AGENDA

1. Roll Call

2. Board Member Participation by Other Means

3. Public Participation

4. Minutes of the February 26 Special EPPC Meeting with H.S. Coalition (pp. 2-5)

5. Minutes of the April Education Policy Planning Committee Meeting (pp. 6-7)

6. Grants and Contracts over $1 million
   *a. 21st Century Community Learning Center Continuation Grants over $1 million (Myron Mason) *(Plenary pp. 140-141)*
   *b. Beginning Teacher Mentoring Grants (Linda Jamali) *(Plenary pp. 138-139)*
   *c. New Principal Mentoring Contract (Linda Jamali) *(Plenary pp. 136-137)*
   *d. WIDA Memorandum of Understanding (Becky McCabe) (pp. 8-9)*
   *e. University of Illinois Memorandum of Understanding (Becky McCabe) (pp. 10-12)*

7. ISAT Math Definitions (Becky McCabe) (pp. 13-34)

8. Adjourn

* Items listed with an asterisk (*) will be discussed in committee and Board action may be taken in the plenary session.
TO: Education Policy and Planning Committee

FROM: Dr. Ginger Reynolds, Assistant Superintendent
       Becky McCabe, Division Administrator, Student Assessment

Agenda Topic: Minutes of the February 26 Special Education Policy Planning Committee Meeting of the Whole

Materials: Attached Minutes

Staff Contact(s): Becky McCabe, Student Assessment

Purpose of Agenda Item
The Education Policy Planning Committee will approve the minutes of the February 26 Special Education Policy Planning Committee Meeting of the Whole.

Background Information
The Coalition for Illinois High Schools meeting was posted as a committee of the whole in order to allow for more than two State Board of Education members participate if desired. The Coalition approved these minutes at their April meeting. They are now ready for approval by the State Board’s Education Policy Planning Committee. Board Members Brenda Holmes and Chris Ward attended this meeting.
Coalition for Illinois High Schools
February 26, 2007
Bloomington, IL

The Coalition for Illinois High Schools met on February 26, 2007 at the IHSA headquarters in Bloomington.

Those in attendance included:  Nesa Brauer, Carol Diedrechsen, Doug Dirks, Don Kachur, Dana Kinley, Rebecca McCabe, Daryl Morrison, Susie Morrison, Bob Nielson, Gineen O’Neil, John Ourth, Charles, Ramos, Fred Singleton, Mark Williams, and Leslie Wilson.
ISBE members: Chris Ward and Brenda Holmes.

At the request of Daryl Morrison, the meeting began with a 9:00a.m. conference call with Kelly James of the Gates Foundation. Elliott Regenstein representing the law firm of Holland and Knight was also present at the meeting.

Information was shared with Coalition members regarding a memorandum of understanding that was presented for consideration to members of the Illinois State Board of Education. The Gates Foundation is in the process of identifying up to 10 state agencies to support as they work toward high school renewal in their states.

The attention on what a student should know and be able to do as a result of their high school experience is an area of focus.

The Foundation would like to offer assistance in the following areas:

- Alignment of data systems - pre-k-higher education.
- Support and intervention – especially for low performing schools.
- Facilitate the creation of a P-20 Education Council.

Three major outcomes were discussed.

- Increase the number of students graduating from high school
- Improve college readiness
- Increase the number of low income students entering college.

The Gates foundation has resources to support projects that align to these 3 goals.

**The official meeting was called to order at 10:00am.**

Gineen O’Neil reviewed a brief overview of the mission, goals and belief statements developed by members of the Coalition.

Don Kachur provided information about the Annual Conference.

Susie Morrison reported on the 4 regional workshops that focused on EPAS and WorkKeys use.
Chris Ward and Brenda Holmes provided perspective from ISBE. Chris reported that the topic of high school renewal is an important and emerging issue for the Board. The Board sees power in coalitions and doing things right. He urged the coalition to plan in terms of 3-5 years. He indicated that the Gates proposal has merit for the Board and there will be further discussions. Mr. Ward indicated that the Board could provide support in policy development and identifying budget priorities. He asked how the Board could be supportive of the work of the Coalition and encouraged a collaborative working relationship.

Brenda Holmes disseminated copies of the MOU presented by the Gates Foundation. She indicated that the Board was in the early stages of plan development and shared that the Board thought good things were happening in the Coalition.

Bob Nielson shared information about the data warehouse project being developed by Naperville, Ball-Chatham and Bloomington school districts.

Leslie Wilson introduced the idea of a need to gather major data points together for review and analysis so we can make more informed decisions about future efforts and direction. A task force of Doug, Charles, Leslie and Becky agreed to identify the data that schools currently receive and additional information that might be useful. The task force will make a recommendation regarding this data and a “State of the State” report.

Chris and Brenda requested a synthesis of what was discussed at this meeting. Chris suggested the Coalition consider the development of a 3-5 year plan – prioritize the processes and piece out the work.

The afternoon session began with a discussion of data and assessment literacy. Fred Singleton explained the Master Principal Program model and next steps.

A discussion of the MOU led to a series of possible areas of support from the Gates foundation. They included:
- Assistance in the analysis of existing data
- Facilitation of a long-range plan for high school renewal in Illinois

John asked if the Board is able to identify resources that might be helpful to the work of the Coalition. The Coalition then agreed that research on transitioning students from 8th to 9th grade would be useful. John agreed to draft a request for that information.

The Coalition members expressed appreciation to Chris and Brenda for attending the meeting and for their candid and meaningful input to the agenda. The Coalition wishes to convey to all Board members their support as we move forward with high school renewal in Illinois.

**High School Conference Program Notes**
- **Schedule**
  - Committee Don, Jane, Gineen, Bob: Set a tentative schedule by March 16.
  - Panel Discussion/Breakout Sessions
    - Bilingual
    - Urban/Rural
    - Special Education
    - Like districts talking to each other
• Speakers
  o Noguera
  o Daggett
  o Announcement—ISBE – Carol’s office – CSR has money left over and will pay for the 2 speakers and 12 high school
• Vendors – Princeton Review (Becky will contact them)
• Entertainment (Committee – Carol, Susie, Fred)
  o Carol – NCLB conference saw a group of students from Lewiston that created a band using PVD piping (perform – cocktail time, 2nd day Lunch)
  o Artwork
  o Music during hospitality
  o Movie
• Advertising Flyer – Nesa
• Conference Call with Pedro Noguera
• Other
  o Registrations – IPA staff
• Financial Report
  o 3-year agreement signed
  o Eastland Suites - $85 includes breakfast
  o Doubletree - $90 includes breakfast
  o Get rooms now! Special Olympics are in town that week too!
• Coalition Membership Report – higher education, New superintendent group – high school, CPS (Don Pittman – Susie)
  o Affirmations coming – IASA, IL Business Round Table
• Regional Meetings Report
• Other
  o Becky suggests more Coalition members attend Board meetings. – the Board meeting has 90 minutes allocated for high school renewal
Future steps – Retreat (2-3 days) to develop a 3-5 year action plan for the Coalition

Next meeting – March 23 – guest speaker – 1:00 – Judy Irwin, Higher Education; Mark about Survey

Action Items:
✓ Thank you note to Chris and Brenda for attending
✓ Sub-group committee groups meet
  o Conference committees
  o Assessment literacy
✓ Note Chris Koch requesting information.

The meeting adjourned at 2:00pm.
The Education Policy Planning Committee meeting convened at 3:20 p.m.

1. **ROLL CALL:** Dr. David Fields requested roll call to be taken. See above.

2. **BOARD MEMBER PARTICIPATION BY OTHER MEANS:** The Committee took a roll call vote to approve Board Member Joyce Karon to participate via phone conference. The Committee approved Joyce Karon's participation via phone conference.

3. **PUBLIC PARTICIPATION:** Representatives of Marissa Elementary School were in attendance to share their success with the Enhancing Education through Technology Grant.

4. **MINUTES OF THE MARCH 2007 EPPC MEETING:** The Committee approved the minutes for the March 2007 EPPC Meeting.

5. **IMAGE PERFORMANCE DESCRIPTIONS (Becky McCabe):** Becky McCabe was in attendance to obtain the Committee’s approval of the Illinois Measure of Annual Growth in English Performance Definitions. Becky stated that this item will be available in multiple languages. The Board will vote on this issue at the May plenary session.

6. **GRANTS AND CONTRACTS OVER $1 MILLION:**
   
a) **Grow Your Own Contract over $1 million (Linda Jamali):** Linda Jamali was in attendance to obtain the Committee’s approval of the Grown Your Own Teacher Initiative Contract Renewal exceeding $1 million. The Board will vote on this issue at the May plenary session.

   b) **RESPRO Grants over $1 million (Myron Mason):** Myron Mason was in attendance to obtain the Committee’s approval for the awarding of the RESPRO Grants. The Committee approved this item to go to the full Board during Thursday’s plenary session.

   c) **MGT Contract Renewal over $1 million (Dana Kinley):** Dana Kinley was in attendance to obtain the Committee’s approval of the annual renewal of the Reading First contract with MGT, Inc. The Committee approved this item to go to the full Board during Thursday’s plenary session.

   d) **Reading First Grant over $1 million (Dana Kinley):** Dana Kinley was in attendance to obtain the Committee’s approval of the FY 07 Reading First Grants. The Committee approved this item to go to the full Board during Thursday’s plenary session.
e) Approval of Continuing Applications for Reading First (Dana Kinley): Dana Kinley was in attendance to obtain the Committee’s approval of the release and awarding of the FY 08 Reading First Continuing Applications. The Committee approved this item to go to the full Board during Thursday’s plenary session.

7. SPECIAL EDUCATION IDENTIFICATION DATA: POLICY AND PRACTICE IMPLICATIONS (Beth Hanselman): John Herner and Beth Hanselman were in attendance to provide the Committee with information regarding the identification rates of student with disabilities and race and ethnicity in Illinois schools.

8. EDUCATOR SUPPLY AND DEMAND (Connie Wise): Connie Wise was in attendance to provide the Board with the results from the 2006 Annual Report on Educator Supply and Demand in Illinois. Ms. Karon requested that this report be prepared to submit to the Illinois Board of Higher Education. Board Members Ed Geppert and Vinni Hall voiced their concerns with the numbers of minority teachers.

9. REPORT CARD RESULTS (Connie Wise): Connie Wise was in attendance to provide the Committee with the results of the 2006 Report Card. The Committee commented on the high quality of this report.

10. COMMITTEE AGENDA PLANNING/ADDITIONAL ITEMS:
   - Minutes of the February 26 Special EPPC Meeting with High School Coalition
   - Minutes of the April EPPC Meeting
   - Illinois College and Work Readiness Partnership (Gates MOU-Phase 1)
   - WIDA Contract
   - International Teacher Recruitment & Exchanges

   TOPICS ON HOLD:
   - SES Report
   - Grade 12 PSAE
   - Technology Literacy
   - Early Childhood Policy Discussion

11. ADJOURNMENT: Ed Geppert moved to adjourn the EPPC meeting and Dr. Vinni Hall seconded the motion. The EPPC meeting adjourned at 4:30 p.m.
ILLINOIS STATE BOARD OF EDUCATION MEETING  
May 2007

TO:  Illinois State Board of Education

FROM:  Christopher A. Koch, Ed.D., State Superintendent of Education  
        Ginger Reynolds, Ph.D., Assistant Superintendent

Agenda Topic:  World-class Innovations in Developing Assessment (WIDA) Consortium  
               Memorandum of Understanding  
               (ACCESS for ELL’s)

Materials:  None

Staff Contact(s):  Becky McCabe, Student Assessment  
                  John Craig, Student Assessment

Purpose of Agenda Item
The purpose of this agenda item is for the Board to authorize the continuation of the existing  
Memorandum of Understanding for ISBE’s membership in the WIDA consortia and for the use  
of the ACCESS for ELLs® assessment tests provided through WIDA. The ACCESS serves as a  
successful measure of English proficiency as required for use in federal Title III ESEA/NCLB-  
funded programs.

Expected Outcome(s) of Agenda Item
It is expected that staff will receive the Board’s authorization to extend the existing  
Memorandum of Understanding with the WIDA consortia for membership and to acquire the  
ACCESS for ELL’s assessment for 2008 and 2009.

Background Information
Title III of ESEA/NCLB federal legislation requires Limited English Proficient (LEP) students to  
be assessed annually for English proficiency and growth.

In December, 2004, ISBE entered into an agreement with a consortium of 15 other states  
(Wisconsin, Alabama, Delaware, New Hampshire, and others), identified as WIDA to develop a  
standards-based assessment instrument for English Language Learners (ELLs) which would be  
an improved measure of proficiency. That assessment is now operational and called ACCESS  
for ELLs®. Illinois has administered ACCESS for two years.

Since the WIDA consortium provides the ACCESS for ELLs, continuation of this Memorandum  
of Understanding will provide for acquisition of tests, scoring, and reporting services for the  
determination of English proficiency and growth and evolution of local programs. The costs for  
such services are on a per-student basis and there is some cost savings with membership in the  
consortia.

The continued participation in the WIDA consortia is the most effective manner for the state and  
its ELL program to obtain the most appropriate and cost-efficient measure of English proficiency  
consistent with Title III ESEA/NCLB requirements.
Analysis and Implications for Policy, Budget, Legislative Action and Communications
It is anticipated that the Memorandum of Understanding will provide ACCESS to an estimated 172,000 ELL students for two years, 2008 and 2009. The anticipated cost of ACCESS in 2008 is $4,500,000 and in 2009 is $4,500,000.

This action provides local schools with a uniform and improved standards-based test for identification and evaluation of ELL proficiency. The use of the ACCESS will continue to bring Illinois into compliance with Title III ESEA program requirements and will ensure ISBE’s eligibility for the use of approximately $26.4 million federal funds. Also included in this agreement are two one-time costs of up to $25,000 for in-service training and ELL assessment resource development undertaken by the consortia.

Pros and Cons of Various Actions
The Memorandum of Understanding provides Illinois continued membership in the multi-state WIDA consortia, securing the ACCESS for ELL proficiency tests. ACCESS serves a dual role: a) a measure of individual student proficiency; and b) a local district program evaluation measure. Use of ACCESS is a reliable and solid source of data. The continued use of ACCESS also meets the state legislated requirement for ELL participation in writing assessments.

Superintendent’s Recommendation
The State Superintendent recommends that the following motion be adopted in June:

I move that the State Board of Education hereby authorize staff to extend the Memorandum of Understanding to provide for the development, printing, delivery, and scoring services for the ACCESS. This agreement period will extend from July 1, 2007 through June 30, 2009, with the total amount not exceeding $9 million for the two-year period.

Next Steps
This item will go to the Board in June for approval.
TO: Education Policy Planning Committee

FROM: Christopher A. Koch, Ed.D., State Superintendent of Education
Ginger Reynolds, Ph.D., Assistant Superintendent

Agenda Topic: University of Illinois Memorandum of Understanding

Materials: None

Staff Contact(s): Becky McCabe, Student Assessment
John Craig, Student Assessment

Purpose of Agenda Item
The purpose of this agenda item is for the Board to authorize the issuance of a Memorandum of Understanding (MOU) establishing an intergovernmental agreement with the University of Illinois to provide ongoing evaluative services to the ISBE Student Assessment system.

Expected Outcome(s) of Agenda Item
It is expected staff will receive the Board’s authorization to enter into a Memorandum of Understanding with the University of Illinois for the time period 2007-2012.

Background Information
The recent events in the 2006 student assessment cycle brought to light a need for ISBE to initiate proactive quality control activities to monitor and evaluate all aspects of the assessment program. The vendor’s printing, production, and delivery system dysfunction led to ISBE issuing a contract with Harte-Hanks to provide third-party oversight of processing, scanning and reporting services. In addition, a need was identified for ISBE to direct attention to additional quality control aspects of the psychometric, test development, and scoring services provided by assessment vendors. ISBE staff has been searching for a credible and reputable organization that could perform such an evaluation.

Under NCLB legislation and Illinois statute, the state assessment system is required to address operational issues identified by United States Department of Education (USDE) guidance through a peer review process. Under section 4, Technical Quality, of the USDE peer review process, the issue of validity is identified as a key element of concern to the Department. One particular aspect of validity is encompassed in Standards for Educational and Psychological Testing, particularly Standard 15.7:

> When educational testing programs are mandated by school, district, state, or other authorities, the ways in which test results are intended to be used should be clearly described. It is the responsibility of those who mandate the use of tests to identify and monitor their impact and to minimize potential negative consequences. Consequences resulting from the uses of the test, both intended and unintended, should also be examined by the test user.

Peer review guidance directs states to monitor the impact of testing in an ongoing, systemic manner. To date, ISBE has not established any process or procedure to collect context data or other information relative to this standard. The Student Assessment Division proposes this information be obtained through an annual survey of school, student, staff and community representatives.
In addition, the appropriateness and accuracy of psychometric services provided to ISBE by its vendors should be subject to external verification and validation of accuracy by independent parties on an ongoing basis. This activity requires that the independent organization has both in-house data analysis or competency resources and highly-trained and experienced individuals to perform the evaluation and review necessary to ISBE vendors on an annual basis.

After including this proposal within the third party quality assurance RFSP and not receiving bids that did not meet the specifications of quality or cost, Student Assessment staff examined a number of options of both public and private sector services and now recommends a partnership with the University of Illinois, which will provide necessary data analysis and reporting of evaluation studies to address concerns about the technical aspects of the assessments and the effect brought about by their use.

Assessment staff has been aware of such university assessment programs in other states, particularly Maryland, Georgia and Minnesota. Our proposed university partner also examined these existing relationships and perceived reciprocal advantages. In these instances, the contribution has, over time, increased the credibility of state assessment programs and the state education agencies’ services.

The two (2) University of Illinois employees conducting the evaluation will serve as ex-officio members of the State Testing Review Committee.

Specific work products and services are identified in the Memorandum of Understanding, which is comparable to a contract with a private sector vendor. Security agreements and issues on data security and protection of personally identification information are incorporated in the agreement.

Data access and special studies are guided by mutual data policies. The ongoing partnership will provide significant improvement in resources related to future staff development and issue refinement activities, and consequently improve assessment practices.

**Analysis and Implications for Policy, Budget, Legislative Action and Communications**

**Budget Implications:** It is anticipated that the intergovernmental agreement Memorandum of Understanding will cost $250,000 per year for a five year period, totaling $1,250,000.

Deliverables include annual evaluation reports concerning the intended and unintended consequences of the assessment program and the adequacy of psychometric services and score reporting.

**Pros and Cons of Various Actions**

**Pros**
The results from this MOU will bring ISBE into compliance with NCLB and state laws.

The studies will be reported annually to the State Board and used to support and strengthen the ISBE Assessment program.

The studies will provide insight and transparency to the testing program, which will enhance ISBE assessment technical quality and increase understanding by the public.

The studies will provide information to the public about the impact of testing beyond the intended consequences. This will assist schools and districts with policy decisions about how testing results should be used.

This work will be a proactive process to prevent or highlight potential problems.
Superintendent’s Recommendation
I recommend that the following motion be adopted in June:

I move that the State Board of Education hereby authorize staff to develop a Memorandum of Understanding to provide for the ongoing evaluation of assessment services. The agreement shall extend from September 30, 2007 until June 30, 2012. The total amount shall not exceed $1,250,000 for the five year period.

Next Steps
This item will go to the Board plenary session in June for an official vote.
Purpose of Agenda Item
As per the US Department of Education’s Peer Review process, the Illinois State Board of Education is to approve the performance definitions for the Illinois Standard Achievement Test (ISAT). Performance definitions are the basic definitions of what students should know and be able to do at a given performance level – exceeds, meets, below standards and academic warning. The definitions presented to the Board are based on the Illinois Math Learning Standards and are measured by ISAT.

Expected Outcome(s) of Agenda Item
The ISAT performance definitions will be approved at the June Board meeting.

Background Information
In the July 2006 review of Illinois’ Assessment program, the US Department of Education required that Illinois review and rework its performance descriptions for mathematics on the ISAT. The review required ISAT performance descriptors to detail the progress made at each grade level.

The process for developing the definitions involves team meetings with ISBE assessment staff, bilingual and Illinois content educators who teach at the variety the grade levels. These teams review and comment on the definitions prior to bringing them to the Board.

These definitions will not change any test item or cut score.

Analysis and Implications for Policy, Budget, Legislative Action and Communications
Policy Implications: Approval ensures compliance with NCLB and state law
Budget Implications: None
Legislative Action: None
Communication: Student Assessment will communicate to the US Department of Education and Illinois educators about the approved changes to the performance descriptions.

Pros and Cons of Various Actions
Pro: These recommendations will meet the requirements of federal law.

Superintendent’s Recommendation
The State Superintendent recommends the following motion be adopted:

The State Board of Education approves the ISAT Math Performance Descriptions.

Next Steps
This item will go to the Board for approval in June, 2007.
EXCEEDS STANDARDS
Third-grade students whose measured performance exceeds standards are able to identify, read, write, represent, and model whole numbers beyond 100,000. They use a variety of strategies and all four operations to represent and solve multi-step problems. They select the relevant information needed to set up and solve application problems, choosing the correct operation(s) and an appropriate strategy. They check the accuracy of their solution by solving it in another way. They can use fractions to describe pictures or data.

Third-grade students whose measured performance exceeds standards are able to use a ruler and other measuring tools accurately. They can read a thermometer using the Fahrenheit or Celsius scale. They can determine the perimeter and area of geometric figures by using methods beyond counting. They can estimate the area of irregularly shaped objects drawn on square grids. In using money, they are able to compare units and make change for amounts beyond $10.00. Given a number sentence, they can write a number story. They can solve a number sentence that includes multiple variables. On a Cartesian Coordinate Graph, they can plot and connect points.

Third-grade students whose measured performance exceeds standards can distinguish between rays, lines, line segments and angles and can identify rectangular, triangular, hexagonal and octagonal prisms and their properties. Given a two-dimensional drawing, they can visualize and identify the three-dimensional shape that would result from folding along lines of the given two-dimensional shape. They can determine all the lines of symmetry of a given shape. They demonstrate an understanding of parallel, perpendicular and similarity. They are able to sort, classify, compare and contrast all simple polygons in addition to trapezoid, parallelogram, quadrilateral and rhombus.

Third-grade students whose measured performance exceeds standards can analyze and interpret data and make inferences and predictions beyond the data. They can compute the probability of events. Sometimes they can list all of the possible outcomes of a simple two-stage event. They can write the probability of an event using a fraction. Given a circle, bar or pictograph, students can create a different kind of graph using the same data.

MEETS STANDARDS
Third-grade students whose measured performance meets standards are able to identify, read, write, represent, and model whole numbers up to 100,000. They can order and compare whole numbers up to 10,000 and decimals using monetary units. They can represent and solve basic addition and subtraction problems that involve whole numbers up to four digit sums. These students can solve multiplication and division problems with single digit factors. They are beginning to be able to select the relevant information needed to set up and solve elementary application problems, choosing the correct operation and an appropriate strategy. They can write and represent fractions 1/2, 1/4, 1/3, and 1/8.

Third-grade students whose measured performance meets standards can use a ruler to measure to the nearest inch or cm. They can use measurements to compare the size of objects. They can determine weight/mass and liquid measures using ounces, pounds, grams and liters. They can determine equivalent measures of time. They can read a thermometer and demonstrate a beginning understanding of the Fahrenheit scale. They can determine the perimeter and area of straight-sided geometric figures drawn on square grids. They can measure volume by counting cubes. In using money, they are able to compare units and
make change for amounts up to $10.00. They can make reasonable measurement estimates.

Third-grade students whose measured performance meets standards can describe, extend and find the missing components of patterns. They can make generalizations from specifics. Given a specific number story, they can write a number sentence using variables, equality and inequality notation. They can solve a number sentence that includes a variable. On a Cartesian Coordinate Graph, they can find a point given the coordinates and can name the coordinates of a given point.

Third-grade students whose measured performance meets standards can identify points, lines, circles, simple polygons and the three-dimensional shapes of cone, cube, cylinder, sphere and pyramid and their properties. This includes congruency, visual similarity and the number of sides, faces and vertices. Given several drawings, they can identify the picture with the correct line of symmetry drawn. They are able to sort, classify, compare and contrast circles, squares, rectangles, triangles, pentagons, hexagons and octagons.

Third-grade students whose measured performance meets standards can analyze and interpret data using tallies, tables, charts, Venn diagrams, bar, picture and pictographs. They can use “likely,” “unlikely,” and “impossible” to describe possible outcomes.

BELOW STANDARDS
Third-grade students whose measured performance is below standards are able to count, read, write and order whole numbers below 1,000. They can inconsistently solve basic addition and subtraction problems that involve whole numbers up to four-digit sums. These students can inconsistently solve multiplication and division problems with single digit factors. They are most often able to select the relevant information needed to set up and solve elementary application problems, choosing the correct operation and an appropriate strategy. They can write and represent consistently the fraction 1/2 and sometimes 1/3, 1/4 and 1/8.

Third-grade students whose measured performance is below standards can inconsistently use a ruler to measure to the nearest inch or centimeter. They are beginning to demonstrate an understanding of where on the ruler to begin measuring. They are moving their understanding from non-standard to standard units of measurement. They can inconsistently determine weight/mass and liquid measures using ounces, pounds, grams and liters. They can determine equivalent measures of time. Their understanding of digital clocks is stronger than analog. They can read a thermometer. They sometimes confuse the concepts of perimeter and area of straight-sided geometric figures drawn on square grids. They can measure volume by physically counting cubes. When using money, they are inconsistently able to compare units and make change. Some of their estimates are unreasonable.

Third-grade students whose measured performance is below standards can describe, extend and find the missing components of patterns. They can make generalizations from specifics. Sometimes, when they are given a specific number story, they can write a number sentence using variables, equality and inequality notation. They can sometimes solve a number sentence that includes a variable. On a Cartesian Coordinate Graph, they can locate a point given the coordinates and can name the coordinates of a given point.
Third-grade students whose measured performance is below standards can with few exceptions identify points, lines, circles, simple polygons and the three-dimensional shapes of cone, cube, cylinder, sphere and pyramid and their properties. This includes congruency and the number of sides, faces and vertices. Given several drawings, they can inconsistently identify the figure with the correct line of symmetry drawn. They are able to sort and classify using the geometric vocabulary of circle, square, rectangle, triangle, pentagon, hexagon and octagon.

Third-grade students whose measured performance is below standards can read tallied data, tables, charts, Venn diagrams, bar, picture and circle graphs. They are beginning to understand how to compute the probability of simple events. They can list the outcomes of a simple one-stage event but cannot consistently count the total population. They can use "likely," "unlikely" and "impossible" to describe possible outcomes. They are beginning to use the language of "two out of three" to describe the probability of an event.

**ACADEMIC WARNING**
Third-grade students whose measured performance indicates academic warning can count but have little understanding of place value. They can follow procedures with little understanding of the process. They are unaware when their answer is unreasonable. They know some basic addition facts and fewer subtraction facts. They can use concrete materials to solve basic addition and subtraction facts. They can order small numbers. They have an understanding of 1/2 and what it means to share fairly.

Third-grade students whose measured performance indicates academic warning can physically compare objects to determine which is heavier, longer or warmer. They can read digital clocks and calendars. They are more consistently accurate with nonstandard units of measurement than standard units. They can name some coins and know they can use them in exchange for services or goods.

Third-grade students whose measured performance indicates academic warning can tell what comes next in a simple, repeating pattern.

Third-grade students whose measured performance indicates academic warning can identify circles, squares, triangles and rectangles. They can count the number of sides on two-dimensional figures and count the number of vertices but do not use the term "vertices" or many other geometric terms.

They can read simple picture graphs. They are able to read graphs using concrete materials. They can sort real objects into categories. They are beginning to demonstrate an understanding that the larger area on a spinner seems to affect the outcome.
EXCEEDS STANDARDS

Fourth-grade students whose measured performance exceeds standards are able to identify, read, write, represent, and model whole numbers beyond 1,000,000. They can order and compare whole numbers beyond 100,000. They can order and compare decimals beyond hundredths. They use a variety of strategies and all four operations to represent and solve multi-step problems. They select the relevant information needed to set up and solve application problems, choosing the correct operation(s) and an appropriate strategy. They check the accuracy of their solution by solving it in other ways. They can consistently use fractions to describe pictures or data and can accurately divide sets or regions to represent a fraction.

Fourth-grade students whose measured performance exceeds standards are able to accurately use a ruler (beyond 1/2 inch or 1/2 cm) and other measuring tools. They can read a thermometer using the Fahrenheit and Celsius scales. They can compare, estimate, and determine area, perimeter, length, volume (including cubic units), and weight/mass of a variety of geometric figures by frequently using methods beyond counting. In using money, they are able to compare units and make change for amounts up to and often beyond $100.00. Given a number sentence, they can easily write a number story and solve a number sentence that includes multiple variables. On a Cartesian Coordinate Graph, they understand how to plot, locate, identify and connect points, as well as describe paths using ordered pairs.

Fourth-grade students whose measured performance exceeds standards demonstrate a knowledge and sense of numbers that allows them to order and compare whole numbers, fractions and decimals and to recognize the relative magnitude of these numbers without models. They can add and subtract decimals and simple fractions and can translate and solve word problems that involve these concepts and skills. These learners are beginning to have a conceptual understanding of ratios, proportions and percents. They can round whole numbers and decimals to a specified place and can use rounding and estimation skills to predict solutions to problems and also check the reasonableness of their answers with confidence.

They are also able to estimate a given measure and/or a conversion between measures within the customary and metric systems. They understand time and can interpret both analog and digital time displays. They can compute elapsed time with little difficulty.

Algebraically, fourth-grade students at the exceeds standards level can identify and extend geometric and numeric patterns and can write and solve one-step equations that involve the four fundamental operations and whole numbers. These students can recognize and use variables to represent unknown quantities, and they demonstrate an understanding of number properties including commutative, associative, zero, equality and order of operations.

Geometrically, fourth-grade students at the exceeds standards level can compare and contrast the attributes of two- and three-dimensional shapes. These learners can identify geometric properties, including parallel, perpendicular, similar, congruent, and line symmetry. They recognize and can demonstrate understanding of angle properties including right, acute, and obtuse angles, and they are able to determine the measures of angles and sides in simple figures.
Fourth-grade students at the exceeds standards level are able to collect, organize, interpret, analyze and display data. They understand and know how to calculate mode and range when given a set of data and are starting to become familiar with mean and median. These students have the ability to predict outcomes from experiments involving chance, and they can accurately calculate the probability of an event.

Overall, fourth graders at the exceeds standards level have a solid grasp of the mathematics curriculum. They exhibit a range of problem-solving abilities, reasoning skills and communication abilities. They are able to use calculators and other forms of technology productively to carry out computation and to test or extend familiar patterns. They are on a solid path of progress in the mathematics curriculum.

MEETS STANDARDS
Fourth-grade students whose measured performance meets standards are able to identify, read, write, represent, and model whole numbers and their place values up to 1,000,000. They can order and compare whole numbers up to 100,000 and decimals through hundredths. They can order, compare, and model addition and subtraction of fractions having like denominators. They may use the same one or two strategies and all four operations to represent and solve multi-step problems. They usually can select the relevant information needed to set up and solve application problems, choosing the correct operation(s) and an appropriate strategy. They generally check the accuracy of their solution by solving it in at least one other way. They can use fractions to describe pictures or data.

Fourth-grade students whose measured performance meets standards are able to use a ruler and other measuring tools accurately. They can read a thermometer using the Fahrenheit or Celsius scale. They understand time and can generally compute elapsed time that occurs either in the a.m. or p.m. They can determine the perimeter and area of geometric figures by using methods beyond counting. They can estimate the area of irregularly shaped objects drawn on square grids. In using money, they can solve problems involving different denominations of bills and coins that have a total value of $100.00 or less, including making change. Given a number sentence, they can write a number story. They can solve simple, one-operation number and word sentences that include multiple or missing variables. They can locate, plot, identify, use ordered pairs, and connect points in Quadrant 1 on a Cartesian Coordinate Graph.

Fourth-grade students whose measured performance meets standards can distinguish between rays, lines, line segments and angles and can identify rectangular, triangular, hexagonal and octagonal prisms and their properties. Given a two-dimensional drawing, they can visualize and identify the three-dimensional shape that would result from folding along lines of the given two-dimensional shape. They can determine all the lines of symmetry of a given shape. They understand and can consistently sketch parallel and perpendicular lines and right angles correctly. The fourth grader who is meeting standards can identify images resulting from flips, slides, or turns, but may not always refer to them as reflections, translations, or rotations. They know the difference between polygons and non-polygons. They can identify and describe two- and three- dimensional shapes according to the number vertices, angles, edges, faces, and length of sides. They can usually sketch the two-dimensional shapes.
Fourth-grade students whose measured performance meets standards can analyze and interpret data and make simple inferences and predictions based on the data. Sometimes they can list all of the possible outcomes of a simple two-stage event. They can write the probability of an event using “3” out of “4” language or 3/4. Given a circle, bar or pictograph, students can create a different kind of graph using the same data.

A fourth grader who meets standards can read, interpret, and create simple graphs with a given set of data. They can consistently determine mode and range given a set of data or graph with whole numbers.

**BELOW STANDARDS**

Fourth-grade students whose measured performance is below standards are not consistently able to read, write and order whole numbers below 100,000. They can sometimes solve basic addition and subtraction problems that involve whole numbers up to four-digit sums. These students can inconsistently solve multiplication and division problems with two-digit factors. They are most often able to select the relevant information needed to set up and solve elementary application problems, choosing the correct operation and an appropriate strategy. They can write and represent consistently the fractions of 1/2, 1/3, and 1/4, but cannot consistently compare or order them.

Fourth-grade students whose measured performance is below standards can inconsistently use a ruler to measure to the nearest 1/2 inch or 1/2 cm. They know the basics of where on the ruler to begin measuring. They are more consistent in their demonstration of understanding standard units of measurement. They can sometimes accurately determine weight/mass and liquid measures using ounces, pounds, grams and liters and can determine equivalent measures of time. They are inconsistent in determining elapsed time correctly. Their understanding of digital clocks is stronger than analog. They can read a thermometer in Fahrenheit, but cannot translate Fahrenheit to Celsius. They sometimes confuse the concepts of perimeter and area of straight-sided geometric figures drawn on square grids. They can measure volume by physically counting cubes. When using money, they are inconsistently able to compare units and make correct, simple, change. Some of their estimates are unreasonable.

Fourth-grade students whose measured performance is below standards can describe, extend and find the missing components of patterns. They can make generalizations from specifics. Sometimes, when they are given a specific number story, they can write a number sentence using variables, equality and inequality notation. They can sometimes solve a number or word sentence that includes more than one variable. On a Cartesian Coordinate Graph, they can locate a point given the coordinates and can name the coordinates of a given point.

Fourth-grade students whose measured performance is below standards can, with few exceptions, identify points, lines, circles, simple polygons and the three-dimensional shapes of cone, cube, cylinder, sphere and pyramid and their properties. This includes congruency and the number of sides, faces and vertices. Given several drawings, they can inconsistently identify the figure with the correct line of symmetry drawn. They are able to sort and classify using the geometric vocabulary of circle, square, rectangle, triangle, pentagon, hexagon and octagon.
Fourth-grade students whose measured performance is below standards can read tallied data, tables, charts, Venn diagrams, bar, picture and pictographs. They can compute the probability of simple events. They can list the outcomes of a simple, two-stage, event. They can use "likely," "unlikely," and "impossible" to describe possible outcomes. They are beginning to use the language of “three out of four” to describe the probability of an event, but lack basic understanding about fractions as they relate to probability and proportion.

**ACADEMIC WARNING**

Fourth-grade students whose measured performance indicates academic warning have limited understanding of place value through hundredths. They can follow procedures with minimal understanding of the process. They are unaware when their answer is unreasonable. They know simple addition, subtraction, multiplication, and division facts and sometimes use concrete materials to solve basic operational problems. They can order smaller numbers, but usually only 2-digit whole numbers. They have an understanding of 1/4 and 1/2 and can identify these values in a visual representation. They understand the concept of sharing fairly.

Fourth-grade students whose measured performance indicates academic warning can physically compare objects to determine which is heavier, longer or warmer. They can read digital clocks and calendars, and most analog clocks. They can usually identify most coins and bills correctly, but they inconsistently make correct change over $10.00.

Fourth-grade students whose measured performance indicates academic warning can tell what comes next in a simple, repeating pattern. They can identify circles, squares, triangles, rectangles, polygons and non-polygons. They can count the number of sides, vertices, faces and edges on two- and three-dimensional figures, but they are inconsistent in their understanding and use of geometric terminology. They can read uncomplicated picture graphs, Venn diagrams, circle graphs, and timelines. They can consistently demonstrate that the largest area on the spinner affects the outcome.

Overall, fourth-grade students at the academic warning level have a somewhat limited sense of the number system. Their computational and problem-solving skills are substandard; these learners inconsistently transfer their knowledge and skills beyond the content and approaches used in mathematics classes.
EXCEEDS STANDARDS
Fifth-grade students whose measured performance exceeds standards demonstrate a knowledge and sense of numbers that allows them to apply their understanding of the relative magnitude of numbers in a broad range of settings. They are able to order and compare whole numbers, decimals and fractions with like and unlike denominators and to apply these skills in one- and two-step problems involving the four operations. They can convert between improper fractions and mixed numbers, and they demonstrate an understanding of the relationship between fractions and decimals. These learners can apply their understanding of ratios, proportions and percents to solve one- and two- step problems involving these concepts. They can describe the relationship between two sets of data using appropriate notations. These fifth-grade students are able to apply estimation skills to predict solutions to complex problems. Furthermore, they have the ability to test the validity of logical arguments.

Additionally, fifth-grade students at the exceeds level are able to make and use measurements to apply concepts of precision, accuracy and greatest possible error. These students are able to use appropriate technology instruments and formulas to solve problems and interpret results. They can estimate conversions between measures within the customary and metric systems. These students are able to make conversions within a system of measure to perform operations with compatible units. These fifth-grade students can determine and compare area and perimeter using formulas and/or other strategies, and they can apply these concepts to solve problems.

Algebraically, the exceeds student at fifth grade can solve multi-step problems and equations using whole numbers. They can solve equations and expressions using order of operations, and they demonstrate an understanding of number properties including commutative, associative, distributive, transitive, zero and equality. These students can construct algebraic expressions using variables to describe a pattern and/or represent an unknown quantity. These fifth-grade students can analyze data from tables and graphs, transfer data from tables to graphs and make predictions based on implications from the data. They are also able to estimate probabilities from experimental simulations.

Geometrically, fifth-grade students at the exceeds level can apply their knowledge of two- and three- dimensional objects to solve complex problems. They can identify, classify and compare relationships using points, lines, planes and solids. These students apply their knowledge of polygonal relationships to compare and classify geometric figures. They recognize the effects of slides, flips and turns of shapes, and they identify relationships between radius, diameter and circumference of a circle.

Fifth-grade students at the exceeds level are able to collect, organize, interpret, compare and analyze data and make predictions and decisions based on that data. These students apply the concepts of mean, median, mode and range in data analysis. They determine and apply basic properties of probability to solve problems, and they compare the likelihood of events in terms of "certain," "more likely," "less likely," or "impossible." These students are also able to estimate probabilities from experimental simulations.

Overall, fifth-grade students at the exceeds level have a solid grasp of the mathematics curriculum along with the ability to extend and apply their knowledge in a wide range of problem-solving situations. They are able to use reasoning and communications skills in mathematics, not only to solve the immediate problem but also to make further inquiries and create additional problems from their own interests. Their work is characterized by its insightful nature and by consistently high performance across the various areas.
MEETS STANDARDS
Fifth-grade students whose measured performance meets standards demonstrate a knowledge and sense of numbers that allows them to order and compare whole numbers, fractions and decimals and to recognize the relative magnitude of these numbers. These students are able to solve practical one- and two-step problems involving whole numbers using addition, subtraction, multiplication and division. They can add and subtract decimals and simple fractions and can translate and solve word problems that involve these concepts and skills. These learners have a conceptual understanding of ratios, proportions and percents and are able to extend that understanding to the solution of simple problems involving these concepts. These fifth-grade students are able to round whole numbers and decimals to a specified place and can use rounding and estimation skills to predict solutions to simple problems and check the reasonableness of their answers.

Additionally, fifth-grade students at the meets standards level are able to use tools to make measurements that are accurate within the range of precision of the instruments used. They are also able to estimate a given measure and/or a conversion between measures within the customary and metric systems. They understand and apply concepts of perimeter and area.

Algebraically, fifth-grade students at the meets standards level can identify and extend geometric and numeric patterns and can write and solve one-step equations that involve the four fundamental operations and whole numbers. These students can recognize and use variables to represent unknown quantities, and they demonstrate an understanding of number properties including commutative, associative, zero, equality and order of operations. These learners can plot and read ordered pairs in the positive quadrant.

Geometrically, fifth-grade students at the meets standards level can compare and contrast the attributes of two- and three-dimensional shapes. These learners can identify geometric properties, including parallel, perpendicular, similar, congruent, and line symmetry. These students demonstrate an understanding of angle properties including right, acute, obtuse, and straight angles, and they are able to determine the measures of angles and sides in congruent figures.

Fifth-grade students at the meets standards level are able to collect, organize, interpret, analyze and display data. They can determine mean, median, mode and range. These students have the ability to predict outcomes from experiments involving chance, and they can calculate the probability of a simple event.

Overall, fifth-grade students at the meets standards level have a solid grasp of the mathematics curriculum. They exhibit a range of problem-solving abilities, reasoning skills and communication abilities. They are able to use calculators and other forms of technology productively to carry out computation and to test or extend familiar patterns. They are on a solid path of progress in the mathematics curriculum.

BELOW STANDARDS
Fifth-grade students whose measured performance is below standards are generally able to order and compare whole numbers, simple fractions and decimals. They are usually able to solve one-step problems involving whole numbers using addition, subtraction, multiplication and division. They are beginning to develop the ability to solve simple problems using fractions and decimals. They can identify and name a ratio that describes a given situation and are beginning to recognize simple percents. These learners are also able to round whole
numbers to a specified place and can often round decimals to the tenths and hundredths. Generally, fifth-grade students at this level use a single strategy to solve problems.

Fifth-grade students at the below standards level are able to use tools to make measurements to the nearest whole and half unit. They can inconsistently estimate a given measure within the customary system. They are beginning to demonstrate an understanding of area and perimeter. They can calculate area and perimeter by counting squares and linear units on a grid, and they can inconsistently determine perimeter by applying a formula.

Algebraically, fifth-grade students who are below standards can identify geometric and numeric patterns. They can inconsistently solve one-step equations with whole numbers that involve the four fundamental operations. These students recognize that variables represent unknown quantities, and they are beginning to develop an understanding of number properties, including commutative, associative, zero and equality. These learners can inconsistently plot and read ordered pairs in the positive quadrant.

Geometrically, fifth-grade students at the below standards level can identify, compare and contrast the attributes of two-dimensional shapes, and they can inconsistently identify and compare the attributes of three-dimensional shapes. They can identify similar, congruent and symmetric figures and can locate the line(s) of symmetry in the latter. They can identify right angles and angles that are greater than and less than a right angle; however, they are inconsistent in their ability to use and understand the terms "acute" and "obtuse."

Fifth-grade students at the below standards level can read and interpret information contained in tables, charts and graphs. They are also able to collect and display data. They can inconsistently determine mean and range from a given set of data. These students are able to calculate simple probabilities and can inconsistently predict the outcome of an event.

Overall, fifth-grade students who operate at the below standards level have an emerging sense of numbers, but they are somewhat limited in their understanding of what may be accomplished within the whole number system. Their computational abilities are limited by the four basic operations, and they inconsistently recognize how and when to use technology. These learners have limited ability to transfer their knowledge and skills beyond the content and approaches used in their classes.

**ACADEMIC WARNING**

Fifth-grade students at the academic warning level are generally able to order and compare whole numbers. They can identify simple fractions and decimals and can compare simple fractions with like denominators. These students can inconsistently solve one-step problems with whole numbers using the four operations. They can inconsistently identify a ratio that describes a given situation. These students are very limited in their ability to estimate; however, they are sometimes able to round whole numbers to a specified place value. Generally, fifth-grade students at this level have difficulty identifying an appropriate strategy for solving problems.

Fifth-grade students at the academic warning level use tools inconsistently to make measurements to the nearest whole unit. They can occasionally estimate a given measure within the customary system. These learners demonstrate a limited understanding of area and perimeter, and they can inconsistently calculate area and perimeter by counting units of figures drawn on square unit grid.
Algebraically, fifth-grade students at the academic warning level can inconsistently identify simple geometric and numeric patterns. They can inconsistently solve simple one-step equations that involve addition and subtraction. These learners are beginning to recognize that variables represent an unknown quantity. Fifth-grade students at the academic warning level demonstrate an emerging ability to recognize number properties including commutative, zero and equality.

Geometrically, fifth-grade students at the academic warning level can identify the attributes of two-dimensional shapes and can inconsistently identify attributes of some three-dimensional shapes. These learners may be able to inconsistently identify symmetry and congruence. They may be able to locate some lines of symmetry in a figure. These students may recognize a right angle but rarely recognize angles that are acute or obtuse.

Fifth-grade students at the academic warning level can inconsistently read and interpret information contained in tables, charts and graphs. These students may be able to collect and display data but are rarely able to make predictions based on that data. They are able to inconsistently calculate simple probabilities, and they can occasionally predict the outcome of an event.

Overall, fifth-grade students at the academic warning level have a significantly limited sense of numbers and what may be accomplished within the number system. Their computational abilities are underdeveloped, and their problem-solving skills are limited. These learners are rarely able to transfer their knowledge and skills beyond the content and approaches used in their mathematics classes.
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Grade 6

EXCEEDS STANDARDS
Sixth-grade students whose measured performance exceeds standards demonstrate a solid knowledge and sense of numbers that allows them to apply their understanding of the relative magnitude of numbers in a broad range of settings. They are able to order and compare whole numbers, decimals, fractions and mixed numbers with like and unlike denominators and to apply these skills in one- and two-step problems involving the four operations. They can convert between improper fractions and mixed numbers, and they demonstrate clear understanding of the relationship between fractions and decimals. These learners can apply their understanding of ratios, proportions and percents to solve two-step problems involving these concepts. They can describe the relationship between two sets of data using appropriate notations. These sixth-grade students are able to apply estimation skills to predict solutions to complex problems. Furthermore, they understand and have the ability to accurately test the validity of logical arguments.

Sixth-grade students at the exceeds level are able to make and use measurements to apply concepts of precision, accuracy and greatest possible error. These students consistently use appropriate technology, instruments, and formulas to accurately solve problems and interpret results. They can estimate conversions between measures within the customary and metric systems. These students are able to make conversions within a measurement system to perform operations with compatible units. They can determine, compare, and sketch area and perimeter of triangle, parallelogram, and irregular shapes, using formulas and/or other strategies, and they can apply these concepts to solve more complex problems.

Algebraically, the exceeds student at sixth grade can solve multi-step problems and equations using whole numbers. They can solve equations and expressions using order of operations, and they demonstrate an understanding of number properties including commutative, associative, distributive, transitive, zero and equality. These students can construct algebraic expressions using variables to describe a pattern and/or represent an unknown quantity. They can analyze and interpret data from various types of tables and graphs, transfer data from tables to graphs, and make predictions based on implications from the data. They can routinely estimate probabilities from experimental simulations.

Geometrically, sixth-grade students at the exceeds level can apply their knowledge of two- and three-dimensional objects to solve complex problems. They can identify, describe, classify and compare relationships using points, lines, planes and solids. These students apply their knowledge of polygonal relationships to compare and classify geometric figures. They easily recognize and predict the result of reflections, translations, and rotations of shapes, and they can identify and describe relationships between radius, chord, diameter and circumference of a circle.

Sixth-grade students at the exceeds level are able to collect, organize, interpret, compare and analyze data and make predictions and decisions based on that data. These students can determine mean, median, mode, and range and apply these concepts of data analysis. They determine and apply basic properties of probability to solve problems, and they represent the probability of the event as a fraction, decimal or percent. These students are also able to estimate probabilities from experimental simulations.

Overall, sixth-grade students at the exceeds level have a solid grasp of the mathematics curriculum along with the ability to extend and apply their knowledge in a wide range of problem-solving situations. They consistently use reasoning and communications skills in
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mathematics, not only to solve the immediate problem but also to make further inquiries and create additional problems from their own interests. Their work is characterized by its insightful nature and by consistent and sustained high performance across the various content areas.

MEETS STANDARDS
Sixth-grade students whose measured performance meets standards demonstrate a knowledge and sense of numbers that allows them to order and compare whole numbers, decimals, fractions and mixed numbers (with like or unlike denominators) and to recognize the relative magnitude of these numbers. These students are able to solve practical two-step problems involving whole numbers using addition, subtraction, multiplication and division. They can add and subtract decimals, fractions and mixed numbers and can translate and solve word problems that involve these concepts and skills. These learners have a conceptual understanding of ratios, proportions and percents and are able to extend that understanding to the solution of problems involving these concepts. They can round whole numbers and decimals to a specified place and can use rounding and estimation skills to predict solutions to simple problems and check the reasonableness of their answers.

Additionally, sixth-grade students at the meets standards level are able to use tools to make measurements that are accurate within the range of precision of the instruments used. They are also able to estimate a given measure and/or a conversion between measures within the customary and metric systems. They understand and apply concepts of length, volume, weight/mass, and angles.

Algebraically, sixth grade students at the meets standards level can identify and extend geometric and numeric patterns and can write and solve two-step equations that involve the four fundamental operations and whole numbers. These students can recognize and use variables to represent unknown quantities, and they demonstrate an understanding of number properties including commutative, associative, and distributive. These learners can plot and read, and interpret ordered pairs in the first quadrant.

Geometrically, sixth-grade students at the meets standards level can compare and contrast the attributes of two- and three-dimensional shapes. These learners can identify geometric properties, including parallel, perpendicular, intersecting, similar, congruent, and line symmetry. These students demonstrate an understanding of angle properties including right, acute, obtuse, and straight angles, and they are able to determine the measures of angles and sides in congruent figures.

Sixth-grade students at the meets standards level are able to collect, organize, interpret, analyze and display data. They can determine mean, median, mode and range. These students have the ability to predict outcomes from experiments involving chance, calculate the probability of a simple event, and represent that probability.

Overall, sixth-grade students at the meets standards level have a solid grasp of the mathematics curriculum. They exhibit an acceptable range of problem-solving abilities, reasoning skills and communication abilities. They are able to use calculators and other forms of technology productively to carry out computation and to test or extend familiar patterns. They are on a solid path of progress in the mathematics curriculum.
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Grade 6

BELOW STANDARDS
Sixth-grade students whose measured performance is below standards are generally able to order and compare whole numbers, simple fractions and decimals. They are usually able to solve one-step problems involving whole numbers using addition, subtraction, multiplication and division. They are beginning to develop the ability to solve simple problems using fractions and decimals, but may experience difficulty with mixed numbers when attempting to solve number and word problems. They can identify and name a ratio that describes a given situation and are beginning to be able to solve problems using decimals and percents. These learners are also able to round whole numbers to a specified place and can often round decimals to the tenths and hundredths. Generally, sixth-grade students at this level use a single strategy to solve problems.

Sixth-grade students at the below standards level are able to use tools to make measurements to the nearest whole, half, and quarter unit. They can more frequently estimate a given measure within the customary system as compared to the metric system. They demonstrate an understanding of area and perimeter by counting units on a grid, and can inconsistently determine correct perimeter by applying a formula.

Sixth-grade students at the below standards level are inconsistent in their demonstration of understanding measurement of volume and mass.

Algebraically, sixth-grade students who are below standards can identify geometric and numeric patterns. They can inconsistently solve one-step and simple two-step equations with whole numbers that involve the four fundamental operations. These students recognize that variables represent unknown quantities, and they are beginning to develop an understanding of number properties, including commutative, associative, zero and equality. These learners can inconsistently plot and read ordered pairs in the positive quadrant.

Geometrically, sixth-grade students at the below standards level can identify, compare, and contrast the attributes of two-dimensional shapes, and they can inconsistently identify and compare the attributes of three-dimensional shapes. They can identify similar, congruent and symmetric figures and can locate the line(s) of symmetry in the latter. They can identify right angles and angles that are greater than and less than a right angle; however, they are inconsistent in their ability to use and understand the terms “acute” and “obtuse.”

Sixth grade students at the below standards level can read and interpret information contained in tables, charts and graphs. They are also able to collect and display data. They can inconsistently determine mean and range from a given set of data. These students are able to calculate simple probabilities and can inconsistently predict the outcome of an event.

Overall, sixth-grade students who operate at the below standards level have an emerging sense of numbers, but they are somewhat limited in their understanding of what may be accomplished within the whole number system. Their computational abilities are limited by the four basic operations, and they inconsistently recognize how and when to use technology. These learners have limited ability to transfer their knowledge and skills beyond the content and approaches used in their classes.
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Grade 6

ACADEMIC WARNING
Sixth-grade students at the academic warning level are generally able to order and compare whole numbers. They can identify simple fractions and decimals and can compare simple fractions with like denominators. These students can inconsistently solve one-step problems with whole numbers using the four operations. They can inconsistently identify a ratio that describes a given situation. These students are very limited in their ability to estimate; however, they are sometimes able to round whole numbers to a specified place value. Generally, sixth-grade students at this level have difficulty identifying an appropriate strategy for solving problems.

Sixth-grade students at the academic warning level use tools inconsistently to make measurements to the nearest whole unit. They can occasionally estimate a given measure within the customary system. These learners demonstrate understanding of area and perimeter, and they occasionally can calculate area and perimeter correctly either by counting units on a grid or by applying formulas.

Algebraically, sixth-grade students at the academic warning level can infrequently identify the more complex geometric and numeric patterns. They can inconsistently solve simple two-step equations that involve multiplication and division. These learners have an elementary understanding of variables representing unknown quantities. Sixth-grade students at the academic warning level demonstrate an emerging ability to recognize number properties including commutative, zero and equality.

Geometrically, sixth-grade students at the academic warning level can identify the attributes of two-dimensional shapes and can inconsistently identify attributes of some three-dimensional shapes. These learners may be able to inconsistently identify symmetry and congruence. They may be able to locate some lines of symmetry in a figure. These students have some recognition of right, acute, and obtuse angles.

Sixth grade students at the academic warning level can inconsistently read and interpret information contained in simple tables, charts and graphs. These students may be able to collect and display data but are rarely able to make predictions based on that data. They are able to inconsistently calculate simple probabilities, and they can occasionally predict the outcome of an event.

Overall, sixth-grade students at the academic warning level have a limited sense of numbers and what may be accomplished within the number system. Their computational abilities are underdeveloped, and their problem-solving skills are limited. These learners are infrequently able to transfer their knowledge and skills beyond the content and approaches used in their mathematics classes.
ISAT Mathematics Performance Definitions
Grade 7

EXCEEDS STANDARDS
Seventh-grade students at the exceeds standards level are able to demonstrate knowledge of numbers to solve many practical problems involving whole numbers, decimals, fractions, percents, and proportions. They have significant conceptual understanding of the interrelationships among fractions, decimals and percents and their connections to proportions. These students are able to apply their knowledge of primes, factors, divisors, multiples common factors and common multiples in solving problems. They can apply these skills in combination with estimation and rounding to predict reasonable solutions to one-and two-step problems. These students are able to recognize and apply patterns in various ways.

Seventh-grade students at the exceeds standards level can consistently apply geometric formulas to determine perimeter, area, surface area, and volume. These students are able to reliably measure and estimate measures to a specified level of accuracy. They can apply their knowledge of proportion and scale to a somewhat complex drawing or situation.

Algebraically, seventh-grade students at the exceeds standards level are able to translate a relationship into symbols and solve multi-step equations involving rational numbers. They can evaluate formulas and expressions involving the four fundamental operations with rational numbers. They are also capable of consistently and accurately graphing inequalities on a number line or a coordinate plane.

Geometrically, seventh-grade students at the exceeds standards level can apply properties of two- and three-dimensional figures, including similar and congruent figures. They can recognize and apply translations, reflections and rotations using a variety of figures. These students can demonstrate understanding of parallel, perpendicular, similarity, congruency and symmetry between and within geometric figures and models.

Seventh-grade students at the exceeds standards level are capable of creating, reading, and interpreting more complex statistical graphs, charts and tables. In addition, they are capable of calculating the probability and/or odds of a given event by constructing a sample space or computing using counting theory and identifying favorable outcomes for complex problems, and they are also able to make predictions from these results.

MEETS STANDARDS
Seventh-grade students at the meets standards level are able to demonstrate knowledge of numbers to solve practical problems that involve whole numbers, fractions, decimals, percents and proportions. They can conceptualize interrelationships among fractions, decimals and percents and their connections to proportions. They also understand variables and solve equations using one variable. For the most part, these students are able to use their knowledge of primes, divisors, and common factors and multiples in solving problems. They can establish ratios and relate them to proportions in common problem settings with which they are familiar. Their grasp of percentages allows them to handle simple situations that involve each type of percent usage such as determining interest, sales tax, or commissions. They function competently in routine settings and those that require minimal extensions from their previous experiences.

Seventh-grade students at the meets level can apply their geometric knowledge by making unit conversions for length, weight/mass, capacity and square units. They can determine the volume and the surface area of a right rectangular prism using an appropriate formula or strategy. These students can use proportions and interpret a simple scale drawing.
ISAT Mathematics Performance Definitions
Grade 7

Algebraically, seventh-grade students at the meets level can solve simple one- or two-step equations that have integral or simple rational solutions. They can also evaluate algebraic expressions using order of operations and implied multiplication procedures. Students can evaluate formulas and expressions that involve natural number exponents. They can graph a given line with integral coefficients on a coordinate plane. These students predict solutions to equations and numerical problems using estimation, rounding or mental mathematics to determine their response.

Geometrically, seventh-grade students at the meets level can apply relationships that involve lines, angles, and two-dimensional shapes in a variety of settings. They can consistently classify triangles by angles and sides and draw conclusions from the relationships of parallel and perpendicular lines within common figures.

Seventh-grade students at the meets level can generalize from simple data tables, lists, and graphs to predict future values and estimate values between given values. They can calculate mean, median, mode, and range and make simple decisions about the effect of a change in data on those measures. They exhibit a basic understanding of relative frequency probability involving common objects or games. They can determine the probability of a simple event and apply simple counting theory to a situation.

BELOW STANDARDS
Seventh-grade students at the below standards level are able to apply numerical knowledge to identify and use the correct fundamental operation for simple one- and two-step problems that involve whole numbers. They can deal with practical mathematical situations that arise from their own experience. These students understand place value but frequently make mistakes using order of operations, and they have some understanding of basic operations with simple fractions that have common or easily converted denominators. They can express simple common ratios but lack the ability to construct related proportions. These students are sometimes able to determine the reasonableness of given estimates and some solutions to numerical problems. They can use a calculator for simple numerical operations.

Seventh-grade students at the below standards level can make conversions between units of length within either the customary or metric system if they are given the formula. They occasionally know and are able to apply geometric formulas for perimeters and areas of simple geometric figures and can extend the use of these formulas to rectangular, two-dimensional settings some of the time. They frequently cannot distinguish between surface area and volume situations. Students have a beginning conceptual knowledge of how to construct a simple scale drawing for a given situation. They can use scale to answer questions that require only simple ratios.

Algebraically, seventh-grade students at the below standards level are inconsistent when translating into symbols and solving one-step equations that involve the four basic operations. They can evaluate formulas and expressions that apply these four operations to whole numbers. These students are inconsistent in plotting ordered pairs of integers on a coordinate plane, often unable to distinguish among the four quadrants. They do recognize basic patterns.

Geometrically, seventh-grade students at the below standards level can identify, compare and contrast the basic concepts of congruence, parallel, perpendicular and symmetry within
common two-dimensional figures, but they are not necessarily able to apply these concepts to a problem situation that is more complex than a simple drawing.

Seventh-grade students at the below standards level are sometimes capable of organizing, interpreting and analyzing basic data from provided surveys, tables or graphs. They can perform simple experiments in probability and describe their perception of the results.

**ACADEMIC WARNING**
Numerically, seventh-grade students at the academic warning level are only able to identify and use the correct fundamental operation for one-step problems that involve whole numbers. They can begin to deal with practical mathematical situations that arise from their own experience. These students understand whole number place value and order of operations of whole numbers, but they have very little understanding of basic operations with simple fractions that have common denominators. They have difficulty expressing simple ratios. These students are less likely to be able to determine the reasonableness of some given estimates.

Seventh-grade students at the academic warning level can begin to make conversions between units of length in a customary system if they are provided with the formula. They are able to apply formulas for perimeters and areas of simple geometric figures if given the formula; however, they may make errors in computation.

Algebraically, seventh-grade students at the academic warning level can translate into symbols and begin to solve simple one-step equations that involve the four basic whole number operations. These students can plot ordered pairs of integers inconsistently on a coordinate plane in Quadrant I, but may switch the axis order \((x, y)\).

Geometrically, seventh-grade students at the academic warning level can sort, identify, and compare the basic concepts of parallel and perpendicular within and/or between common two-dimensional objects.

Seventh-grade students at the academic warning level can begin to interpret simple graphs from given data. They understand the meaning of average and can compute simple means using a calculator. Predictions are inconsistently made from given data. They can perform simple experiments in probability.

Overall, seventh-grade students at the academic warning level have an inadequate sense of numbers and what can be accomplished within the number system. As with students in preceding grades, the computational ability of these learners is underdeveloped, and they rarely transfer their basic knowledge and skills beyond classroom setting.
EXCEEDS STANDARDS
Eighth-grade students at the exceeds standards level are able to demonstrate knowledge of numbers to solve a wide variety of practical problems involving whole numbers, percents, proportions and exponents. They have a solid conceptual understanding of the interrelationships among fractions, decimals and percents and their connections with proportions. These students are able to apply their knowledge of primes, factors, divisors, multiples common factors and common multiples in solving problems. They can apply these skills in combination with estimation and rounding to predict reasonable solutions to multi-step complex problems. These students are able to recognize and apply patterns in various ways.
Eighth-grade students at the exceeds standards level can consistently apply geometric formulas to determine perimeter, area, surface area and volume. These students are able to reliably measure and estimate measures to a specified level of accuracy. They can apply their knowledge of proportion and scale to a complex drawing or situation.

Algebraically, eighth-grade students at the exceeds standards level are able to translate a relationship into symbols and solve multi-step equations involving rational numbers. They can evaluate formulas and expressions involving the four fundamental operations with rational numbers. They are also capable of graphing inequalities on a number line or a coordinate plane. These students can interpret the slope of a line in various ways.

Geometrically, eighth-grade students at the exceeds standards level can apply properties of two- and three-dimensional figures, including similar and congruent figures and apply the Pythagorean Theorem in a variety of settings. They can recognize and apply translations, reflections and rotations using a variety of figures with or without coordinates. These students can demonstrate knowledge of relationships of parallel, perpendicular, similarity, congruency and symmetry between and within geometric figures and models.

Eighth-grade students at the exceeds standards level are capable of reading and interpreting complex statistical graphs, charts and tables. In addition, they are capable of calculating the probability and/or odds of a given event by constructing a sample space or computing using counting theory and identifying favorable outcomes for complex problems, and they are also able to make predictions from these results.

MEETS STANDARDS
Eighth-grade students at the meets standards level are able to demonstrate knowledge of numbers to solve practical problems that involve integers, decimals, fractions, percents and proportions with or without a calculator. They can conceptualize interrelationships among fractions, decimals and percents and their connections with proportions. They also understand variables and solve equations using one variable. These students are able to use their knowledge of primes, factors, divisors, multiples, common factors and common multiples in solving problems. These students can establish ratios and relate them to proportions in common problem settings with which they are familiar. Their grasp of percentages allows them to handle simple situations that involve each type of percent usage such as determining interest, sales tax or commissions. They function competently in routine settings and those that require minimal extensions from their previous experiences.
Eighth-grade students at the meets level can apply their geometric knowledge by making conversions between units of mass and capacity within a measurement system and calculate the surface area and volume of standard rectangular solids. Students can use proportions and interpret a simple scale drawing.
Algebraically, eighth-grade students at the meets level can solve simple equations of one-or two-step equations that have integral or simple rational solutions. They can also evaluate algebraic expressions using order of operations and implied multiplication procedures. Students can evaluate formulas and expressions that involve natural number exponents. They can graph a given line with integral coefficients on a coordinate plane. These students predict solutions to equations and numerical problems using estimation, rounding or mental mathematics to determine their response.

Geometrically, eighth-grade students at the meets level can apply relationships that involve lines, angles and two-dimensional shapes in a variety of settings. They can classify triangles by angles and sides and draw conclusions from the relationships of parallel and perpendicular lines within common figures. Students can apply the Pythagorean Theorem in common settings most of the time.

Eighth-grade students at the meets level can generalize from data tables, lists and graphs to predict future values and estimate values between given values. They can calculate mean, median, mode and range and make simple decisions about the effect of a change in data on those measures. They exhibit a basic understanding of relative frequency probability involving common objects or games. They can determine the probability of a simple event and apply simple counting theory to a situation.

**BELOW STANDARDS**
Eighth-grade students at the below standards level are able to apply numerical knowledge to identify and use the correct fundamental operation for simple one- and two-step problems that involve whole numbers. They can deal with practical mathematical situations that arise from the students own experience. These students understand place value but frequently make mistakes using order of operations, and they have some understanding of basic operations with simple fractions that have common or easily converted denominators. They can express simple common ratios but lack the ability to construct related proportions. These students are able to determine the reasonableness of given estimates and some solutions to numerical problems. They can use a calculator for simple numerical operations. Eighth-grade students at the below standards level can make conversions between units of length within either the customary or metric system if they are given the formula. They know and are able to apply geometric formulas for perimeters and areas of simple geometric figures and can extend the use of these formulas to rectangular three-dimensional settings some of the time. They frequently cannot distinguish between surface area and volume situations. Students have a beginning conceptual knowledge of how to construct a simple scale drawing for a given situation. They can use scale to answer questions that require only simple ratios.

Algebraically, eighth-grade students at the below standards level are inconsistent when translating into symbols and solving one-step equations that involve the four basic operations. They can evaluate formulas and expressions that apply these four operations to whole numbers. These students are inconsistent in plotting ordered pairs of integers on a coordinate plane. They do recognize basic patterns.

Geometrically, eighth-grade students at the below standards level can identify, compare and contrast the basic concepts of congruence, parallel, perpendicular and symmetry within common two-dimensional figures, but they are not necessarily able to apply them to a problem situation that is more complex than a simple drawing. They tend not to know the Pythagorean Theorem.
Eighth-grade students at the below standards level are sometimes capable of organizing, interpreting and analyzing data from provided surveys, tables or graphs. They can perform simple experiments in probability and describe the results.

**ACADEMIC WARNING**
Numerically, eighth-grade students at the academic warning level are only able to identify and use the correct fundamental operation for one-step problems that involve whole numbers. They can begin to deal with practical mathematical situations that arise from their own experience. These students understand whole number place value and order of operations of whole numbers, but they have very little understanding of basic operations with simple fractions that have common denominators. They have difficulty expressing simple common ratios. These students are able to determine the reasonableness of some given estimates.

Eighth-grade students at the academic warning level can begin to make conversions between units of length in a customary system if they are provided with the formula. They are able to apply formulas for perimeters and areas of simple geometric figures if given the formula; however, they may make an error in the computation.

Algebraically, eighth-grade students at the indicates academic warning level can translate into symbols and begin to solve simple one-step equations that involve the four basic whole number operations. These students can plot ordered pairs of integers on a coordinate plane in Quadrant I but may switch the order \((x, y)\).

Geometrically, eighth-grade students at the indicates academic warning level can sort, identify, and compare the basic concepts of parallel and perpendicular within and/or between common two-dimensional objects.

Eighth-grade students at the academic warning level can begin to interpret simple graphs from given data. They understand the meaning of average and can compute simple means using a calculator. Predictions are inconsistently made from given data. They can perform simple experiments in probability.