-hand the *west*: except when these points are indicated by a compass engraved on the map, when the north is indicated by a *fleur-de-luce*.

Obs. 1.—It would be well to convey the idea of the principle of maps to children, by shewing them a plan of the place where they live, or a map of their county or district, laying it in the position of the places.

2.—Young persons should be taught the use of maps, by means of the Problems in Goldsmith's Royal Atlas.

358. The figures running from north to south, or south to north, at the side of a map, indicate the *latitude* or distance in degrees or minutes from the equator. The lines across are mere guides to the eye, to connect the figures on each side, and are called the *parallels of latitude*. If the figures increase upward, it is north latitude; if downward, it is south latitude.

359. An imaginary line, which passes over every place on the earth, from the north pole to the south pole, is called the *Meridian*; and the distance between these meridians, measured at the equator, is called the *longitude*.

The figures at the bottom and top of the map indicate such distances between meridians, and the lines which join them are called *parallels of longitude*. The longitude is *east* when the distance increase from left to right; or *west*, when the figures increase from right to left.

Obs.—See the opposite map of the whole world, and examine, study, and copy it.

360. A globe is a resemblance of the earth or heavens. For the facility of working problems, it is provided with a universal *brass meridian*;

with a universal wooden horizon ; with an hour circle to reduce its motion into time ; with a compass to set it due north and south ; and with a quadrant to measure distances and altitudes.

361. As the earth, which is 360 degrees round, turns opposite to the Sun in every 24 hours, of course, 15 degrees turn to and from the Sun in every hour, and one degree in every four minutes.

The hour of the day, therefore, at different places, depends on their difference in longitude, calculated in the above proportion ; all places to the east moving under the Sun, or having their noon sooner than those to the west, because the earth turns from west to east.

Obs.—Bristol is nearly 120 miles, or two degrees west of London ; it therefore passes under the Sun eight minutes later than London arrives at the Sun ; and of course, when it is twelve o'clock at London, it wants eight minutes of twelve in Bristol ; or when it is twelve in Bristol, it is eight minutes after twelve in London. In working such problems, it is simply necessary to bear in mind, that the whole earth of 360 degrees turns round in 24 hours ; and of course, that the clocks every where vary in proportion to the distances of their meridians, or the difference of their longitudes.

XIV. Of Morals and Religion.

362. Man will not be well adapted to a social state, unless his conduct be restrained by a respect for others beyond what is imposed by laws ; that is, without he be actuated by an habitual sense of what is right, and by feelings of remorse for having done what is wrong.

363. In due time he will find, that his happiness consists in restraining his own passions and sensual propensities ; in doing good to others ; and in rendering *his existence useful*, by creating a reliance in others upon his labour, skill, and kindness.

364. The perception which every man feels of what is right and wrong, is called *the Moral Sense* ; and it appears to arise from a consciousness of doing, or not doing to others what we would have them do to us, were our situations reversed. *Doing to others*, therefore, as *we would that others should do to us*, is the golden rule of social virtue.

Obs.—Another rule as universal, and not less important to the cause of virtue, is *never to do an act which you would be ashamed to have known*.

365. The practice of virtue implies restraint on our own wishes, and on our respecting the rights and happiness of others ; restraint is the result of habit, and habit is produced by education. Hence, the necessity of education, for restraining vicious propensities, and for producing virtuous habits, on which depend all our happiness and prosperity.

Obs.—The golden rule of *virtue* is also the golden rule of *manners* ; true politeness consisting in deference to others, and conceding our own wants and wishes to the pleasure and enjoyment of others.

366. There are no general rules so unerring as those, that virtue ought always to be practised for its own sake, as productive of happiness ; and that future misery is an inevitable consequence of vicious habits.

367. Such were the results of men's own ex-

perience in the pagan world; but at length it pleased Almighty God to send his only Son Jesus Christ among his chosen people, the Jews, to recall them, and all mankind, from their idolatries; and to convey to them a just knowledge of ONE GOD, the maker of all things, and of the immortality of the soul of man after this life of probation.

368. The history of this divine Personage is met with in the writings of the four Evangelists; in which his precious doctrines are recorded for the instruction of mankind.

As everlasting foundations of virtue, these writings, those of the Apostles, and the whole Bible, should be consulted by young and old, for that wisdom which surpasses finite enquiry, and the delusive knowledge of man.

369. By the information of the holy scriptures, and the inferences of our reason, deduced from the perfection of his wonderful works, we learn that there is ONE GOD; that he is a Supreme Being; First Cause; the Creator of the universe; Omnipotent, or all-powerful; Omniscient, or all-wise; Infinite, or present every where; and Eternal, or without beginning and without end.

In the Vast and the Minute, we see
The unambiguous footsteps of the God
Who gives its lustre to an insect's wing,
And wheels his throne upon the rolling worlds.
COWPER.

370. We learn, and we perceive, that God is always present with us; that all our thoughts and actions are known to him; and that we are accountable for them in a future state of immortality, which will follow this transient and ephe-

meral existence. Hence, we have a far more powerful stimulus to virtuous conduct, than mere temporal happiness.

I read his awful name, emblazon'd high
With golden letters on th' illumin'd sky;
Nor less, the mystic characters I see
Wrought in each flower; inscrib'd on ev'ry tree:
In ev'ry leaf that trembles on the breeze,
I hear the voice of GOD among the trees. BARBAULD.

371. Some virtues, from their great worth, are called Cardinal Virtues: these are Sincerity, Charity, Temperance, Justice, Prudence, and Fortitude.

a. Sincerity is that desirable virtue which deals plainly and honestly without disguise, falsehood, or hypocrisy.

b. Charity is that amiable virtue which leads us to relieve the distresses, tolerate the imperfections, pity the sufferings, and ameliorate the condition of all sensitive beings; and it opposes itself to persecution, cruelty, selfishness, and all barbarous practices towards men, animals, or insects.

c. Temperance sets bounds to our desires, ambition, and passions; opposes our self-love, vanity, and sensual gratifications; and leads to contentment, health, and long life.

d. Justice is that virtue which leads us to do to men and animals that which we would they should do to us, were we in their situation and they in ours; and it is the opposite of tyranny, and of practices towards others, founded on our own supposed impunity.

Ob.—Tenderness to animals, and to all who cannot help themselves, or resist our power, is the primary duty of all men.

e. Prudence is that useful virtue which results from experience, of what is fit or unfit for our condition; and being possessed by the aged and by parents, their precepts ought to have full weight on the minds of children.

f. Fortitude is that necessary virtue, which enables us to bear with the adversities and accidents of social life; and which keeps us steady in the practice of virtue.

372. In early ages, the Christian world became divided into two great bodies, called the Greek church and the Romish church.

The *Greek* church was, and is still, established in Russia, Turkey, Asia, and Greece.

The *Romish* church spread its influence over the west of Europe into Germany, France, Spain, Sweden, Britain, &c.

373. Soon after the invention of printing, the abuses and palpable errors of the Romish church led to the efforts of Luther, Calvin, Cranmer, and others.

A reformed religion was, in consequence, established in Great Britain, Germany, Sweden, Holland, and some other countries, called *Protestant*, from the early reformers *protesting* against the proceedings of a Romish council.

374. The Protestants have subdivided themselves into,

Lutherans, or followers of Luther.

Calvinists, or those who prefer the doctrine of Calvin.

Arminians, who follow those of Arminius.

Socinians, those of Socinus.

Anglican, who prefer the national church of England, and its rights and liturgy.

Presbyterians, who deny the authority of bishops.

Independents, who acknowledge no church-government.

Baptists, who disapprove of infant baptism.

Quakers, who have no external religious ceremonies.

Unitarians, who deny the doctrine of the Trinity.

Swedenborgians, who believe in the divine mission of Emanuel Swedenborg.

And *Methodists*, who use the church-liturgy but preach extemporaneously.

375. The *Jews* still exist as a distinct people in all parts of the world; over which they are dispersed, according to ancient prophecy, preserving every where their religion and original language.

376. In Turkey, and in most parts of Asia and Africa, the religion of Mahomet, an Arabian impostor of the 7th century, still prevails; and descendants of Mahomet still occupy several Asiatic and African thrones, as sultans, emperors, &c.

377. In China, the national religion is founded on the pure belief of ONE God; and on the moral writings of Confucius, a Chinese philosopher.

In India, many superstitions and much idolatry prevail; but the effect tends to maintain subordination and industry; while it teaches peace among men, and charity even to animals and insects.

378. In other nations, Christianity is silently working its way among the people; and civilization and Christianity appear happily to go hand-

in-hand in Africa, in America, and among the South Sea islanders, the majority of whom entertain the grossest superstition and idolatries.

XV. Grammar.

379. The power of communicating ideas by speech is peculiar to man; but it is a power on which depends his improvement in all the arts; because the gradation and accumulation of improvements depend on co-operation and continuation.

Neither could exist, if the power were not attained of describing improvements to the living, and of transmitting them to posterity.

380. The language of savage nations is, however, very limited: they are able to call a few hundred things by their names; to express some qualities; and name a few modes of action; but they express more by gesture than by sound: few of them can count above ten; and when desired to express a higher number, they shew the hair of their heads.

381. The most ancient languages consisted of two or three hundred monosyllables, expressing general ideas:—as air, sea, tree, man, God, house, good, bad, &c.: and all other words, by a systematic combination, were formed out of these:—such were the Welsh, Chinese, and some other languages.

382. The first sounds used by savages, may be supposed to have been cries of pleasure and pain; as *Oh!* *Ah!* and other such words, called **INTERJECTIONS**.

They probably next named visible objects; as *river, tree, grass, &c.*; thereby introducing a new class of words, called **NOUNS**.

They would then derive from nouns, a class of words to express corresponding actions; as *walk, talk, eat, drink, &c.* called **VERBS**.

383. The next class of words describe and may be supposed to have been the qualities of *nouns*, and *verbs*; as *tall, swift, short, fast, &c.* called **AD-NOUNS** and **AD-VERBS**.

Words, to describe the position of nouns in regard to each other; as *to, from, above, below, &c.* were also among those necessary to a language, and these were called **PRE-POSITIONS**.

384. The seventh class was a mere refinement of speech, and consisted of words used in place of nouns; as *he, she, it, they, &c.* called **PRO-NOUNS**.

The eighth class was intended to give precision to the noun; as *a man, or the man*, and called **ARTICLES**.

And the ninth class consisted solely of words intended to *join* others together in a discourse; as *and, because, but, yet, &c.*; and are called **CONJUNCTIONS**.

385. Such were the origin and progress of speech; and such, without variation, is the general composition of language. The English language, and all others, contain *nine* kinds of words, or parts of speech named as above; and the science of grammar merely supplies general rules for their arrangement and government.

386. The classification of *all* words into *nine kinds*, enables grammarians to simplify the rules

which direct the construction of language. Instead of a rule for every word, a few rules only are necessary to regulate forty thousand words.

Obs.—For the details of grammar, I must refer the student to my own *Practical Grammar*; or to any other modern grammar which is not too long and complex.

387. All names of things, are called *nouns*; all qualities of things are called *ad-nouns* or *adjectives*.

All actions are expressed by *verbs*.

All words, which modify actions or qualities, are called *ad-verbs*.

All words, which describe the position of persons and things, are called *pre-positions*.

All words, which are used instead of nouns, or for nouns, are called *pro-nouns*.

All words, which are used to join sentences or parts of sentences, are called *conjunctions*.

The words *a* or *an*, and *the*, are called *articles*.

The exclamatory words, which express earnestness or surprise, are called *interjections*.

388. The first written signs of words were probably hieroglyphics, or characters which represented the object named by the character; and, of course, there were nearly as many characters as ideas. The characters now used for the signs of the Zodiac and the Planets are specimens of this kind of character; and so is a circle or *snake*, when used to signify eternity.

389. The invention of letters, by combining which all sounds could be represented, is ascribed to some wise man in the reign of Cadmus, king of Thebes. This simple contrivance facilitated

the propagation and preservation of knowledge, by enabling us to express a million of words, if we desire it, by the various combination of only twenty-four or five characters.

Obs. 1.—In the GREEK LANGUAGE there are twenty-four letters; of which seven are vowels, and seventeen consonants:—

Α α	- -	Alpha	- -	*Αλφα	- -	a
Β β β	- -	Beta	- -	Βήτα	- -	b
Γ γ γ	- -	Gemma	- -	Γάμμα	- -	g
Δ δ	- -	Delta	- -	Δελτα	- -	d
Ε ε	- -	Epsilon	- -	*Επιλον	- -	e short
Ζ ζ ζ	- -	Zeta	- -	Ζήτα	- -	z
Η η	- -	Eta	- -	Ητα	- -	e long
Θ θ θ	- -	Theta	- -	Θητα	- -	th
Ι ι	- -	Iota	- -	Ιωτα	- -	i
Κ κ κ	- -	Kappa	- -	Κάππα	- -	k c
Λ λ λ	- -	Lambda	- -	Λάμβδα	- -	l
Μ μ μ	- -	Mu	- -	Μυ	- -	m
Ν ν ν	- -	Nu	- -	Νυ	- -	n
Ξ ξ ξ	- -	Xi	- -	Ξι	- -	x
Ο ο ο	- -	Omicron	- -	*Ομικρον	- -	o small
Π π π	- -	Pi	- -	Πι	- -	p
Ρ ρ ρ	- -	Rho	- -	Ρω	- -	r
Σ σ σ	- -	Sigma	- -	Σιγμα	- -	s
Τ τ τ	- -	Tau	- -	Ταυ	- -	t
Υ υ υ	- -	Upsilon	- -	Υπιλον	- -	u
Φ φ φ	- -	Phi	- -	Φι	- -	ph
Χ χ χ	- -	Chi	- -	Χι	- -	ch
Ψ ψ ψ	- -	Psi	- -	Ψι	- -	ps
Ω ω ω	- -	Oméga	- -	*Ομέγα	- -	o great

The vowels are α, ε, η, ι, ο, υ, ω.

2.—The following is the ancient HEBREW ALPHABET, of twenty-two letters, of which five are vowels, and the rest are consonants:—

Name.	Form.	English sound.
Aleph - - -	א	a broad, as in <i>war</i> .
Beth - - -	ב	b
Gimel - - -	ג	g hard, as in <i>give, get</i> .
Daleth - - -	ד	d
He - - -	ה	e, as in <i>where</i> .
Vau - - -	ו	u, as <i>oo</i> , w before a vowel.
Zain - - -	ז	z
Heth or Cheth	ח	h hard aspirate.
Teth - - -	ט	th
Yod - - -	י	i like <i>ee</i> .
Caph - - -	כ	k or c hard, as <i>come</i> .
Lamed - - -	ל	l
Mem - - -	מ	m
Nun - - -	נ	n
Samech - - -	ס	sh
Oin - - -	ע	o long, as <i>whole</i> .
Pe - - -	פ	p
Jaddi - - -	צ	j soft as s in <i>treasure</i> .
Koph - - -	ק	q or qu
Resch - - -	ר	r
Shin or Sin - - -	ש	s
Tau - - -	ת	t

The vowels are א ה ו י ע

390. The English language consists of about 40,000 words; and is derived from the Celtic, Gothic, and Latin; successively incorporated by the Welsh, Romans, Saxons, Danes, and Normans; and by the terms used in the sciences, de-

ived from the Greek, French, Italian, and German languages.

391. Grammar, in a limited sense, is the art which teaches the construction of phrases and sentences; but, in an extended sense, it embraces the whole science of language.

The study of language is properly divided into the seven following branches:—Orthoëpy, Orthography, Accidence, Syntax, Prosody, Rhetoric, and Composition.

392. *Orthoëpy* consists of rules for pronouncing letters and syllables according to the established usage.

Orthography is the art of writing words with the proper and necessary letters.

The *Accidence* treats of the modification of the different kinds of words, called parts of speech.

Syntax furnishes the rules for the proper construction and just disposition of words in a sentence.

393. *Prosody* teaches the right accentuation of syllables; and the different measures of verses.

Rhetoric enables us to affect or convince those whom we address in speaking or in writing.

Composition is the art of arranging our thoughts with precision and elegance; and is, consequently, the object and end of the study of language.

394. The nine kinds of words, or *nine parts of speech*, compose all languages; and there are in the English language about 20,500 nouns, 40 pronouns, 9,200 adnouns, or adjectives, 8,000 verbs, 2,500 adverbs, 69 prepositions, 19 conjunctions, 68 interjections, and 2 articles;—in all about forty thousand words.

395. After having acquired a stock of words by reading and copying the best authors, and mixing in good company, we should learn to arrange and combine them in a sentence with elegance; and in such manner, as exactly to express the sense we intend to convey, and no other than that sense;—a power of writing which is called *perspicuity*.

396. The great rule for the attainment of the art of composition, is to conceive, ourselves, that sentiment, which we purpose to convey to others, by previously reflecting upon it; as it is impossible to express clearly, to others, what we do not well understand ourselves.

397. We should never desire to express too many ideas in one sentence; but dispatch them one after another in their proper order; and confine ourselves to simple and short sentences till we have acquired facility in the management of them.

Obs.—The best exercise in writing and speaking is to read a short story, and then write or speak it in our own phraseology. Such an exercise daily continued for some months, would teach the several arts of spelling, writing, and speaking, at the same time.

398. We should avoid all quaint phrases, cant words, vulgar proverbs, and foreign idioms; and make our choice from the phraseology of the Old or New Testaments, or the works of Addison or Shakspeare; and avoid the latinized phraseology of Johnson, and the Gallic phraseology of some other modern writers.

Obs.—Happily, the translation of the Scriptures has served to preserve our language; or it would have been lost amidst the barbarous affectations of Johnson and his

followers. We have no where such variety of beautiful and affecting language, as in the Old and New Testaments. These will, I hope, preserve our language from the corruptions and innovations daily making in it, by those who prefer sound to sense.

399. To speak or write our ideas in an able and persuasive manner, we ought to possess ourselves of various knowledge: to read the best books on all subjects; to suffer no hour to pass, without making some improvement; and think, talk, and write ourselves on subjects, on which we have perused the opinion of others.

400. We should commit to memory the terms and leading facts of the various Arts and Sciences; and frequently reduce to writing, striking facts or important sentiments which we meet with in reading. We should compare one author with another on the same subject; and frequently converse with others, on any points in which authors do not satisfy our curiosity.

Obs.—Dr. Irving's Elements of Composition is a library for young persons; and the study of it should follow that of every grammar. Adair's Questions render it practical for schools.

XVI. Logic.

401. Logic, (which notwithstanding its importance, is too much neglected,) is the science of *correct thinking*. Logicians give five general rules, by which to assist their views in thinking, writing, and speaking on all subjects.

As these rules are of great and constant use, I have copied them from my own English Grammar:—

a. Conceive of things *clearly and distinctly*, in their own natures.

Obs.—That is, we should acquire a clear and distinct conception of things as they are in their own nature;