THE CONNECTION OF GEOGRAPHY AND ASTRONOMY, AN ELEMENTARY TEXT BOOK FOR DEPARTMENT OF SCIENCE AND ART, TEACHERS' CERTIFICATE, AND SPECIFIC SUBJECT EXAMINATIONS

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The Connection of Geography and Astronomy, an Elementary Text Book for Department of Science and Art, Teachers' Certificate, and Specific Subject Examinations by A. H. Dick

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A. H. DICK

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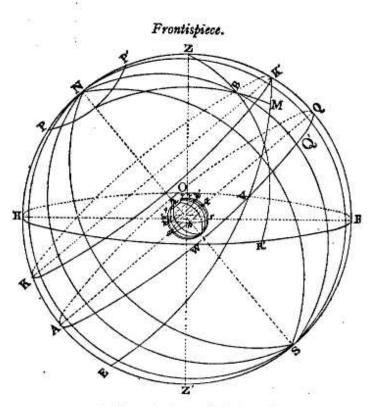


THE CONNECTION OF GEOGRAPHY AND ASTRONOMY.

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Position of a heavenly body, and Correspondence of the celestial and terrestrial spheres-

Norrespondence of the celestial and terrestrial spheres Outer sincis, the celestial; inner sincis, the terrestrial spheres. N.S. month and south poles of celestial sphere NG, axis of the heavens. ar axis of the earth, n.s. north and and south poles of terrestrial sphere. AWQ, equinoctial, stoy, equator, KK' the northern celestial tropic. A' the northern terrestrial tropic. PP' and pp' the corresponding polar circles. a the observer's position. Z his zenita. Z' his madir. ZZ' the axis of the holizon HWR'R. W, O the est and west points; H,R the north and south points, of the horizon. The unter and inner circles, and the three curves on each side through N.S. and n.r. represent corresponding meridians in the celestial and terrestrial spheres. EK', the cell,tic. Y the point Arise. B, a star, whose position may be described by BM it is initiade, and VM its lengthude; or by BR' its altiende, and SR', or H&' its azimuth; or by BQ', its declination, and VQ ' its right ascension.

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ELEMENTARY TEXT BOOK

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DEPARTMENT OF SCIENCE AND ART, TEACHERS' CERTIFICATE, AND SPECIFIC SUBJECT EXAMINATIONS.

BY

A. H. DICK, D.Sc. (Edin.), M.A., L.LB. (Lond.)



Fondon: THOMAS MURBY, 32, BOUVERIE STREET, FLEET STREET, F. C. 1876.

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PREFACE.

Tax object of the present work is to furnish a convenient, short, and sufficiently elementary text book for students of Geography preparing for the examinations on that subject prescribed by the Department of Science and Art, or by the General Committee of Council on Education. In the tables of specific subjects of the new Code, both for England and Scotland, scholars of the third year, who have chosen Physical Geography as their subject, are required to know something of "the form and size of the earth, and its motions-day and night-the seasons of the year, how they depend upon the relative positions of the earth and sun; the moon's dimensions and distance-ber phases, and the general arrangement of the planetary system." In the advanced stage of the Physical Geography, of the Science Directory, students are expected to have acquired "so much elementary astronomy as relates to the position of the earth in the solar system, its magnitude and rotation, and the influence of the sun, moon and other bodies distributed through space on terrestrial phenomena." In the Government examinations for certificates as teachers, a familiar knowledge of the shape, size, and movements of the earthand indeed, of all such geographical phenomena as depend upon Astronomy for explanation, is required. There are many excellent treatises on Astronomy from which the student might coll the truths and the explanations required ; but the very seeking for them in such books implies a knowledge of the things sought; and, even when found, it is difficult to make note of them, because the explanations often depend upon previous explanations of purely astronomical facts.

The author has, therefore, selected the chief doctrines of Astronomy which bear upon Geography, and tried to explain them in simple language, assuming no previous mathematical study, and using such illustrations, and modes of explanation, as a somewhat lengthened experience in teaching the subject has led him to see are most easily understood and remembered. He has thus sought to produce a work which, while meeting the immediate wants of students of Geography, might also be a fitting introduction to more complete treatises on Mathematical Geography, and to the study of Astronomy as a science. ٩.

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CONTENTS.

23

17. (t

1

| | | | | | PAGE. | |
|-------|--------------------------------|------------|---------|---------------|-------|---|
| I. | Shape of the Earth , . | (X | 39 | 3 • 23 | 9 | |
| п, | Magnitude of the Earth . | 225 | 223 | 663 | 24 | |
| 111, | Rotation of the Earth | | | | 25 | |
| IV. | Longitude and Latitude . | 36 | | | 50 | |
| v. | Annual Motion of the Earth | | | 1 | 41 | |
| VI. | Daily Lincles of the Sun, Moor | , and 4 | stars | 22 | şa | |
| VIL | Time | 36 | 2 | | •3 | |
| VIII. | The Moon and Tides | | 3 | | 80 | |
| IX. | Distance of Sun, Moon, and Sta | a . | | | 34 | |
| x. | The Solar System | 4 | | | 93 | |
| XI. | Gravitation | | 3 8 | | 99 | |
| хп. | Маря | 58 | 8 | 3 | 105 | |
| | Etymology of Terms | | 94 1 | ж. | 119 | |
| | Index , , 1 | 12 | 1 | ÷ | 821 | , |
| | | | | | | |

¥.

23

11

1

3⁽¹⁾