

Secondary Teacher Education Program in Science

University of Massachusetts Amherst

EARTH SCIENCE SUBJECT MATTER KNOWLEDGE WORKSHEET

Name: _____

Undergraduate Institution and Major: _____

Graduate Institution and Program of Study: _____

Please indicate how your course work or other experience satisfies each of the following requirements:

<i>Course Title and Number</i>	<i>Semester</i>	<i>Year</i>	<i>Grade</i>
---------------------------------------	------------------------	--------------------	---------------------

(a) Geology: _____

(b) Oceanography: _____

(c) Astronomy: _____

(d.) Environmental _____
Biology, Physics _____
and Chemistry _____

(e) Meteorology: _____

(f) Chemistry, Physics, _____
Earth Science, and _____
Mathematics _____

(g.) Engineering and _____
technical applications _____
of the earth sciences: _____

(h) History and philosophy of science: _____

(j) Methods of research in the sciences, computers and lab work: _____

Subject Matter requirements have been checked and _____ has completed the requirements for Initial Licensure in Earth science at the 5-12 grade level.

Licensure Advisor Date

**Guidelines for Students Seeking Initial Licensure in Earth Science
Massachusetts Subject Matter Knowledge for Earth Science
(Grade Level: 5-12)**

- (a) Geology
- (b) Oceanography
- (c) Astronomy
- (d) Environmental biology, physics, and chemistry
- (e) Meteorology
- (f) Related aspects of chemistry, physics, biology, and mathematics
- (g) Engineering and technical applications of earth science
- (h) History and philosophy of science
- (i) Methods of research in the sciences, including laboratory techniques and the use of computers

Subject matter knowledge in Earth Science for Initial Licensure can be demonstrated by successful completion of appropriate course work and by passing the MTEL in Earth Science. Normally the course work requirement can be met with a major in Earth Science or Earth Systems. Often candidates must take additional course work to fulfill requirements (g) and (h).