This provision is needed and reasonable because it gives the student the option of staying in school to age twenty-two and pursuing the required statewide standards without modification if the student so chooses.

3501.0360 ADJUSTED PERFORMANCE PACKAGES.

Subpart 1. Limited use for high school students. For a student who enters grade 9 before the fall of 2001, the district may adjust the difficulty or complexity of a performance package for a high school content standard so that all specifications of the content standard are completed but one or more assignments or activities require student work that is less difficult or complex than that required in a state model performance package.

Subp. 2. Limited use for preparatory students. For a student who enters grade 6, 7, or 8 in the fall of 1998, the district may adjust the difficulty or complexity of a performance package for a preparatory content standard.

This provision is needed because for a period of time, there will be some high school students entering Minnesota high schools who, because they have not completed preparatory standards, may lack sufficient content and skill background to address the level of rigor expected in the state's model packages or district performance packages that parallel the state's model. These students are, as it were, "caught in the middle" of the standards-based reform. Their math background, for example, may not have prepared them to do high-level chance and data handling; their school programs may not have given them sufficient developmental experience in systematic observation and investigation to address high level inquiry; their science background may not have focused on sufficient content to address all parts of a physics package written at a rigorous level. For a student who does not have an IEP, Section 504 Accommodation Plan, or LEP individual graduation plan, this provision is reasonable because while the student is required to address all specifications of the content standards, the districts are allowed to adjust how the student will demonstrate a standard by adjusting the level of difficulty of a performance package to be more appropriate to the level a student can reasonably achieve. This provision is reasonable because it avoids placing the burden of the transition to a standards-based education system on the students.

It is necessary to allow adjustment of packages until the year 2001 to provide for students with lack of background, and allowing this only until 2001 is reasonable because it is a time period that includes all students who have not done middle level preparatory content standards work. Students who will be ninth graders in the year

2001 will be in 6th grade in the year 1998 when the rules are scheduled to take effect. Therefore, they will have the opportunity to complete the middle level content standards at an adjusted level before being required to complete the high school content standards. While district programs will respond and accelerate learning to compensate for what students may have missed in primary and intermediate level content, it is reasonable to allow districts to make adjustments in middle level standards for students to transition sufficiently to high school standards.

Subp. 3. Scoring. The district shall assign a score of "pass" to a student who completes all assignments and activities on an adjusted performance package under subparts 1 and 2.

This subpart allowing the adjustment of performance packages provides reasonably for students in the transitional years of this standards-based reform. While all specifications of the statewide content standards are met, because some or all are met at a less difficult level than would be expected of students who had more years of preparation, the work cannot be compared equitably with that of students who complete the regular, more difficult packages that have not been adjusted. Therefore, it is necessary and reasonable that the score for work completed on an adjusted package be different. It is reasonable to use the score of "pass" because it is consistent with the tradition of "pass-fail" grading currently used for scoring work which is not done in the regular range of expectations. It is also consistent with the "pass" scoring of the basic skills tests for the math and reading requirements for graduation in Minn. Rules Chapter 3501.

Subp. 4. Criteria for adjustments. A district shall adjust performance packages according to criteria in a district profile of learning implementation manual under part 3501.0420.

It is needed and reasonable that these adjustments be required to be made according to the process to adopt local district policy so that opportunities are provided consistently for students across the district.

Subp. 5. Incomplete work. A district shall not assign a score to incomplete student work on an adjusted performance package.

This provision is needed to clarify that adjustment in level of difficulty does not in any way provide for standards not to be completed. The rule reasonably requires that the student address all specifications of the content standards and requires that work which addresses these specifications must, in fact, be completed albeit at an adjusted level. This is consistent with practice for all students.

Subp. 6. Prohibitions for kindergarten through grade 5. For a student who enters kindergarten through grade 5 in the fall of 1998 or later, the district shall not adjust performance packages for preparatory content standards to a lesser level of difficulty or complexity.

It is necessary to prohibit the adjustment of performance packages for students entering kindergarten through fifth grade in 1998 in order to require the district to accelerate learning opportunities in primary and intermediate standards for those students and thereby prevent a lack of preparation for their work in middle level standards. This is reasonable because these students are just beginning school under the new standards-based education system.

Subp. 7. Approval. A district decision to adjust the difficulty or complexity of a performance package for a student shall be made only with the written approval of the student's parent or guardian.

This provision is necessary to require that decisions to adjust packages and consequently to score students at the "pass" level be made with parental approval. This is reasonable because it maximizes parental understanding and the opportunity for parental involvement in these educational decisions about the student and supports parents in being informed about the progress of the student and the options of additional years in school or additional work during the regular school year.

3501.0370 ASSESSMENT AND SCORING STUDENT ACHIEVEMENT.

Subpart 1. District assessment requirements. A district shall:

A. assess student performance in primary, intermediate, middle level, and high school content standards using a state model performance package, local performance package, or adjusted performance package under part 3501.0360;

This provision is needed to require all districts to assess all required state standards: primary, intermediate, middle level, and high school. In order to provide statewide accountability for individual results, the achievement of statewide content standards must be demonstrated by the student and assessed by the district. Moreover, the Profile of Learning standards are designed to elicit application of complex skills in simulated real-world situations. This provision is needed to give clear direction to the districts on how to assess what the student knows and is able to do. Performance assessment activities ensure the opportunity for the student to demonstrate learning and for the student's demonstration and performance to be scored. Performance packages are needed because they align curriculum and assessment into integrated classroom activities.

> *If educational reform is to be achieved, the processes of teaching and learning need to be addressed and assessment used to support learning* (Gipps, 1996).

The requirement to use performance packages is needed to ensure that there is a vehicle to allow and ensure a student's demonstration of mastery of the skills, concepts, and processes in the standards. State model performance packages have been developed that address this and include classroom assignments and activities which give students opportunities to demonstrate mastery of skills, using simulated real-world situations. School districts may adopt and use the state models or may develop their own performance packages which require student demonstration of all specifications in the required statewide standards.

The proposed rule requiring the use of performance packages is needed and reasonable because it is consistent with M.S. 121.11 7c (d), the federal Education America Act, and education research supporting integration of learning and assessment and because this integration can best be operationalized during learning experiences in the classroom teaching-learning interaction.

Education research supports integrated, applied learning. Those views have guided the development of the framework for the Profile of Learning. For example, Falk states:

> *We need to develop assessments that do not constrain and constrict teaching and learning... [... and that] support what we have come to know is needed for learning: opportunities to use and apply knowledge, to inquire, to analyze, to critically evaluate, and to use creativity to pose and solve problems. We need to make these assessments an integral part of the learning experience... Only when*

real and meaningful student work is made a part of the assessment process can there be valid and equitable evaluation of the skills and abilities of all students (Falk, 1966).

Performance packages also provide meaningful examples against which to score the student's performance. Such activities are reasonable because they follow best practice in providing learning and demonstration opportunities without curricular interruption and are already used in many classrooms.

It is necessary and reasonable to allow the district either to adopt state model performance packages or to adopt locally-developed packages because the tradition of assessing student work in Minnesota schools has been one of local decision -- largely carried out by the classroom teacher.

B. establish processes by which content standards completed as verified on transcripts from other Minnesota public school districts shall be transferred as completed, work completed and verified on transcripts from postsecondary educational institutions or educational institutions outside the state shall be accepted for completion of content standards, and opportunities for a student to demonstrate completion of a high school content standard through learning experienced by the student outside the district's curriculum are provided;

C. use a checklist defining the work that must be completed by a student to meet the specifications of a content standard; and

D. use scoring criteria as specified in subpart 3.

Because students learn in a variety of environments and often move among schools, it is necessary to require the district to have a consistent process in place for recognizing, as completed toward graduation requirements, standards that were accomplished in other learning environments. It is reasonable to require districts to have a consistent process so that all students transferring into the district or gaining learning from programs outside the school, such as postsecondary enrollment options and community-based educational experiences, will have their completed work reviewed and accepted for completion of standards in a comparable and consistent manner. Schools have always had to deal with students coming from other school districts both from Minnesota and from other states. This provision is reasonable because it allows the district to develop a way both to review a student's prior work against the new results-

oriented standards and to allow the student to demonstrate accomplishment of what the standard requires without repeating the requirement. This provision is reasonable because allowing students to gain credit for outside learning recognizes the world as a potential classroom and is consistent with previous practice in Minn. Rules 3500.2900 "credit for learning" or "credit by assessment" provisions, which allowed students to test out of requirements that they already knew and had done. This provision is reasonable because it provides a way to implement the provisions of Minn. Laws 1997, Chapter 4, Article 3, Section 18, quoted in Section II of this document, which allows a number of out-of-school learning experiences to be used to fulfill Profile of Learning requirements.

The provision to require a checklist is needed to communicate clearly the assignments and activities that demonstrate student completion of all specifications of a standard. This is reasonable because it provides a way for students to know their progress toward requirements and provides written evidence of completion of requirements for graduation. The need and reasonableness of the scoring criteria is discussed under subpart 3.

Subp. 2. District scoring process. Districts shall determine that a student's performance package is completed by using the checklist under subpart 1, item C, and shall assign a score to the student's work on a performance package according to the scoring criteria in subpart 3.

This provision is needed to specify that the scoring of student work will be done locally in the district. This is reasonable because rating of students' completed work has traditionally been done by classroom teachers and the teacher is best qualified to rate students whom they have taught. The Profile of Learning continues this practice. Using the person who actually observes the performance insures integrity of rating, and using statewide criteria for assigning scores increases scoring objectivity and congruency with performance mandated in statewide model packages and exemplars. To guide local teachers in their ratings, the department will provide districts with exemplars of student work at the high levels of achievement, which insures consistency.

Further, it is reasonable to require that all scoring of required statewide standards use the same criteria to provide for increased consistency of scores across students. This increased consistency makes scores more meaningful.

Subp. 3. Scoring criteria.

A. Scoring criteria for a performance package

includes:

(1) a score of "4," that signifies student work that meets or exceeds the rubric for the state exemplar score of "4";

(2) a score of "3," that signifies student work that meets the rubric for the state exemplar score of "3";

(3) a score of "2," that signifies student completion of work defined on the checklist under subpart 1, item C, but that does not meet the rubric for the state exemplars; and

(4) a score of "1," that signifies student completion of work defined on the checklist under subpart 1, item C, with performance significantly below the rubric for the state exemplars.

B. Incomplete student work on a performance package shall not receive a score and does not complete a content standard.

The state rubric for scores of 1-4 with descriptors plus exemplars of actual student work at the 3 and 4 levels will provide strong guidance for greater objectivity in rating actual student work. This is needed and reasonable to increase consistency of teacher evaluation of the quality of a student's work.

Educational researchers have made the following observations about traditional grading practices:

> There is great discrepancy in the factors teachers consider when they construct grades. Grades given by one teacher might mean something entirely different from grades given by another teacher even though the teachers are presiding over two identical classes with identical students who do identical work. Where one teacher might count effort, behavior, attendance and/or cooperation as 25% of a grade, another teacher might not count these variables at all (Marzano & Kendall, 1996).

> *Consequently, students, colleges, and employers are all using unreliable information when students from different schools compete with one another for jobs or college admissions... Standards-based reform seeks to straighten out this mess through a public process of setting the same standards across the board so that everyone can see what they are supposed to be doing and how well they are doing it* (Pritchard, 1996).

A four-point set of scoring criteria is also reasonable because it is consistent with the scoring system used already in the Minnesota basic written composition tests (Minn.

Rules 3501.0200 - 3501.0290), and because teachers are familiar with it. It is also reasonable because it allows teachers to indicate two "degrees" of positive and two degrees of "not yet" scores against high standards. An even number of score choices is commonly used to avoid a tendency to choose the score "in the middle." The choice between two positive and two "not yet" scores requires a decision that the work either does or does not meet the expectations of the performance package and the standard.

Subp. 4. Other scoring considerations. While schools may offer and students may complete specifications of content standards at various grades and ages, the index for scoring shall be:

A. scoring of primary level performance packages shall use outstanding work by third graders;

B. scoring of intermediate level performance packages shall use outstanding work by fifth graders;

C. scoring of middle level performance packages shall use outstanding work by eighth graders; and

D. scoring of high school performance packages shall use outstanding work by 12th graders.

This provision is needed to clarify the expectation that scoring will be consistently applied against high content standards regardless of the age at which the student completes the performance package for the content standard. The provision also clarifies that schools have latitude in the grade levels in which content standards are assessed, but that the performance expectation is not consequently made inconsistent because of those district choices. This is reasonable because it keeps the content standard consistent and it parallels general practice in school programs where consistent standards and expectations are currently applied; for example, a ninth grader who is on the varsity basketball team, is not given extra points because she is younger than most others in the same level of competition but is held to the same level as all other varsity level players.

It is also reasonable to provide exemplars and to set the exemplars to be used for scoring at the top grade level for each level of content standards.

Subp. 5. Individualized scores.

A. When a student completes an adjusted performance package, the district shall record the score as "pass."

B. When a student, under provisions in an IEP or Section 504 Accommodation Plan, completes the specifications of a

modified content standard as determined in the student's plan, the district shall record the score as "pass-individual." When a student's IEP or Section 504 Accommodation Plan exempts the student from a content standard, the district shall record "exempt" for that content standard.

C. When an LEP student, under provisions of an LEP individual graduation plan, completes the specifications of a modified content standard, the district shall record the score as "pass-LEP." When an LEP student under the provisions of an individual graduation plan completes all specifications of a content standard solely in a language other than English, except for work in learning area ten, the district shall record the score as "pass-LEP."

This provision for scoring for students who have had packages adjusted or have had variations as stated in parts 3501.0340 or 3501.0350 is needed to preserve the integrity of the statewide system of requirements by designating that considerations have been given to individual student needs and the content standard or that the conditions under which the content standard was demonstrated by the student are different from the statewide requirement for all students. This provides an accurate record of student accomplishment. These designations are reasonable because they provide an understandable and consistent set of scores distinct to each allowable consideration: 1) "Pass" designation for all students whose packages are *adjusted*; 2) "Pass-Individual" designation for all students who achieve *modified* standards as designated in an IEP or section 504 Accommodation Plan; 3) "Exempt" designation for all students exempted from a standard as designated in an IEP or Section 504 Accommodation Plan; and, (4) "Pass-LEP" provided for all LEP students when a language other than English is used solely or specifications of a content standard are modified in an individual graduation plan.

Subp. 6. Recording repeated content standard scores. When a student completes a content standard more than once, the district shall record the highest attained score.

This provision is needed to clarify that students may have more than one chance at demonstrating specifications of a standard if a first attempt has not resulted in high performance. This provision is needed to establish that, when a student repeats a content standard, as specified in 3501.0330, subpart 7, to improve the score for that content standard, the highest score, even if it is not the most recent score, must be

assigned by the district. Therefore, the student cannot jeopardize his/her record by trying to improve performance. It is reasonable that the student should receive the highest of the scores achieved because it does demonstrate, consistent with a results-oriented philosophy, that the student should be "credited" for the best performance she/he has completed whether the first time or in subsequent attempts.

3501.0380 ADVISING STUDENTS.

A district shall establish procedures for advising a student and the student's parent or guardian of student progress in completing content standards and the choices and opportunities available for achieving graduation and learning consistent with the student's postsecondary educational and career goals.

Requiring this counseling/advising is needed to ensure that the advising process will occur, thus ensuring that students and their parents, as the students pursue the new statewide standards, receive clear and correct information which will allow the students to make choices appropriate to graduation requirements, to their postsecondary goals, and their needs with informed, parental or guardian participation. This is needed because as the standards-based system is implemented, particularly at the high school level, there will be more demand for these services to provide adequate information and clarification to parents and students about the student's progress and what is required to receive a diploma. Many schools have already begun "parents' night" programs to get this information to parents efficiently; however, this provision is needed to require districts to provide advising services.

This is reasonable because it ensures that this service will be available to all students in all districts statewide. It is traditional that secondary schools provide counselors and/or advisors for students. This function may be handled by the classroom teacher in elementary schools.

3501.0390 PREPARATORY CONTENT STANDARD RECORD DATA.

A district shall establish a system for recording student completion of primary, intermediate, and middle level content standards that must include:

A. content standards completed by the student; and

B. the score achieved on each content standard.

The requirement for a record of student achievement on the preparatory content standards is needed to provide teachers, parents, and students with information regarding the student's progress through the preparatory standards in elementary and middle schools. Like a patient's "chart" in a hospital, the preparatory record must contain the critical information which will inform educational programming relative to the student's strengths and needs, which can inform the teaching-learning process.

This provision is also needed to require that districts have a record for each student in K-grade 8 and that the record has consistent elements of information that are essential for the student's successful participation in a standards-based system.

The provision is reasonable because it adds few additional elements to the achievement records already kept by schools for students K-grade 8. It is also reasonable because it allows for districts to determine their own formats as long as the required information is included. While it is needed to require the high school transcript to be consistent in format as discussed in the part below, the preparatory record is used primarily by individual schools and parents; and therefore, it is reasonable to allow local determination of the format as is currently true of report cards but to ensure that the key components are consistent for all students in all districts statewide.

3501.0400 HIGH SCHOOL STUDENT TRANSCRIPT DATA.

Subpart 1. Transcript information. A district shall include on the transcript for a high school student the following information:

A. high school content standards completed by the student;

B. the score achieved on each high school content standard, or a notation that the content standard has been certified as completed through the district's process for transferring credit under part 3501.0370, subpart 1, item B; and

C. date of completion of each high school content standard.

This provision is necessary to provide a written record of each standard completed and the score earned as an officially documented record of the requirements fulfilled by the student to be used for the district to grant a high school diploma. This is reasonable because it ensures all students in all districts will have an accurate record upon which the decision to award a diploma is based. This is needed and reasonable so that, if a student moves, these records can also be transferred from school to school so that accomplishments of the past can be clearly tied to the statewide graduation

requirements and credited to the student in the new school. The required recordkeeping system ensures that each student's record will convey consistent and accurate information.

Subp. 2. Transcript format. A district shall format a high school student transcript according to specifications provided by the commissioner.

This provision of the requirements is needed to provide a consistent and meaningful format for reporting results to students, parents, school, the community, and the state. Schools and postsecondary institutions have frequently complained that the current transcripts lack clarity and are often not sufficiently helpful; this provision is needed to correct that situation.

This provision is reasonable because using a format that is known and understood universally will ensure consistency and will communicate more efficiently and effectively for the use of school officials, employers, and postsecondary admissions personnel.

3501.0410 NOTIFICATION TO PARENTS AND STUDENTS.

In addition to the requirements of part 3501.0120, the district shall provide written notice to parents and students, including:

A. the content standards taught and assessed in the school curriculum;

B. the procedures for advising students and parents or guardians and how to access these procedures;

C. the procedures by which students may meet graduation requirements with content standards completed outside the district curriculum;

D. the individual student progress and achievement reporting schedule the district uses; and

E. procedures for student and parent or guardian appeal of policies and procedures in the district's profile of learning implementation manual.

It is necessary for local school districts to establish and maintain a process to provide written notice to parents and students about all graduation requirements. In order to participate actively in the educational process, parents and students need to be properly informed about graduation requirements.

It is reasonable to require school districts to notify parents of graduation requirements so that they may make informed decisions regarding their children's education (Mehrens, 1993).

Notification to parents and students is reasonable because it is consistent with Minnesota legislation, Minn. Stat. 121.11 7c (b) (3), which requires that such information be provided. It is also general practice in school districts to inform parents of requirements and student progress. This is also reasonable because it is consistent with Minnesota law (M.S. 126.69, Subp. 2) which currently requires school districts to provide timely notification to parents and guardians about school programs.

3501.0420 IMPLEMENTATION REPORTING.

Subpart 1. Report to commissioner. A district shall, by July 31, 1998, submit for approval by the commissioner, in a format prescribed by the commissioner, its district profile of learning implementation manual, including the following:

A. policies and procedures for involving students, parents or guardians, and the community in decisions regarding implementation of the profile of learning;

B. policies and procedures for ensuring that all students kindergarten through grade 8 are taught and assessed on all preparatory content standards in learning areas one through nine under parts 3501.0460 to 3501.0469 in a comprehensive academic school curriculum that integrates technology;

C. policies and procedures for ensuring that all high school students have access to comprehensive academic school curriculum that integrates technology and that provides graduation opportunities through instruction and assessment of content standards from all ten learning areas under parts 3501.0440 to 3501.0450;

D. policies and procedures for assessment of student demonstration of the content standards, including criteria for local adoption of performance packages and identification of the teaching staff and processes established for scoring student work;

E. policies and processes for staff development for continuous improvement of curriculum, instruction, and assessment;

F. policies and procedures by which a student may meet a graduation requirement for a content standard, whether the district offers the content standard in its school

curriculum or the student accomplishes the work in another learning environment, including process for transfer of standards completed in another Minnesota school district, recognition of work completed in other schools and postsecondary institutions, and credit for standards achieved in extracurricular activities, activities outside of the school, previous learning, and community and work experiences;

G. policies and procedures for periodic advising of students, the student's parents or guardians, or both, of the student's progress and achievement and of the choices and opportunities available for achieving learning, graduation, and the student's postsecondary educational and career goals;

H. policies and procedures for recordkeeping and reporting of student achievement; and

I. procedures for student and parent or guardian appeal of policies and procedures in the district's profile of learning implementation manual.

Requiring districts to have policies and procedures in place in the areas specified in Items A - I is needed to assure that local decision making will occur to address the essential components of the Profile of Learning requirements and their implementation in compliance with these proposed rules. It is reasonable to require that policies be adopted by local school boards in these areas because these are areas of responsibility generally charged to local school boards, and to focus these policy areas on the new requirements of the Profile of Learning is consistent with the local autonomy component of the legislation mandating the graduation standards.

Requiring submission of these materials to the commissioner for approval is needed and reasonable so that the state has assurance that all students have access to achieving the graduation requirement and that local policies and procedures are addressing all requirements of these proposed rules. This information also informs the commissioner and the State Board of what range of structures and opportunities exist within Minnesota's schools for standards delivery and allows them to determine what assistance may be needed to schools for implementation of the Profile of Learning. As the system should be constantly researched and in continuous improvement, these data are of importance and will assist this effort. It is, therefore, needed and reasonable to gather the data.

Each required component of the local district implementation manual is needed and reasonable for the following reasons:

A. Local policies for the involvement of stakeholders are needed, in fact critical, to local implementation, for, in keeping with the legislated local autonomy provision in M.S. 121.11, the local community must determine how the Profile will be provided, offered, and assessed in the local district. It is reasonable to require systematic procedures for this involvement to maximize the opportunity for the involvement of community members. Requiring a district policy for this involvement is reasonable in that it follows in the traditions of P.E.R., system accountability, staff development advisory committees, etc., for which districts had procedures in place for community involvement.

B. and C. These policies and procedures for the preparatory and high school standards are needed to monitor the district's compliance with rules that require that learning opportunities be offered as specified in parts 3501.0440 to 3501.0469 of these proposed rules. It is reasonable to require reporting as a method to demonstrate compliance with the rules.

D. These policies and procedures are needed to assure that the district has established an assessment procedure that will be applied to all students in the district and that all students will have comparable opportunities to demonstrate completion of graduation requirements. Again, reporting is a reasonable method to demonstrate compliance.

E. This requirement is needed because it is necessary to support staff with knowledge and understanding of these new proposed rules and how to implement them. Adequate staff development is essential for successful implementation of the Profile of Learning, and it is reasonable to require districts to demonstrate provision of staff development at a level of importance signified by having policies and procedure for it in place.

F. This requirement is needed to ensure compliance with part 3501.0370 subp. 2B that requires the district to provide opportunities for a student to demonstrate completion of a high school content standard that he/she has addressed outside the school curriculum. This is reasonable because it is consistent with current practices of transferring credits and credit for learning (test-out) policies that have been in place under Minn. Rules 3500.2900 (now repealed). There is no intention that schools become more restrictive about allowing students to demonstrate completion of requirements gained in alternative ways.

G. This requirement is needed to ensure that advising parents and students occurs and occurs systematically. This is necessary for informed parental involvement and is reasonable because it is consistent with traditional report card and conferencing processes used to keep parents involved in their children's education and to provide

information regarding options for students. It is reasonable to have this policy to assure that all students receive this service.

H. This requirement is needed to ensure that recordkeeping and reporting requirements are applied throughout the district. This is reasonable because compliance with recordkeeping is essential when completion of required statewide standards is the basis of awarding a diploma. Accurate records must be kept, and it is reasonable to require districts to demonstrate their provision for this activity through policy setting.

I. This is needed to assure that an appeal process is in place for all parents and students. Students and parents need a process for requesting reconsideration of standards decisions made by schools. This requirement is reasonable because it is consistent with current appeals procedures in school districts but extends them to include the Profile of Learning.

Subp. 2. Students with disabilities or limited English proficiency. District policies and procedures under subpart 1 shall include considerations for students with disabilities and students with limited English proficiency.

This provision is needed to state clearly that *all* students must be included in all district policies and procedures regarding the Profile of Learning. It is reasonable because it is consistent with the goal of serving all students.

Subp. 3. Ongoing reporting. By September 1 of each subsequent year, the district shall report to the commissioner any amendments to its district profile of learning implementation manual or a statement that the last submitted manual continues to reflect current policies and procedures of the district.

Ongoing reporting is needed to ensure that districts' practice continues under their adopted policies and procedures reported in the district implementation manual, that districts periodically review their policies, and that changes are reported to and monitored by the state for appropriateness of revisions and continuing compliance. It is reasonable because it ensures ongoing reporting of, continuing attention to, and updating of those policies and procedures that give evidence of compliance with these proposed rules.

Subp. 4. Reporting to community. The information in

subparts 1 to 3 must also be reported to the community each year as part of the district's system accountability report.

This provision is needed because this information is essential to informed local decision-making. Without this report, local district residents would not have current information about the results achieved by their local schools and students to consider as they participate in local decision making.

This process is reasonable because it extends the reporting of necessary and useful data beyond the date of the repeal of P.E.R. Districts have been reporting to their communities annually under P.E.R. since 1976 and have successfully operated during the last decade in providing information to local district citizens about the accomplishments of the students enrolled in their schools and thus providing accountability information on a local level. Reports will give the district's citizens and the state data for making decisions about school improvement. Without this report, local district residents would not have current information about the results achieved by their local schools and students. This information is essential to informed local decision-making.

3501.0430 OTHER DISTRICT RESPONSIBILITIES.

A district shall maintain records of the following to be submitted for audit at the request of the State Board of Education for its periodic review of graduation standards, opportunities, and requirements:

A. copies of local performance packages used to assess student completion of primary, intermediate, middle level, and high school content standards;

B. aggregated records of student completion of each high school content standard;

C. aggregated data on each year's high school graduates, including average number of high school content standards completed, and the number of each score earned on each content standard;

D. anonymous examples of local student work that have been assigned scores of "3" and "4" on primary, intermediate, middle level, and high school content standards for both audit and district staff development opportunities; and

E. issues, comments, and concerns about student achievement and system delivery of content standards as may assist the board in upgrading or expanding student requirements under the profile of learning.

This requirement for districts to maintain the records specified in A. to E. is needed to meet the legislative mandate (M.S. 121.11.7C) which requires that "the state board shall periodically review and report on the assessment process and student achievements..." It is needed and reasonable to provide district level data that will allow the state to fulfill the legislative mandate that achievement and assessment should be reviewed by the State Board with the intention of upgrading and expanding requirements. The State Board needs to have data which will provide a clear picture of how schools are implementing the rules and what results are being achieved by students.

These proposed rules are reasonable because they require that these data be gathered by the districts and reported to the local community and the state, enabling the state to meet this mandate. In addition, these reporting requirements replace the P.E.R. reporting requirements and strengthen the reporting of local assessments by adding the component of reporting achievement against the state content standards. Goals 3 and 5 of Goals 2000 call for increasing student achievement. The report data will also be used in assessing Minnesota's fulfillment of these goals.

Because the proposed rules focus on student achievement, it is necessary for districts to report results of testing. This gives information about the impact on students and on schools of statewide content standards and required demonstrated completion. This information will contribute a feedback link in the accountability system, as schools, the department, and the public have the annual "success rate" to review. The reports will also serve as data for the State Board to "periodically review and report on the assessment process and student achievement with the expectation of raising standards and expanding high school graduation requirements" (M.S. 1211.7C). Minnesota's law allowing a variety of assessments decentralizes assessment results and makes local data-gathering and reporting necessary.

This process is reasonable because it merely extends the reporting of needed and useful data beyond the date of the repeal of P.E.R. Reports will give the district's citizens and the state data for making decisions about school improvement needed and the level of student success. These proposed rules require less data than did previous P.E.R. reports. Because schools would, as a matter of professional practice, need to keep these records about students, reporting this information will not be a burden and will provide effective achievement data needed for continuous decision-making to improve each local school and the statewide system as a whole.

A. The requirement that locally-developed packages be available for review is necessary so that copies of packages being used may be examined to determine that demonstration of all parts of the standard is being required and to review the rigor and

academic breadth that are being expected and achieved. This is a check on the requirement that locally-developed packages address all parts of the standards at a level of difficulty equal to the state model packages. These packages may also indicate what subjects, topics, and approaches are working most effectively in Minnesota schools. This is reasonable because it monitors for consistency in performance packages used and for compliance with part 3501.0370.

B. and C. Collecting aggregated records of student achievement is needed and reasonable because aggregated records of student accomplishment will provide data to suggest where Minnesota students and schools seem to be strongest and weakest in the delivery of the Profile of Learning and what areas and subjects may need further support and staff development opportunities.

Aggregated achievement data is needed to provide information about the achievement of students in various sites and districts. It is reasonable to require this to provide for accountability for results statewide being achieved by school districts that are required to deliver statewide content standards to meet graduation requirements.

D. Maintaining a series of local exemplars is necessary and reasonable because the state must continuously seek more and better exemplars to develop the state exemplars for "3" and "4" scores to assist teachers in scoring through better examples of outstanding work. As achievement increases, these exemplars need to be updated; therefore, new student work must be kept and available for review and scoring.

E. Records of comments and suggestions are necessary and important so that the State Board can know what difficulties and suggestions schools have in implementing the Profile of Learning. This will help to focus the workplan of the department on responding to those school needs.

This provision is reasonable because it is consistent with the current practice of the state conducting periodic audits in local districts to assess compliance with various programs such as school nutrition and special education.

The remainder of this section (VI) pertains to:

3501.0440 through 3501.0450 CONTENT STANDARDS: HIGH SCHOOL LEVEL; and
3501.0460 through 3501.0469 PREPARATORY CONTENT STANDARDS.

Overview of the Ten Learning Areas and the Content Standards

The Profile of Learning consists of ten Learning Areas. Each Area is designed as an integrated focus of knowledge and skills.

Specific academic requirements within each of these ten Learning Areas are expressed in the form of "content standards" listed under the Learning Areas. The standards provide a definition of what is to be learned in a Minnesota public school education. The specifications of each standard are stated in parts 3501.0440 to 3501.0469. There are forty-eight high school content standards across the ten Learning Areas and fifty-six preparatory content standards. Each content standard lists within its parts the required tasks and activities (the content) that a student must know and demonstrate. The content standards clearly define specific expectations against which individual student performance in the Learning Areas can be assessed.

The specific knowledge required of students within each standard is of two types: declarative and procedural knowledge. Declarative knowledge is what the student needs to know and understand and is composed of facts, concepts, principles, and generalizations. Procedural knowledge is what the student needs to do and is composed of skills, strategies, and processes.

Each of the forty-eight standards has been developed specifically as an outline of the essential knowledge, concepts, and processes required to demonstrate thorough understanding of the subject content and the demonstration of applied learning within an appropriate context for the subject. However, while a comprehensive education in many content areas requires a blend of in-depth background knowledge and a demonstration of applied learning, in others, such as reading, writing, speaking, and research, it is the demonstration of applied learning which is most important. These standards not only include statements of what the student must know but state what the student must do.

Within the ten Learning Areas, as the standards build from the preparatory standards at the primary, intermediate, middle levels to the high school level standards, the skills, knowledge, concepts, and processes build from basic to advanced and from general to specific. In each Learning Area, all primary, intermediate, and middle level standards are required for all students. The completion of these preparatory standards provides the basic knowledge in each Learning Area and prepares students to work in the high school content standards.

Accountability for individual student results is dependent on the same clear expectations being set out and required for all students in all public schools across the state. Parts 3501.0440 to 3501.0469 are needed to establish clearly the specifications of

the content standards for the Profile of Learning for students in Minnesota public school districts.

Overview of the Need and Reasonableness for the Learning Areas

The ten Learning Areas define the framework of the integrated knowledge base that comprises a comprehensive education and that organizes the knowledge, concepts, and processes determined by Minnesota stakeholders to be needed to succeed in employment and lifelong learning in the Twenty-first Century. Each of these Learning Areas is needed because, together, they comprise Minnesota's definition of a comprehensive education. Each Area represents an essential component of an education that will equip students for lifelong learning, the world of work, and successful adulthood. An overview of the ten Learning Areas and the forty-eight high school content standards appears in Appendix A. An overview of the fifty-six preparatory content standards appears in Appendix B.

> In a 1996 report from the U.S. Dept. of Education, what American learners need is addressed: *Today, rapid political and technological change around the world has created another crisis of confidence and another moment of opportunity [for public education]. ...Opinion differs on the emphasis and methods of schooling and on the best use of the nation's resources. ...American learners will need a firm grasp of basic competencies, a broad general knowledge of their world and the skills to respond to the rapid generation of new knowledge. Every recent report on education calls upon schools to help students become not only knowledgeable adults, but also reflective analysts, independent problem solvers and effective team players* (Robinson, 1996).

In his book *Frames of Mind: Theories of Multiple Intelligences*, Howard Gardner articulates the consideration that multiple intelligences must be addressed and nurtured as the child proceeds through education. Only in this way can one be certain that linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, interpersonal, and other named and as yet un-named intelligences are identified, employed, and applied as one needs or is able to use them throughout life. The Profile of Learning is needed and reasonable because it is designed to assess and address the multiple intelligences of each student to provide a comprehensive experience in school through direct application which allows an individual to function as multiply intelligently as possible in adulthood. As Gardner writes:

> *Ultimately, the educational plans that are pursued need to be orchestrated across various interest groups of the society so they can, taken together, help the society to achieve its larger goals. ...It is important that a society find some way of training, and then using, those abilities that permit a vision of a large and complex whole* (H. Gardner, 1983).

The Learning Areas of the Profile are designed to address and develop multiple means of intelligence and, thereby, to make the student experienced in and able to use those transferable skills and processes -- often simply indeterminable in a pencil-and-paper test -- because application has been required across the spectrum of Learning Areas within standards which require practical use.

The forty-eight high school content standards across the ten Learning Areas are needed and reasonable because they include the essential skills, knowledge, and processes that are consistent with the entrance requirements of Minnesota colleges, universities and postsecondary institutions; that are consistent with the skills that the SCANS (Secretary's Commission on Acquiring Necessary Skills) Report lists as what employers state is needed in the world of work; and that are consistent with education research and with what numerous national studies and reports state that students need to be prepared for the Twenty-first Century.

The entrance requirements of various Minnesota postsecondary institutions have been reviewed and compared to the content standards in the ten Learning Areas. Appendix C shows the matches between the standards in the ten Learning Areas and those requirements. The matches strongly support both the need and reasonableness for the content and processes included in the ten Learning Areas.

The requirements in the ten Learning Areas were reviewed and compared with the major competencies and foundation skills identified in the SCANS (Secretary's Commission on Acquiring Necessary Skills) Report. Appendix D shows the matches that strongly support both the need and reasonableness for the content and processes included in the ten Learning Areas.

Evidence from **education research literature** supports the need and reasonableness for 1) the content standards included in the ten Learning Areas, 2) the emphasis of the specifications of the content standards being on concepts and processes, 3) the inclusion of specifications which require application of learning by the student, and 4) the interdisciplinary organization of the Learning Areas.

> A national study that reviewed content standards from different states reported the following common themes in content standards --

Content standards:

- *...emphasize that students need to know the large concepts in each discipline and use higher order cognitive processes as well as "basic skills" to make sense of these concepts...*
- *...envision learning that shifts toward a greater focus on thinking skills -- reasoning, problem solving, making connections, communicating -- as the context for learning basic skills and facts...*
- *...guide teaching and learning experiences that explore big ideas and essential questions in the disciplines...*
- *...engage students in experiencing and understanding the disciplines' bodies of knowledge and a set of dynamic ideas rather than a collection of facts; they often suggest performance tasks to demonstrate understanding...*
- *[provide for] ...learning and teaching for understanding, which generally involves explaining, finding evidence and examples, generalizing, applying, analogizing and/or representing the topic in a new way...*
- *...encourage interdisciplinary curriculum and instruction...* (Wheelock, 1996).

The Profile of Learning content standards reflect these common themes.

The "new curriculum" is organized around eight integrative themes called "Human Commonalties": The Life Cycle, Language, The Arts, Time and Space, Groups and Institutions, Work, Natural World, and Search for Meaning (Boyer, 1995).

What would be the features of the new education? Central would be the creation of learning environments that support the skills of symbolic analysis -- the skills essential to the functioning of the electronic global economy. Young symbolic analysts will have learned to read, write, and calculate and will have done serious study in the humanities and sciences. The ways they learn to learn will be critically important. They will need the skills of calling up information on the computer. More importantly, they will need to learn how to conceptualize problems and solutions. They will need learning in depth to refine the basic symbolic-analytic skills: abstraction, system thinking, experimentation, and collaboration. The capacity for abstraction will be essential to the capacity for discovering patterns and meanings (Wirth, 1992).

Process must be taught before and throughout content to enable students to become "information processors." ...By teaching process skills related to critical thinking, communication, cooperation, leadership, problem solving and decision making, we are preparing our students with the skills necessary for a productive and responsible life (Stone, 1993).

...[I]f students can't take the learning they have and translate it to a new situation, it's worthless. If all you are going to teach are names and dates and facts, you're wasting your time and the students' time. Learning is like money in the bank; it's great to have it there but it's only useful when you pull it out and use it. So it's very important to teach for higher-order thinking, but not without building a foundation (Brandt, 1985).

Whenever you isolate a process and teach the process separately, there's a danger that students will not actually use it. We have to help them make the application. ...Decision making must become a part of the student's real life (Brandt, 1985).

Daggett listed the stages of using Bloom's taxonomy in applied learning as:

1. *Knowledge*
2. *Apply in Discipline*
3. *Apply across Disciplines*
4. *Apply to Predictable Situations*
5. *Apply to Unpredictable Situations* (Daggett, 1994).

All students have potential for creative thinking. In many, that potential has been scientifically extinguished by their "majoring" in recalling THE right answer rather than using information as the launching pad for more complex thinking. OR: Information and skills become useful when they can be applied to a new, not previously encountered situation. Generalizations can be used to solve new problems. Previous experience can be used to predict outcomes, estimate answers, extrapolate from data, and/or avoid errors. It is important that students have experience in applying whatever they learn to new problems or situations (Hunter, 1982).

Studies on the working of the human mind confirm this essential truth: Children learn best when they see relationships across the disciplines, when they see connections. In a comprehensive review of neuroscience research, Geoffrey and Renate Caine conclude: In learning, the brain is ...constantly synthesizing things, organizing knowledge and processing parts of information into a whole (Boyer, 1995).

Not all educators endorsed the idea of redefining what should be taught in key subjects. ...the curriculum reform efforts only served to reinforce traditional subject-matter boundaries at a time when schools should shatter those boundaries. Especially as instruction connects schooling to the real world, Boyer and others argued, teaching should not be compartmentalized into disciplinary blocks (Rothman, 1995).

> *Our preoccupation with the disciplines ...is slowly but steadily isolating students from the knowledge and skills they need in order to survive* (Brady, 1993).

The requirements represented by the forty-eight content standards in the ten Learning Areas are also reasonable because they were developed by the primary stakeholders in Minnesota over a period of more than five years. This stakeholder involvement is described in Section IV of this document. Since the 1980s, Minnesota stakeholders have been consistently sending the same message about what they want students to know and be able to do as a result of their public school experience.

> In the Minnesota Dialogue on Education conducted during 1984, the purposes of education ranked as the three highest by citizen participants were:
> *1) to develop basic skills (e.g., math, reading and writing); 2) to learn to think, solve problems, and make decisions; and 3) to provide the opportunity for each student to develop his/her individual potential* (Minnesota Department of Education, 1984).

The reasonableness of the requirements is further supported by their consistency with the evolution of results-oriented education in Minnesota education. The content standards across the ten Learning Areas are reasonable as what comprises a comprehensive education for Minnesota public schools because they are consistent with earlier efforts in Minnesota to move to a results-oriented system for graduation requirements. Review of the Essential Learner Outcomes (ELOs), that were found to be needed and reasonable and were adopted into State Board of Education rule in 1989, shows that the same essential areas of learning that were in the Essential Learner Outcomes are found within the content standards in the ten Learning Areas. Appendix E shows a comparison of the ELOs and the Profile of Learning high school content standards.

A review of Essential Learner Outcomes rules (Minn. Rules, Parts 3500.1060 - 3501.1075, now repealed) that delineated learner expectations, and a comparison to the forty-eight Profile of Learning high school content standards, indicates strong consistencies and similarities in the goals and outcomes set forth in both documents. Therefore, a consistent, result-oriented perspective has been evolving and is continued in the content standards in the Profile of Learning. The Profile of Learning content

standards contain knowledge, skills, concepts, and processes documented in prior Minnesota Rules as what Minnesota public schools should require and that have been further refined and clearly specified in the Profile of Learning content standards. The requirements in the content standards have been carefully and repeatedly honed to reflect what has been found to work in pilot implementation.

The reasonableness of the requirements contained within the content standards across the ten Learning Areas is supported by the fact that clearly the content and processes are consistent with what schools have been and are now teaching. The difference is the clear focusing and defining of exactly what is required within each Learning Area and the emphasis on concepts, processes, and application of learning.

Finally, the reasonableness of these requirements is supported by their consistency with the standards being identified nationally as needed and by the standards being developed in other states.

> The American Association of School Administrators (AASA) in a 1996 regional report identified what students need to know and be able to do. AASA also reported the following as the academic content students need to master to succeed in the Twenty-first Century:
>
> 1. *Math, logic, and reasoning skills; functional and operational literacy; and the understanding of statistics.*
> 2. *Critical interpersonal skills, including speaking, listening, and the ability to be a part of a team.*
> 3. *Effective information accessing and processing skills using technology.*
> 4. *Writing skills to enable students to communicate effectively.*
> 5. *Knowledge of American History and government to function in a democratic society and an understanding of issues surrounding patriotism.*
> 6. *Scientific knowledge base, including applied science.*
> 7. *An understanding of the history of the world and of world affairs.*
> 8. *Multicultural understanding...*
> 9. *Knowledge of foreign languages.*
> 10. *Knowledge of world geography* (Uchida, 1996).
>
> AASA also specified the most essential skills students will need in the Twenty-first Century:
>
> 1. *Oral and written communication skills.*
> 2. *Critical thinking, reasoning, and problem-solving skills.*
> 3. *Self-discipline.*
> 4. *Skill in the use of computers and other technologies.*
> 5. *Job success skills.*
> 6. *Adaptability and flexibility.*

7. *Conflict resolution and negotiation skills.*
8. *Being able to conduct research and interpret and apply data.*
9. *Knowledge of other languages -- being multilingual.*
10. *Comprehensive reading and understanding skills* (Uchida, 1996).

While Minnesota's Profile of Learning is unique in its comprehensiveness and level of integration and in the extensiveness of the involvement of stakeholders over the five years of development, the choice to move to content standards as requirements and the choices about what to include in the required statewide standards are consistent with those of other states.

> *At last count, 48 states and the District of Columbia had instituted or were in the process of developing academic standards in core subjects* (Robinson, 1996).

Maine's Common Core Outcomes:

- *Human record...student understanding of history and the constructs of human thought and creativity as they have evolved over time.*
- *Reasoning and problem solving...[the] ability to use knowledge and to reflect on their own process of learning.*
- *Communication...[the ability to] use a variety of media.*
- *Personal and global stewardship...development of responsible citizens and personal well-being* (Uchida, 1996).

Colorado Public Schools: Opportunities for Success -- Essential Learnings:

1. *Communication skills...*
2. *Decision making and problem solving skills and strategies.*
3. *Basic language skills and broad vocabulary to use as building blocks in developing reading, writing, and critical thinking.*
4. *Self-advocacy skills to make needs and wants known in socially constructive ways in learning, work and social situations.*
5. *Personal strengths and capabilities and use this information to act responsibly at school and work.*
6. *Social skills to develop positive relationships with peers and adults in a variety of settings and situations and with diverse populations.*
7. *Organizational skills and study strategies for school and work...*
8. *Career development skills to make, pursue and maintain personal employment choices.*
9. *The use of tools and technology to augment learning and accessing information* (Colorado Department of Education).

North Carolina Public Schools: Standards and Accountability:
...the Standards and Accountability Commission has recommended that North Carolina adopt six competency areas for student proficiency: communications, using numbers and data, problem solving, processing information, teamwork and using technology (North Carolina Department of Public Instruction).

Learning Area 1: Read, View, Listen

Learning Area 1 is needed in the Profile of Learning to ensure that students have and can apply the skills to receive communication and information. At the high school level the content standards include reading, listening, and viewing complex information or technical reading, listening, and viewing. At preparatory level the content standards include the core component skills necessary to receiving communication.

The high school content standards included within this Learning Area are reasonable because they provide the critical components for taking in complex information and analyzing and evaluating it. Both of the high school content standards provide for the same critical attributes of this learning while giving the choice of one, from reading of varied English language selections or technical reading. The preparatory standards are reasonable because they provide the critical skills, such as literal comprehension and interpretation, sequenced through the grade levels that will support successful student performance in the high school standard for dealing with comprehending and evaluating complex information.

Learning Area 2: Write and Speak

Learning Area 2 is needed in the Profile of Learning to ensure that students have and can apply the communication skills for expression through writing and speaking. The high school content standards within Learning Area 2 are reasonable because they provide the critical component skills, concepts, and processes for written or oral expression through academic writing or technical writing and through public speaking or interpersonal communication. Both choices in each required area contain the critical attributes of this Learning Area. The choice allowed the student, responds to individual need and interest. The preparatory content standards are reasonable because they support the accomplishment of the high school standards with a scope and sequence of critical skills such as writing a story, speaking to an audience, and interpersonal communication such as problem solving.

Learning Area 3: Literature and the Arts

Learning Area 3 is needed in the Profile of Learning to ensure that students have and can demonstrate concepts, knowledge, and processes in analysis and interpretation of literature as a requirement and in other various areas in the arts as elective choices, and that students have the knowledge, concepts, and processes in creation and performance in one of the various areas in the arts by choosing from dance, music, theater, visual arts, and media arts. This Learning Area requires two standards but is needed to provide numerous elective choices for students to fit interest and future career goals. The high school content standards within Learning Area 3 are reasonable because they provide critical knowledge and demonstrated understanding in the analysis and interpretation of literature and in one other selected art form. The preparatory content standards are reasonable because they provide knowledge and demonstrated understanding in artistic creativity, performance, and expression that support accomplishment of the high school content standard.

Learning Area 4: Mathematical Applications

Learning Area 4 is needed in the Profile of Learning to ensure that students have the skills, knowledge, and demonstrated understanding for application in the critical component areas of mathematics. The three required high school content standards include chance and data handling or patterns and discrete functions, algebraic patterns or technical applications, *and* shape, space and measurement. These high school content standards are reasonable because they encompass the major aspects of mathematics. The preparatory content standards are reasonable because they provide the supporting core skills and understanding in number sense, space, shape and measurement, patterns and functions, and chance and data handling for successful student performance of the high school content standards.

Learning Area 5: Inquiry

Learning Area 5 is needed in the Profile of Learning to ensure that students have and can apply knowledge and skills to conduct research and communicate findings which would include hypothesizing, accessing information from a variety of resources, validating sources, determining opinion from fact, and applying data. This Area is needed to assure the foundation skills of inquiry. The need for this Learning Area is strongly supported in education research pertaining to interdisciplinary learning. The student must complete two high school content standards from this Learning Area. The first requirement -- chosen from history of science, history through culture, history of the arts, world history and cultures, and recorders of history -- is reasonable because it provides for the critical

attributes of issues analysis. The content standards from which the second requirement must be selected are reasonable because they provide for the critical attributes of the research process. The preparatory standards in this Learning Area are reasonable because they provide the content in a developmental sequence to support successful completion of the high school content standards in this Area. The preparatory content standards -- including data categorization, classification and recording; observation and investigation; and accessing information -- are critical to inquiry and research and also are skills that are used in learning in many other areas.

Learning Area 6: Scientific Applications

Learning Area 6 is needed in the Profile of Learning to ensure that students have and can apply the knowledge, concepts, and processes in scientific concepts and methods to various aspects of life. The student must complete two high school science content standards from concepts in biology, concepts in chemistry, earth and space systems, concepts in physics, and environmental systems. These high school content standards are reasonable because they encompass the major aspects of science. The preparatory content standards are reasonable because they provide the core supporting skills and understanding in direct science experience, living and non-living systems, earth systems, and physical systems for successful performance in the high school content standards.

Learning Area 7: People and Cultures

Learning Area 7 is needed in the Profile of Learning to ensure that students have and can apply the knowledge, concepts, and processes of the development of and interactions among people, cultures, geography, and government. This Area includes United States history and citizenship, civic responsibility, and action in a democratic society. The high school content standards require United States history, citizenship, and diverse perspectives, and a choice of one additional content standard from among human geography, institutions and traditions in society, and community interaction. Requiring themes of United States history, United States citizenship, and diverse perspectives is reasonable because they provide an understanding of the key events, concepts, and people in the historical development of the United States. These high school content standards are reasonable because they provide critical information and understanding for participating as an informed citizen in a pluralistic society. The preparatory content standards are reasonable because they provide critical core knowledge through standards including family, school and community; historical events; geography and citizenship; current issue analysis; and geography and culture to provide

broad knowledge and background to participate successfully in the high school content standards and as an informed adult in society.

Learning Area 8: Decision Making

Learning Area 8 is needed in the Profile of Learning to ensure that students have and can apply the knowledge and process skills for decision-making as applied to personal health, physical well being and fitness, and career investigation or occupational experience. This Learning Area focuses on the process of using information to make decisions. Decision making is an essential skill that can be generalized to and used in all aspects of adult life. The high school content standards in this Learning Area are reasonable because they provide knowledge and application of that knowledge in the area of decision-making as it relates to critical areas of health and well being in adult life, including individual and community health, physical education and fitness, and career investigation or occupational experience. The preparatory content standards are reasonable because they provide critical core knowledge for personal health and fitness, nutrition, physical fitness, and career exploration for successful performance of the high school content standards and informed adult decision making in these essential areas of living.

Learning Area 9: Resource Management

Learning Area 9 is needed in the Profile of Learning to ensure that students have and can apply knowledge, concepts and processes in the management of resources for a household, community, or government. This Area includes technology and the interdependence of natural/managed systems. This Area assures a general understanding of economics. The high school content standards in this Learning Area are reasonable because they provide the critical components of learning in economic systems, natural ecosystems and human managed systems, personal and family resource management, business management, and technological and financial systems. These support and inform adult living with essential knowledge and skills. The preparatory content standards are reasonable because they provide supporting core curriculum including introduction to technology, personal resources, group resources, informed consumerism, and technology applications for resource management using skills in technology for successful completion of the high school content standards and for further education and the world of work.

Learning Area 10: World Languages

Learning Area 10 is needed in the Profile of Learning to ensure that students have the opportunity to gain and apply knowledge and skills in communicating in a language other than English. This skill is an entrance requirement for a number of colleges. It is an increasingly needed skill in a global society and economy. It is reasonable to require that districts offer this high school content standard because many students need a world (foreign) language to pursue their postsecondary education and career goals. This Learning Area is not required for graduation because it may not fit the personal goals of all students, and because at this time Minnesota does not have an adequate number of world language teachers to deliver a language other than English to *all* students in the public school system. It is reasonable to provide preparatory standards in this Learning Area because there is growing evidence that world language learning is most effective when started at early ages.

VII. ADDITIONAL NOTICE PLAN

In accordance with Minn. Stat. section 14.101 and Minn. Rules 1400.2060, the Board developed and submitted for prior approval by the Office of Administrative Hearings, an additional notice plan. Both the Request for Comments and the Notice of Intent to Adopt Rules were mailed to the following, according to the approved plan:

a) all Superintendents of public school districts (362)
b) all Special Education Directors (250)
c) Limited English Proficient (LEP) Project Directors in schools statewide
d) Statewide Educational Organizations and selected state level councils (37)
e) all Graduation Standards Pilot Site Directors (24)
f) public libraries statewide (350)
g) Minnesota Association of Student Councils
h) Student Council Presidents, in high schools statewide (400)
i) all local school district parent organizations (PTA/PTO) (1500 statewide)
j) Minnesota State Legislators: members of the Senate Education Committee, Senate Education Division - K-12 Funding; House Education Committee, House K-12 Education Finance Division
k) selected newspapers published primarily for various communities of color: *La Prensa, La Voz, Native American Press, Asian Pages, Insight News, Minneapolis*

Spokesman, and *The Circle* (A summary of the Notice only will be published in these newspapers.)

l) State Multicultural Education Advisory Committee

m) the two Twin Cities newspapers: *Star Tribune* and *St. Paul Pioneer Press* (a summary of the Notice only)

n) the Internet address: < http://cfl.state.mn.us > (the Hearing Notice and Proposed Rules only).

VIII. WITNESSES

The following individuals will testify on behalf of the Board and the Department of Children, Families and Learning:

John Augenblick, education finance consultant of Augenblick and Myers, Inc., will testify on the estimated cost to school districts and the state to implement the proposed rules.

Wayne Erickson, Director of Special Education, Minnesota Department of Children, Families and Learning, will testify on the need and reasonableness of including special needs students in the Profile of Learning and providing special consideration for this population.

Linda Forbes, Consultant in Community Development, Northern States Power Company, will testify on the need and reasonableness of the proposed rules and the involvement of stakeholders from the business community.

Mike Lindstrom, Executive Secretary, Council of Minnesota Professional Education Associations, will testify on the need and reasonableness of the ten learning areas and the content standards included in the proposed rules.

Jessie Montano, Manager of Student Options, Minnesota Department of Children, Families and Learning, will testify on the need and

reasonableness of considerations for limited English proficient students in the Profile of Learning.

Carolyn Olson, Assistant Director, Minnesota River Valley Education District, will testify on the reasonableness of the proposed rules from the small, outstate, local school district perspective.

Susan Phillips, consultant in assessment from the Michigan State University, will testify on the need and reasonableness of the Profile of Learning standards and assessment.

Yvonne Shiplin, Chair, Graduation Standards Executive Committee, will testify on the reasonableness of the development process and the involvement of stakeholders.

Jane Stewart, Curriculum Director of Rosemount/Apple Valley/Eagan public school district, will testify on the reasonableness of the proposed rules from a larger school district perspective.

Kate Foate Trewick, Assistant Commissioner in the Department of Children, Families and Learning, will provide an overview of need and reasonableness of the Profile of Learning.

IX. REGULATORY ANALYSIS

Minnesota Statutes 14.131 requires the statement of need and reasonableness to include the following information on classes of persons affected by the rules, cost, and alternatives considered.

1. Describe the classes of persons who will probably be affected by the proposed rules, including those who will bear the costs of the rules and those who will benefit from the rules.

Ultimately, all Minnesotans will be affected by the proposed rules, for the rules will ensure a comprehensive education and thus improve the education received by a high school graduate in Minnesota. Minnesotans will also benefit from increased accountability at the individual student level for learning results and at the school level. Most direct benefits will be to the future graduates, especially those who, without these rules, may have graduated without these skills, and to those who employ them after graduation or admit them to postsecondary education. In both of these cases, costs of retraining graduates or of lost productivity will be reduced.

The major costs of the Profile of Learning rules will be borne largely by the state for developing training opportunities, reporting, analyzing, and auditing. Other costs will be borne by local districts for staff development time, administration,and planning.

2. Estimate the probable costs to the agency and other agencies of implementing and enforcing the rules and any anticipated effect of the rules on state revenues.

A cost impact study was conducted by Augenblick and Myers, Inc., a consulting firm, to estimate the cost to the state and to school districts of implementing the proposed rules for the Profile of Learning. Similar studies were conducted by this firm in 1995 to estimate the cost of the rules for basic requirements in mathematics and reading and in 1996 to estimate the cost of the rules for the basic requirement in written composition.

For the first year (school year 1998 - 1999) that the proposed rules will be in effect, the estimated cost to the state for implementation of the proposed rules for the Profile of Learning is $2,904,053. For the following year (1999-2000), the cost is estimated to be $2,918,746.

These costs to the state are based on the following cost items being paid for by the state: 1) assessment package implementation (monitoring of quality), 2) reporting, 3) professional development and curriculum change assistance, 4) research and evaluation, 5) technology support, and 6) an indirect cost factor for department activities necessary to support the implementation of the Profile of Learning. The proposed rules will not affect state revenues and will not cause costs to other state agencies.

3. Discuss whether there are less costly or less intrusive methods of achieving the purposes of the rules.

The proposed rules have been designed to require the least cost and time necessary for implementing a results-oriented system of statewide standards.

The Board believes it has selected the most efficient, cost-effective, non-intrusive means of ensuring statewide content standards with local autonomy in delivery.

4. Describe any alternative ways of achieving the purpose of the rules that the agency seriously considered and the reasons why they were rejected in favor of the proposed rules.

The agency examined the possibility of requiring Outcome-Based Education of all districts, with each district responsible for setting its own standards. This was rejected by citizens in public meetings. The agency also considered having a larger number of basic requirements in areas beyond reading, mathematics, and writing, and rejected these possibilities when the excessiveness of testing in such a system became apparent. It was also deemed unreasonable to focus so heavily on minimum skills. Required individualized educational plans for all students were proposed also, and rejected because they would be burdensome and unlikely to render the desired results. Finally, statewide performance assessment was considered, with students possibly submitting portfolios to the state for examination. Experience in other states indicated that this was not a useful form of assessment and that local curricula would need to be dictated too heavily.

Rules that provided a balance of statewide standards and local delivery models were considered best for Minnesota, and, thus, the present proposal was refined and readied for the rulemaking process.

5. Estimate the probable costs of complying with the rules.

The costs of complying with the proposed rules will be to local public school districts. The Augenblick and Myers 1997 cost impact study estimates the cost to local school districts in Minnesota for implementing the proposed rules for the Profile of Learning. The cost to school districts includes costs needed to carry out the following activities: (1) staff development, (2) new responsibilities, and (3) supplies and materials.

Based on these categories of cost and the set of assumptions developed about such factors as the number of school districts, pupil counts, salary levels, etc., it is projected that the added cost to school districts will be $93.9 million in 1998-1999 and $93.8 million in 1999-2000 for the Profile of Learning. Some of these costs will be offset by funds likely to be available from the school districts for professional development. As a result of these funds being available, it is estimated that the net cost of the Profile of Learning will be $76.1 million in 1998-1999 and $72.3 million in 1999-2000. On a per student basis, this translates to $79.47 per pupil per weighted average daily membership (WADM) in 1998-1999 and $74.93 per WADM pupil in 1999-2000. Copies of the full cost impact study are available on request from the Department of Children, Families and Learning.

6. Discuss any differences between the rules and existing federal regulations and specifically analyze the need for and reasonableness of each difference.

The proposed rules are consistent with federal regulations, particularly for *Goals 2000: Educate America Act* which requires state standards and emphasizes the need for a well-educated population and work force. As requirements for graduation are the province of the state rather than the federal government, there is no inconsistency in standards or procedures to assess standards, which are the essential components of these rules.

CONCLUSION:

Based on the foregoing, the proposed rules are needed and reasonable.

Dated: Dec 8, 1997 Signed: Dolores Fridge

Dolores Fridge, President
State Board of Education

Appendix A

High School Standards Outlines

Read, View, Listen 1

Read, view and listen to complex information in the English language.

choose 1

Read Complex Information
Comprehend and evaluate complex information in a variety of English language non-fiction reading, viewing and listening selections.

Technical Reading
Read and apply technical information from a variety of English language documents or electronic media.

Write and Speak 2

Write and speak effectively in the English Language.

choose 1

Academic Writing
Write in the English language for a variety of academic purposes and situations.

Technical Writing
Write for a variety of technical purposes, situations and audiences.

choose 1

Public Speaking
Construct and deliver speeches in English for a variety of purposes and audiences.

Interpersonal Communication
Demonstrate effective English communication skills in personal, family, community and/or work situations.

Literature and the Arts 3

Apply and interpret artistic expression.

required

Literary/Arts Creation/ Performance
Create and/or perform original artistic presentations in dance, creative writing, music, theater, visual arts or media arts.

(Creative writing may be used as an elective. It does not fulfill the requirement.)

required

Literature/Arts Analysis & Interpretation
Interpret and evaluate complex works of art in dance, theater, literature, music, visual arts or media arts applying specific criteria that represent an informed response.

(All students are required to work on this standard using literature. Other arts areas may be used as electives.)

Math Applications 4

Solve problems by applying mathematics.

choose 1

Discrete Mathematics
Use discrete structures to model mathematical relationships and solve problems.

Chance and Data Analysis
Apply concepts of chance and data analysis to make critical judgments, predictions or decisions.

choose 1

Algebraic Patterns
Analyze mathematical patterns, relationships and functions to model and solve problems.

Technical Applications
Apply mathematics to solve complex technical problems.

required

Shape, Space, Measurement
Apply concepts of shape, space and measurement to illustrate and describe the physical world and solve problems.

Inquiry 5

Conduct research and communicate findings.

choose 1

Math Research
Gather and analyze information on a mathematical topic.

History of Science
Understand the interaction between economic, technological and/or environmental factors and the occurrence of scientific advances.

History through Culture
Understand historical periods through investigation of their cultural expression.

History of the Arts
Understand the past and continuing development of an art form or theme.

World History and Cultures
Understand the significance of events and themes across cultures and time.

Recorders of History
Understand that historical knowledge is the result of decisions made by recorders of history.

Issue Analysis
Research an issue and evaluate proposed positions or solutions.

choose 1

Research Process
Collect primary data to investigate a topic, problem or issue.

Social Science Processes
Investigate historical artifacts, documents, events or concepts using social science processes.

Research and Create a Business Plan
Develop and implement a plan to start a business or an organization.

Market Research
Investigate a product through market research.

Case Study
Use observation and theory to study human interaction, learning or development.

New Product Development
Research, develop and test a new product.

Scientific Applications 6
Understand and apply scientific concepts and methods.

choose 2

Concepts in Biology
Understand biological concepts, theories and principles through investigation and analysis of cells, organisms and ecosystems.

Concepts in Chemistry
Understand concepts, theories and principles in chemistry through investigation and analysis.

Earth and Space Systems
Understand concepts, theories and principles of earth and space systems through investigation and analysis.

Concepts in Physics
Understand physics through interactions of matter, forces and energy.

Environmental Systems
Apply scientific methods to issues involving relationships among the individual, the society, the economy and the environment.

People and Cultures 7
Understand interactions among people and cultures.

required

Themes of U.S. History
Trace significant themes in the development of the United States.

required

U.S. Citizenship
Understand the foundations, rights and responsibilities of United States citizenship.

required

Diverse Perspectives
Evaluate events and actions from diverse U.S. and world perspectives.

choose 1

Human Geography
Understand how cultures interact with their environments.

Institutions and Traditions in Society
Understand the interaction among individuals, groups and institutions.

Community Interaction
Understand the relationships between organizations and the communities they serve through direct service or experience.

Decision Making 8
Use information to make decisions.

required

Individual/Community Health
Make informed decisions that enhance individual, family and community health in all six priority health areas. Promote healthful nutrition; dietary practices; and physical fitness.
Reduce and Prevent: tobacco use; drug/alcohol use; intentional and unintentional HIV/STD; and unintentional pregnancies.

required

Physical Education and Fitness
Apply informed decision-making processes to select appropriate physical activities to achieve fitness.

choose 1

Career Investigation
Evaluate career choices through informed decision making.

Occupational Experience
Apply a decision-making process to real work situations.

Resource Management 9
Manage resources for a household, community or government.

required

Economic Systems
Understand how individuals, households, businesses and governments use scarce resources to satisfy unlimited wants and needs.

choose 1

Natural/Managed Systems
Understand the interaction and interdependence of natural and managed systems.

Personal/Family Resource Management
Apply the fundamentals of persona/family resource management through informed decision making.

Business Management
Apply the fundamentals of business management through informed decision making.

Financial Systems
Manage financial systems and information.

Technical Systems
Apply knowledge, skills and tools of technological systems to extend human capabilities while preserving ecological functions.

World Languages 10
Communicate in a language other than English.

World Language
Comprehend and communicate in a language other than English on a range of applications.

(The World Language standard may be completed in various foreign and domestic languages as well as symbol systems and technical languages.)

Read, View, Listen 1

Read, view and listen to complex information in the English language.

Primary Level

Literal Comprehension
Comprehend literal meaning in reading, viewing and listening selections.

Interpretation and Evaluation
Interpret and evaluate information in reading, viewing and listening selections.

Intermediate Level

Literal Comprehension
Comprehend literal meaning of information received through reading, viewing and listening selections.

Interpretation and Evaluation
Interpret and evaluate information in reading, viewing and listening selections.

Middle Level

Non-Fiction: Reading, Viewing, Listening
Comprehend, interpret and evaluate information from a variety of non-fiction formats in reading, viewing and listening.

Fiction: Reading, Viewing, Listening
Comprehend, interpret and evaluate information in fictional reading, viewing and listening selections.

Technical Reading
Comprehend technical information from documents or electronic media.

Write and Speak 2

Write and speak effectively in the English Language.

Primary Level

Writing and Speaking
Write and speak for a variety of academic and technical purposes.

Intermediate Level

Writing
Write for a variety of academic and technical purposes and audiences.

Speaking
Speak to an audience or interact with a group.

Middle Level

Writing
Write for a variety of academic and technical purposes, situations and audiences.

Interpersonal Communications
Communicate effectively in a small group of familiar people.

Arts 3

Apply and interpret artistic expression.

Primary Level

Artistic Creativity, Performance and Expression
Create and describe a variety of artistic works.

Intermediate Level

Artistic Creativity, Performance and Expression
Create, interpret and evaluate a variety of artistic expressions.

Middle Level

Artistic Creativity and Performance
Demonstrate knowledge of art forms through artistic process and presentation.

Artistic Interpretation
Interpret and evaluate a variety of art works, performances and/or presentations.

Math Applications 4

Solve problems by applying mathematics.

Primary Level

Number Sense
Use number relationships to represent information and solve problems.

Shape, Space, Measurement
Apply concepts of shape, space and measurement to solve problems involving two- and three-dimensional shapes.

Intermediate Level

Number Sense
Use number concepts and a variety of math operations to represent information and solve problems.

Shape, Space, Measurement
Describe and analyze two- and three-dimensional shapes and spaces.

Chance and Data Handling
Apply concepts of chance and data analysis to evaluate information and solve problems in a familiar context.

Middle Level

Shape, Space, Measurement
Apply concepts of shape and space to describe and measure the physical world to solve problems.

Number Sense
Use number concepts, relationships and computational procedures to communicate, solve problems and evaluate results.

Chance and Data Handling
Apply concepts of chance and techniques of data handling to evaluate and solve problems.

Patterns and Functions
Analyze patterns and use concepts of algebra to represent mathematical

Inquiry 5

Conduct research and communicate findings.

Primary Level

Data Categorization, Classification and Recording
Gather information to answer questions.

Intermediate Level

Media, Observation and Investigation
Answer questions using information gathered through direct observations, experiments and other sources.

Middle Level

Direct Observation
Gather information to answer scientific or social science questions.

Accessing Information
Access information and use a variety of sources to answer a question or support a position.

Controlled Experiments
Design and conduct a controlled experiment or investigation and interpret the results.

Scientific Applications 6

erstand and apply ntific concepts and methods.

Primary Level

Direct Science Experience
Understand basic science concepts through direct experience.

Intermediate Level

Living and Non-Living Systems
Understand how individuals and objects interact in life, earth/space systems and physical systems.

Middle Level

Living Systems
Understand interactions and interdependence of living systems.

Earth Systems
Recognize concepts and evaluate interactions of earth/space systems and mpact upon human

Physical Systems
Evaluate interactions between physical systems encountered in everyday life.

People and Cultures 7

Understand interactions among people and cultures.

Primary Level

Family, School and Community
Understand the interaction of location, family, school and community.

Intermediate Level

Historical Events
Understand historical events and contributions of key people from different time periods.

Geography and Citizenship
Understand the interaction of people, places and locations.

Middle Level

Current Issue Analysis
Defend a position concerning a current event or issue.

Geography and Culture
Understand how events or actions of people are influenced by physical and cultural geography.

History and Citizenship
Understand historical events and the roles of individuals within them.

Decision Making 8

Use information to make decisions.

Primary Level

Personal Health and Fitness
Understand and participate in activities that promote personal fitness, health, nutrition and safety.

Intermediate Level

Personal Health and Nutrition
Use a decision-making model to promote personal health, nutrition and safety.

Physical Education and Fitness
Understand and participate in physical activities that develop motor skills and physical fitness.

Middle Level

Career Exploration
Explore career and education options to make informed decisions for future life choices.

Personal Health
Make informed decisions based on information to promote personal health.

Physical Education and Fitness
Understand and participate in physical activities and develop motor skills and physical fitness.

Resource Management 9

Manage resources for a household, community or government.

Primary Level

Introduction to Technology
Use appropriate computer technology to access information and produce products.

Intermediate Level

Technology Skills
Use appropriate computer technology to access, evaluate and organize information and to produce products.

Middle Level

Personal Resources
Effectively manage personal resources to meet a goal or solve a problem.

Group Resources
Manage resources as a team to produce a product or service.

Informed Consumerism
Understand the impact of purchases in the areas of household, business, community and environment.

Technology Applications
Use appropriate computer technology to access, evaluate and organize information and to produce products.

World Languages 10

Communicate in a language other than English.

Primary Level

World Language
Communicate in another language on age-appropriate topics in a culturally appropriate manner.

Intermediate Level

World Language
Communicate in another language on familiar and personal topics in a culturally appropriate manner.

Middle Level

World Language
Communicate in another language on a variety of age appropriate topics in a culturally appropriate manner.

Appendix C

Minnesota College Entrance Requirements Matched with Learning Areas (matches in parentheses)

I. Minnesota Technical Colleges

A strong background in specific technology education (Learning Areas 2, 4, 5, and 6) and math (Learning Area 4) are required and/or recommended, along with effective written and verbal communication skills (Learning Area 2).

II. University of Minnesota

4 credits of English (Learning Areas 1, 2, and 3 [for literature])
2 credits of Social Studies (including American History), (Learning Area 7)
3 credits of Mathematics (including one year each of Algebra, Geometry, and Higher Algebra), (Learning Area 4)
3 credits of Science (including one year each of Biological and Physical Science), (Learning Area 6)
2 credits of a single second language (Learning Area 10).

III. Minnesota State Universities

4 credits of English (Learning Areas 1, 2, and 3 [for literature])
3 credits of Mathematics (2 Algebra and 1 Geometry), (Learning Area 4)
3 credits of Science (1 Physical Science, 1 Biology, and 1 other Lab Science [Chemistry or Physics]), (Learning Area 6)
3 credits of Social Studies (including 1 U.S. History and 1 Geography), (Learning Areas 5 and 7)
2 credits of a single World Language (Learning Area 10)
One elective (World Cultures, Arts, Computer Literacy).

Students with exceptional High School records may be admitted if they have not taken a World Language in High School.

IV. Minnesota Private Colleges

4 credits of English (Learning Areas 1, 2, and 3 [for literature])
3 credits of College Preparatory Mathematics (Learning Area 4)
3 credits of Laboratory Science (Physical Science, Biology, Chemistry, and/or Physics), (Learning Area 6)
2 credits of a Foreign Language are strongly recommended (Learning Area 10)
Visual/Performing Arts are also recommended (Learning Area 3).

V. Minnesota Community Colleges

A High School diploma is required with coursework in English (Learning Areas 1, 2, and 3 [for literature]), Math (Learning Area 4), Science (Learning Area 6), and Social Studies (Learning Areas 5 and 7).

Appendix D

SCANS Skills

(Secretary's Commission on Achieving the Necessary Skills)

Matched with Learning Areas (matches in parentheses)

I. Competencies

1. Resources - identify, organize, plan, allocate (Learning Area 9)
2. Interpersonal - works with others (Learning Areas 2, 5, and 7)
3. Information - acquires, evaluates, interprets, organizes (Learning Area 5)
4. Systems - social, organizational, technological (Learning Areas 6 and 7)
5. Technology - selects, applies, maintains (Learning Area 9 and throughout).

II. Foundations

1. Basic skills - reading, writing, arithmetic/math, listening, speaking (Learning Areas 1, 2, and 4)
2. Thinking - creative thinking (Learning Areas 3 and 5); decision making (Learning Area 8); problem solving (Learning Areas 5, 7, and 9); seeing things in the mind's eye (Learning Areas 3 and 5); knowing how to learn, reasoning (Learning Areas 4, 5, 6, and 7).

Appendix E - Comparison of the Essential Learner Outcomes and the Profile of Learning High School Standards

PROFILE OF LEARNING Standards - High School	Fine Arts	Health	Language Arts	Mathematics	Physical Fit/Wellness	Science	World Lang/Culture	Agricultural Occupations	Business Opport.	Consumer Home Econ.	Health Occup/Opport	Marketing	Service Occup	Ind. Technology	Career/Wk Readiness	Environ. Issues	Family Life/Parenting	Information Tech.	International Perspective	Media	Youth Service
Read, View Listen																				X	
Reading Complex Info	X		X																	X	
Technical Reading	X		X																	X	
Write and Speak																				X	
Academic Writing	X		X																	X	
Technical Writing	X		X																	X	X
Public Speaking	X		X							X	X				X						
Interpersonal Comm	X		X																		
Arts																		X			
Literary/Arts/Creation/Perf	X																				
Lit/Arts/Analysis/Interp	X			X																	
Math Applications				X																	
Discrete Mathematics				X																	
Chance & Data Analysis				X										X				X			
Algebraic Patterns				X																	
Technical Applications				X																	
Shape, Space & Meas																					
Inquiry																		X			
Math Research						X													X		
History of Sciences																			X		
History through Culture	X																		X		
History of the Arts	X																			X	
World History & Cultures	X																	X			
Recorders of History	X																			X	
Issue Analysis						X		X					X								
Research Process									X			X									
Social Science Processes								X	X			X									X
Res. & Create a Bus. Plan												X									
Market Research								X													
Case Study																					
New Product Dev								X													
Scientific Appl						X					X										
Concepts in Biology		X				X					X										
Concepts in Chemistry		X				X															
Earth/Space Systems						X		X													
Concepts in Physics						X								X		X					
Environmental Systems						X		X													
People & Cultures																					
Themes of U.S. History							X			X							X	X			
U.S. Citizenship							X			X							X		X		X
Diverse Perspectives	X						X			X							X				
Human Geography	X						X			X							X		X		
Inst. & Traditions	X						X			X							X				
Community Interaction							X			X			X								
Decision Making																	X				X
Ind/Comm Health		X			X					X	X		X		X						
Phy Ed. & Fitness		X			X													X			
Career Investigation	X	X						X		X	X		X	X	X			X			X
Occupational Experience		X						X		X	X	X	X	X							
Resource Mgmt																					
Econ. Systems									X	X		X		X							
Natural Managed Systems									X			X		X							
Pers. Family Resources									X	X		X		X			X				
Business Management									X			X		X							
Financial Systems									X			X									
Technical Systems						X		X					X	X		X					
World Languages																					
World Language							X														

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