GEOGRAPHY.

THE EARTH IN SPACE.—There is a curious fascination in putting side by side the myth and science of astronomy. The old legends of the sun and moon, of earth and sky, of heaven and the stars, tell us of the self-same objects whose place and size, whose weight and nature astronomers are chronicling to-day. The difference is great indeed between the guesses of early times and the methods of modern science; nowhere else, perhaps, is the contrast seen so well between the infancy and the maturity of the mind of man, and no part of astronomy shows it so clearly as that which tells of the earth's place in the universe. To the Greeks, eight centuries before Christ, the earth was flat, surrounded by the sea, and covered by the canopy of sky, which is the floor of heaven, the abode of the Olympian gods. Greece was at the centre of the earth, and Delphi at the central point of Greece. As to other worlds scattered through the sky depths, science has lately been learning much; something of their nature, their number, their distance is constantly being learned, while the way is being prepared for gaining some real insight into the relations of the stars among themselves, and for fixing our own position in regard to other suns and systems than our own.

We have to invent a new measure for talking of their distance, since, finding miles too small, we talk of "light years," which means the distance that a ray of light, travelling some hundred and eighty-six thousand miles a second, would traverse in a year. Before we get too used to talking of light years it may be well to try to get a notion what a light year really is. It means a journey that would take an express train more than eleven million years. It means a velocity that the periphery of a gigantic fly-wheel one hundred miles in diameter could not keep up with, though it made five hundred revolutions in a second. It means a distance traversed in one second that sound will not pass over in ten days. And this is the unit for the quantities that modern astronomy deals with when treating of the distribution of stars in space. Sometimes one hears a cubic light year spoken of—that is, an imaginary cube with each side a light year long. It was long after men saw how to measure the distance of the stars before they succeeded so as to feel much confidenee in the results obtained; but now the distances of a few stars are known with comparative accuracy and certainty, many measures having been made that probably come within twenty or thirty per cent. of the truth.

The nearest star that has been found is Alpha Centauri, with a distance of 4⅓ light years. Probably next in order is a small star, numbered 21,185 in Lalande's catalogue. It is about 6½ light years off, while 61 Cygni, the most frequently measured of any star, is about 7 to 7½ light years off. But let us take our nearest neighbour and try to see something of the isolation of our solar system in space. Let us try to conceive of a sphere of which the sun is centre, with a radius of 4.35 light years, so placing our nearest stellar neighbour on its circumference—translated into the more familiar unit, its diameter is over fifty billion miles and its cubic contents nearly three hundred and fifty cubic light years, or seventy thousand sextillions (7 with 49 ciphers) of cubic miles, for a cubic light year is rather more than two hundred sextillions of cubic miles. Here is isolation indeed. The sun, with all its vastness, does