

## INTRODUCTORY SUBJECT MATTER AUTHORIZATIONS -- WORKSHEET

Each authorization requires either a degree major directly related to the subject or 32 semester units (or 48 quarter units) directly related to the subject, including all specific content areas. Grade C or better is required for all course work. The subject of science requires at least six semester units (or eight quarter units) in each of the specific content areas listed. See the Subject-Matter Authorization Guideline Book or leaflet CL-852 for additional information, both available on the Commission's website at [www.ctc.ca.gov](http://www.ctc.ca.gov).

Subject	Specific Content Areas								Total Units
<b>Art</b>	art history including aesthetics & appreciation	2-dimensional art including drawing, painting & printmaking	3-dimensional art including sculpture & ceramics	photography/ computer generated imagery					
<b>English</b>	grammar or language structure	advanced composition	speech	drama or theatre	literature				
<b>A Language Other Than English</b>	grammar	composition	culture	conversation	literature				
<b>Mathematics</b>	algebra	advanced algebra	geometry	probability or statistics	development of real number system or intro math				
<b>Music</b>	vocal music including analysis of repertoire and literature appreciation for developing musicians	instrumental music including analysis of repertoire and literature appreciation for developing musicians	aural musicianship	keyboard	music history including music appreciation	world music	conducting	music theory	
<b>Science</b>	biological sciences	chemistry	geosciences	physics					
<b>Social Science</b>	US history	California history	world history	world civilization or world cultures	physical geography	US government			

(continued)

## SPECIFIC SUBJECT MATTER AUTHORIZATIONS -- WORKSHEET

Each authorization requires either a degree major directly related to the subject or 32 semester units (or 48 quarter units) directly related to the subject. Grade C or better is required for all course work. The subject of History requires a minimum of 16 semester units in both world history and U.S. history. See the Subject-Matter Authorization Guideline Book or leaflet CL-852 for additional information, both available on the Commission's website at [www.ctc.ca.gov](http://www.ctc.ca.gov).

Subject	Course work	Total Units
Art History/Appreciation		
Biological Sciences		
Chemistry		
Civics/Government		
Dance		
Drama/Theatre		
Economics (social science)		
English Composition		
Geography		
Geosciences		
History		
Instrumental Music		
Literature		
Photography		
Physics		
Plant Science		
Three-Dimensional Art		
Two-Dimensional Art		
Vocal Music		