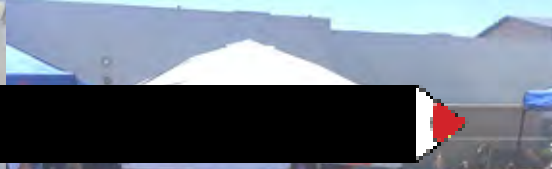
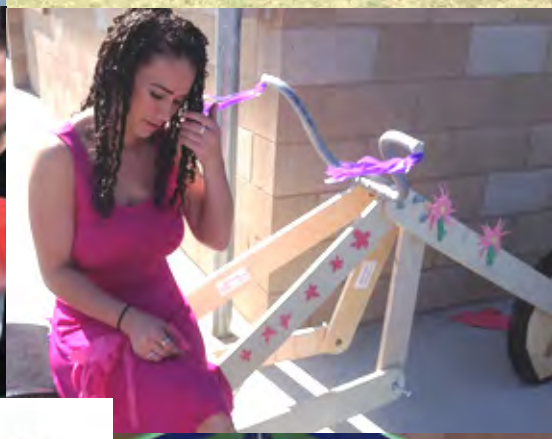
Program Catalog









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STEAM into Big Ideas Mathematics

Welcome to TPS Publishing Inc. Kindergarten through Grade 12 programs;
STEAM into Big Ideas Mathematics.
TPS is a teacher/writer group working in conjunction with CeMaST at Illinois State University. TPS provides STEAM programs to ensure students are engaged and learn by doing. STEAM education is research-based and provides inclusive, real-life scenario projects that offer multiple strategies. Research shows this approach works for diverse student populations. For each Big Idea, TPS provides STEM, traditional and arts projects.
TPS submitted three programs, Kindergarten through Grade 8, Algebra I, and Mathematics I.

The content integrates with most LMS such as Clever, CANVAS, Google Classrooms and ClassLink.

Below is a link to preview the online materials, together with your username and password. This link will be valid until December 31, 2025. Should you need a personalized link in 2026, please contact info@tpspublishing.com

go to www.tpspublishing.com/my-resources
enter the user name and password associated with the subject(s) to view

K-8 Math Menu:	Algebra I Menu:	Math I Menu:
User – STEAMM	User – STEAMA1	User – STEAMM1
Password - steamm	Password - steama1	Password - steamm1

Follow the links above and when prompted enter the User ID and Password. You will then be asked to agree the terms of the review before being presented with the menu. Each subject and grade has its own sub-menu.

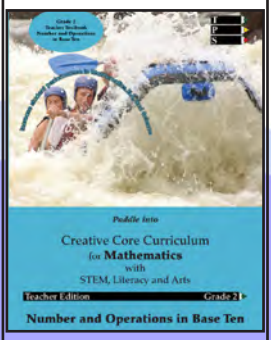
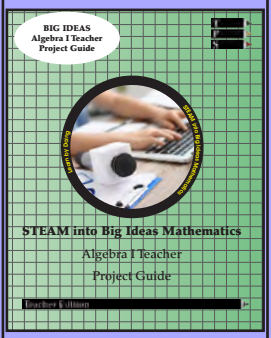
Using your online access details you can follow citations, which appear in the online teacher support area, to view how content is aligned to the requirements in California.
You have access to the Online Assessment Tools, teacher and student Big Ideas Project Guides, combined strategies texts, and STEM and arts projects. You can view all specific libraries. *For example, the Big Ideas: Environmental Principles and Concepts and online STEAM libraries.*
TPS provides a Teacher Community Implementation Guide.

It is important to read and follow the implementation guide detailed information and review the key steps, Big Ideas Project Guide, Online Assessment Tools, Online Toolbox. It also provides detailed standards and criteria maps. It sets out how we meet the requirements of the Framework.

TPS also provides ongoing support using a toll-free number, 1-800-578-5191, webinars and/or on site visits throughout the school year. For your review, and continual use throughout the school year, TPS provides a section entitled *How to Use and Navigate the Program*. Use this section to help you review our program. It includes links to videos for how to use the assessment tools. An online version appears in the online teacher support guide.

There are three core components that form the steps to success, and are supported by the assessment tool content. TPS then provide libraries that contain support materials to ensure teachers and caregivers have all they need to ensure the students master content.

STEAM into Big Ideas Mathematics

			TPS Publishing Inc. STEAM into Big Ideas Mathematics K-12 Steps to Success			
		Step 3			• STEM projects - Summative Assessment • Arts projects and reader activity books	
	Step 2			• Combined Strategies • Assessment • Combined Strategies Journal • •		
Step 1			• Formative assessment • Project Guide Investigation Student led Big Ideas Projects • Assessment	• Multi Lingual Learners Math and English Journal		
Online Assessment Library Assessment Database Interactive Assessment Tool Interactive Homework System Big Ideas Intervention Focus Tutorial				**Online Teacher Support** **Online Teacher Support-Blackline Master**		
Online Big Ideas - Environmental Principles and Concepts - K-12						

STEAM into Big Ideas Mathematics

		Grades K through 5	Grades 6 through 8	Algebra I and Math I
	LIBRARIES	• Big Ideas - Math Online STEAM Library - Elementary • Andre and Hedy • Amelia Rose	• Big Ideas - Math Online STEAM Library - Middle • Amelia Rose • iMaST • Forensic Science	• Big Ideas - Math Online STEAM Library - Middle • Big Ideas - Math Online STEAM Library - Elementary • iMaST • Forensic Science
		• The Lewis Family • STEM TE Videos • STEAM into Careers • Modeling Math	• CeMaST Engineering • Muscle Karts • STEAM into Careers • Modeling Math	• CeMaST Engineering • Muscle Karts • STEAM into Careers • Modeling Math
	Support Materials	• Big Ideas - Inclusive Community Reader Activity Library • Archway • Reader activity books		
		Big Ideas - Inclusive Community Math After School Math Club Library Big Ideas - Inclusive Community Math After School PSHE Library Big Ideas - Inclusive Community Math Literacy and Reteach Library Big Ideas - Inclusive Community Homework and Applied Math Library Big Ideas - Inclusive Community Preferred Supplier 'Didax' Library		

STEAM into Big Ideas Mathematics.

Your pacing plan and scope and sequence will, by grade, guide you through the school year. Here is a summary description of the program's core components.

STEP 1 – Big Ideas Project Guides

The Big Ideas - Teacher and Student Editions are designed as a first point of exploration and learning for students, with engaging and meaningful projects that utilize real-world data and experiences. Students are given the opportunity to develop their mathematical abilities through active learning experiences, and thought-provoking projects and tasks, that puts the responsibility on the students to investigate how they will best solve problems. Teachers are encouraged to set out the problems and provide guidance and information only when necessary. Students should show perseverance, confidence and achievement in their learning. Teachers should work to guide student ideas and guide them towards solutions and understanding of their own making.
The teacher and student Project Guides provide real-life scenarios to introduce conceptual learning and include a skills section, and arts project. From grade 3, performance tasks are included.
Information is provided in each chapter to take you to the online assessment tools, and online libraries. The teacher training implementation guide includes detailed information about online content. It sets out how to implement the program and work with caregivers.

Each project gives a consistent structure. The teacher edition pages start with a lesson plan as described below, followed by student edition pages with solutions and teacher guidance notes in red. In grades Kindergarten, 1 and 2, TPS provide text to read to students who cannot read.

Project Plan:

Project Title - A title for the lesson, which is also the top banner of each page.

Time - Estimated lesson time, usually consistent of one task per lesson, though guidance is given if timings fall outside of this range.

Vocabulary - Key vocabulary words for the project. A glossary is provided at the end of each project.

Materials - Any materials needed for the lesson.

Learning Targets - Objectives for understanding in the lesson.

Prior Knowledge - Information about prior learning ahead of study in this project, including concepts and skills.

STEAM into Big Ideas Mathematics.

Common Misconceptions - Any common viewpoints or facts that are often accepted as true, but are incorrect, which the students may have developed from prior experiences.

Introduction - An introduction to the problem and aim of the project.

Lessons 1 - 4 - Typically there are four lessons, consisting of a title, followed by a mixture of:

- Paired tasks
- Individual tasks
- Group tasks, which are designed to be completed in groups of around four students

Student Attainment Guidance -

- Entry - Guidance for students who are in early stages of understanding of the project requirements.
- Developing - Guidance for students who understand the requirements of the task.
- Mastery - Guidance for students who are excelling in understanding and can be stretched in understanding.

Drivers of Investigation, Standards for Mathematical Practices, and Content Standards - Within each lesson we provide information about which of these are supported.

Drivers of Investigation

1. Make sense of the world (understand and explain)
2. Predict what could happen (predict)
3. Impact the future (affect)

Standards for Mathematical Practices and Standards Guidance

1. Make sense of problems and persevere in solving them
2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make us of structure
8. Look for and express regularity in repeated reasoning

Content Standards - Guidance for the teacher of what standards are studied in the project, in order to help guide towards support resources where necessary.

Content Connections - these are listed, as appropriate, at the beginning of each Big Idea.

1. Reasoning with data
2. Exploring changing quantities
3. Taking wholes apart, putting parts together
4. Discovering shape and sequence

STEAM into Big Ideas Mathematics.

Reflection - Guidance for a class summary discussion about the project, what students enjoyed, found easy or difficult, and what the project may inspire students to study outside of class.

Homework - A homework task to extend learning beyond the classroom.

At Home and in the Community - Ideas for including home and members of the community in student learning.

ELD Support - Specific ideas for supporting ELD students are included within the project. TPS also provides multiple tools to assist with ELD:

- Online picture glossary cards (English and Spanish)
- Archway: TPS provide a phonics program that teaches students and their families how to read, write and speak English.
- Online reader activity books: STEAM reader books, available in English and Spanish, provide practice of NGSS aligned science and CA mathematics.

SEN Support - Specific ideas for supporting SEN students are included within the project. TPS also provides an online menu containing STEAM special education projects, and the intervention focus tutorial provides key content to be reviewed in bite sized chunks. This is useful for SEN and ELD students.

STEAM Activity Link - TPS is a STEAM provider. Many students learn best by doing, and TPS provides STEM and arts projects to ensure students from diverse backgrounds can master content. Each STEAM Activity Link provides ideas for extending or broadening understanding within TPS resources. The projects provide conceptual learning using a visual and tactile approach.

Language Goals - As part of the continual development of students' understanding of mathematical concepts, students need to develop correct mathematical terminology. Students are encouraged to express their understanding of new concepts using their own words and preferred phrases to describe observed phenomena. Teachers should then formalize the concepts with the correct terminology.
TPS recommend using the ELD support tools, previously noted, throughout the year. In addition, TPS ask teachers, in all grades, to use a classroom word wall. Have students use the words included, on a daily basis, in the classroom. Ensure students use the words accurately. Have ELD students create picture glossary cards in their first language, and then in English. You can also print the dual language cards from the TPS online menu.

STEAM into Big Ideas Mathematics.

Environmental Principles and Concepts Project
TPS provides a by-grade span project with performance tasks and rubric. It is located at the back of each teacher edition. There are specific tasks in each grade that feature in the 'Further Learning and Support Products section. The directions will take you to the online library **Big Ideas - Environmental Principles and Concepts.**

Further Learning and Support Products
After each Big Idea project plan, you will find a series of Further Learning and Support Product information pages. Teachers can choose to utilize these products as appropriate for their students.

Assessment Generator – TPS ask teachers to use this tool for continual assessment, formative, by standards, by skill level mini quizzes, and summative assessment. TPS propose teachers use level 1 questions to gauge natural knowledge before teaching, and for below grade students during the term. Level 2 questions should be created for the tests cross referenced within lesson plans; results are recorded onto the student report card. Level 3 questions are for advanced students.

Interactive Software Tool - TPS provides a web-based tool within which personalized mathematics tests can be assigned to students. Teachers can add and/or edit questions in over 20 styles. Multiple choice questions are automatically graded, and teachers can set the number of attempts by students. The tool has a hierarchy system: district/school/teacher/student and can be used for all subjects. Tests are for AI, MI, and K-8 and are by-level and by-standard.

Intervention focus tutorial - TPS provide this tool to assist all ELD and SEN students. Content of the traditional student textbooks is made available in bite-sized chunks, for each grade. However, only the teacher can see the grade and standard, thus removing any stigma.

STEM – Professors at CeMaST, Illinois State University, created STEM projects to provide conceptual learning with students following the DAPIC process. Students design, assess, plan, implement and communicate. Students learn best by doing and work in collaborative groups to build projects aligned to real-life careers. Some projects are cross-referenced within lesson plans. The content aligns to the Big Idea. Other projects, grouping across-grade standards, are available for reteaching in the online menu. For advanced students TPS provides Forensic Science and Engineering projects.

Student skills – TPS provide teaching for standard-based content, to be used for practice and or reteaching skills first taught within the Big Ideas project. From grade 3, Performance Tasks are provided.

STEAM into Big Ideas Mathematics

Traditional – Students may require focused teaching content for individual standards content, and these lesson plans are provided digitally in our online libraries. The student materials within this area include a student narrative, student exercises and classroom tasks.

Amelia Rose – This character grows up with students from grade K. Amelia and her family complete NGSS aligned science activities linked to real-life and solve mathematical problems linked to the Big Idea Project.

Arts – A variety of arts lesson plans are provided, for example, students at Sunny Elementary learn grade level NGSS aligned science and complete associated math and English tasks. You will also find themed arts reader activity arts projects. Characters are from diverse backgrounds and TPS use themes such as family, sport and diversity.

EP&Cs – TPS has provided content to align to the EPCs throughout the program and narratives are clearly labeled and cross referenced.

Didax – TPS recommend Didax as the manipulative provider. Some students will need manipulatives to master content. TPS provide activities to reteach by standard content. The manipulatives activities can be used for formative and summative assessment.

Performance tasks – TPS provide these summative assessments from grade 3, and they can be used for reteaching students core skills too.

Workbooks – Practice activities are provided for summative assessment/reteach.

Homework system – this tool provides teachers with content to set as homework for students. It is a web-based tool requiring access to the internet. Teachers and/or carers can review student progress by standard. TPS provide Homework Help for carers to use in their homes.

Homework help - TPS provide this online menu for families. Access is provided to the district for families at no additional cost. Content is by-standard, so busy family members can work with students to help improve mathematical skills.

TPS provides multiple libraries with further learning support materials designed for high school age learning. Here are key materials, alongside the ones mentioned previously, you will use regularly within Math I and Algebra I. Some are K-8 for intervention. Advanced STEM projects are also provided.

Help Sheets - TPS provides help sheets within which working examples are provided, by standard. Students review the content and then apply their knowledge for practice.

STEAM into Big Ideas Mathematics

iMaST - The iMaST program was developed to provide an integrated curriculum that would promote experientially based, hands-on learning for students and teaming among teachers from three or more disciplines. The iMaST curriculum is built on major themes. These themes provide a context for the content, with mathematical concepts learned through their applications. The iMaST program can be found on the digital menu Big Ideas - Math Online STEAM Library - Middle. We encourage exploring this resource and utilizing the themes to support student learning.

Real Numbers - This STEM Project Guide was written to exactly align to the framework requirements. Projects are careers aligned. The first four chapters are for both Algebra I and Math I. Further chapters are then provided dedicated to each course.

Student Edition Pages

These pages exist in the student and teacher editions, with red text only appearing in the teacher edition.

The Problem - An introduction to the problem and objectives of the project.

Lessons 1 - 4 - Typically there are four tasks, consisting of a title, followed by a mixture of:

- Paired tasks
- Individual tasks
- Group tasks, which are designed to be completed in groups of around four students.

Reflection - Guidance for a class summary discussion about the project, what students enjoyed, found easy or difficult, and what the project may inspire students to study outside of class. Students can complete a self-evaluation checklist to evaluate their understanding of the various lesson objectives.

Homework - A homework task to extend learning beyond the classroom.

Global Connection - Information about an important and influential person, group or organization, that is relevant to the project.

Vocabulary - Key vocabulary words for the project with definitions.

Environmental Principles and Concepts

Along with the mathematical content, we have included instruction to engage with the five Environmental Principles and Concepts (EP&Cs).

1. People depend on natural systems.
2. People influence natural systems.
3. Natural systems change in ways that people benefit from and can influence.

4. There are no permanent or impermeable boundaries that prevent matter from flowing between systems.
5. Decisions affecting resources and natural systems are complex and involve many factors.

To experience and engage with these principles and concepts, we encourage the exploration of various arts, STEM, and/or reader projects.

STEP 2 – Combined Strategies

Most programs have one textbook. TPS provides three core components as part of its teacher toolbox.

The step 2 component, Combined Strategies textbooks for teachers and students, represent our more traditional content and is underpinned with a strategy of teaching mathematics with literacy.

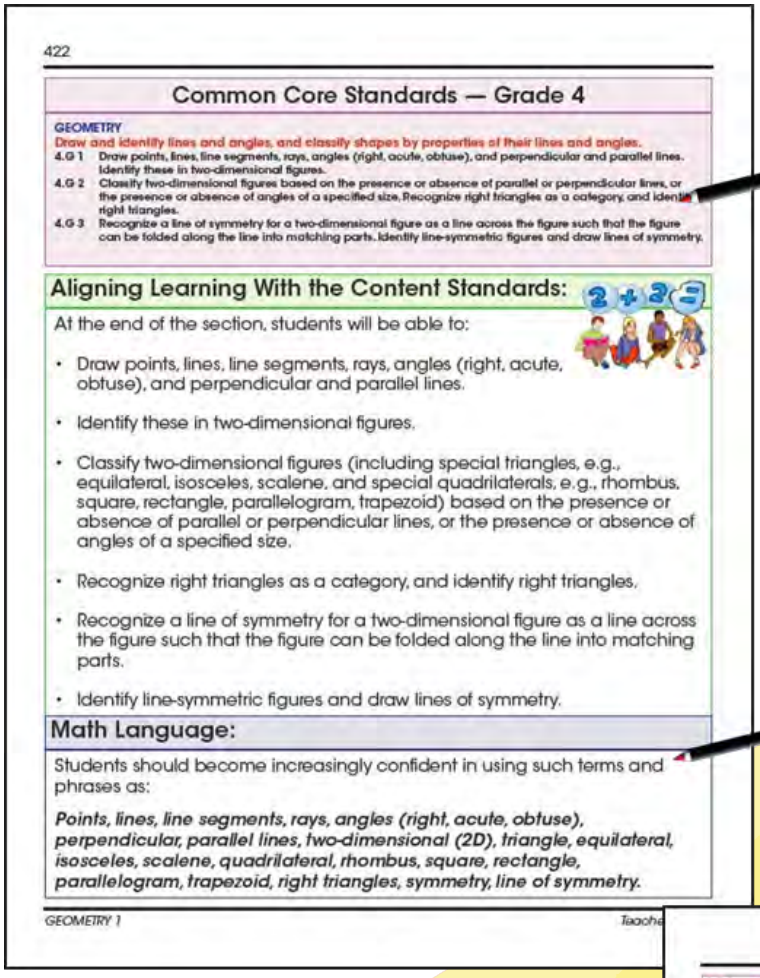
STEAM into Big Ideas Mathematics

Arranged by grade and by strand, the textbook is organized specifically to empower teachers by building their knowledge and understanding of mathematics in a way that is comprehensive but does not sacrifice its integrity. Please note that we do provide tips for universal access within the textbook pages but we also have whole components specifically built to assist far below grade students, ELL and special education students.

Features of the textbook are:

- Math language
- Time required to teach the lesson
- Vocabulary
- Materials required
- Objective
- What students should know already
- Lesson structure with step by step Introduction, Middle, and Summary.
- Lesson activity
- Extension activity
- Support for SEN and ELL
- Teacher assessment notes - a table to make notes on student attainment
- Student exercises
- Common misconceptions
- In the classroom extensions
- In the home extensions

STEAM into Big Ideas Mathematics



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Common Core Standards — Grade 4

GEOMETRY

Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

4.G.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

4.G.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Aligning Learning With the Content Standards:

At the end of the section, students will be able to:

- Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines.
- Identify these in two-dimensional figures.
- Classify two-dimensional figures (including special triangles, e.g., equilateral, isosceles, scalene, and special quadrilaterals, e.g., rhombus, square, rectangle, parallelogram, trapezoid) based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size.
- Recognize right triangles as a category, and identify right triangles.
- Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts.
- Identify line-symmetric figures and draw lines of symmetry.

Math Language:

Students should become increasingly confident in using such terms and phrases as:

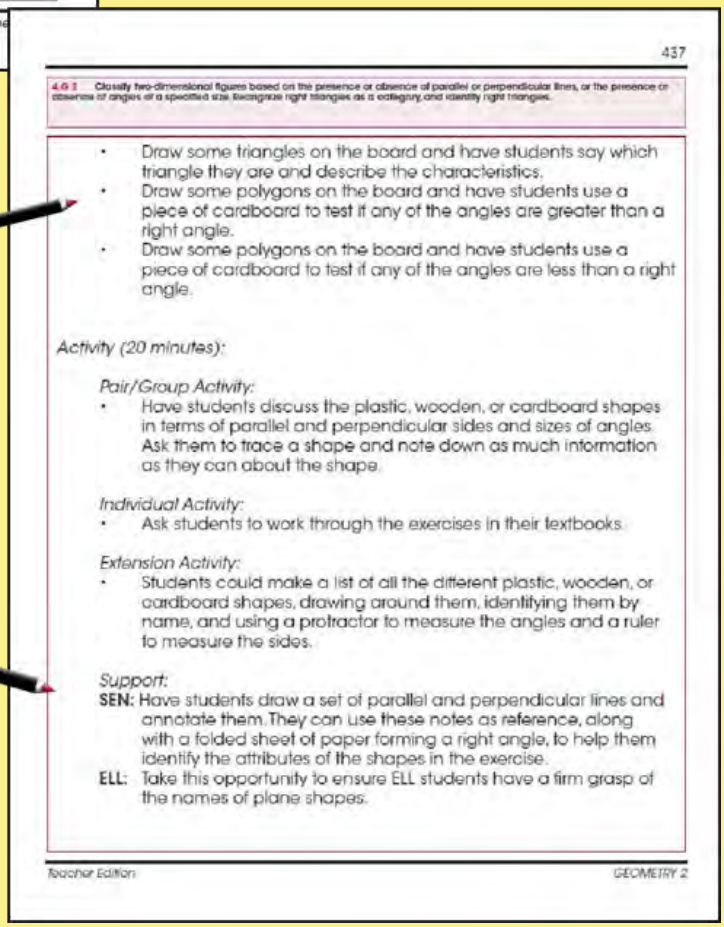
Points, lines, line segments, rays, angles (right, acute, obtuse), perpendicular, parallel lines, two-dimensional (2D), triangle, equilateral, isosceles, scalene, quadrilateral, rhombus, square, rectangle, parallelogram, trapezoid, right triangles, symmetry, line of symmetry.

GEOMETRY 1 Teache

The Common Core State Standards for mathematics are printed clearly at the beginning of each section. The vocabulary required for the math content is included in the Math Language section. For teachers with ELL students this is a key component of the program.

In the student textbook one full page is used to display the words. The vocabulary pages are included on the Blackline Master CD Rom.

We encourage study of the mathematics vocabulary as homework.



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4.G.3 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

- Draw some triangles on the board and have students say which triangle they are and describe the characteristics.
- Draw some polygons on the board and have students use a piece of cardboard to test if any of the angles are greater than a right angle.
- Draw some polygons on the board and have students use a piece of cardboard to test if any of the angles are less than a right angle.

Activity (20 minutes):

Pair/Group Activity:

- Have students discuss the plastic, wooden, or cardboard shapes in terms of parallel and perpendicular sides and sizes of angles. Ask them to trace a shape and note down as much information as they can about the shape.

Individual Activity:

- Ask students to work through the exercises in their textbooks.

Extension Activity:

- Students could make a list of all the different plastic, wooden, or cardboard shapes, drawing around them, identifying them by name, and using a protractor to measure the angles and a ruler to measure the sides.

Support:

SEN: Have students draw a set of parallel and perpendicular lines and annotate them. They can use these notes as reference, along with a folded sheet of paper forming a right angle, to help them identify the attributes of the shapes in the exercise.

ELL: Take this opportunity to ensure ELL students have a firm grasp of the names of plane shapes.

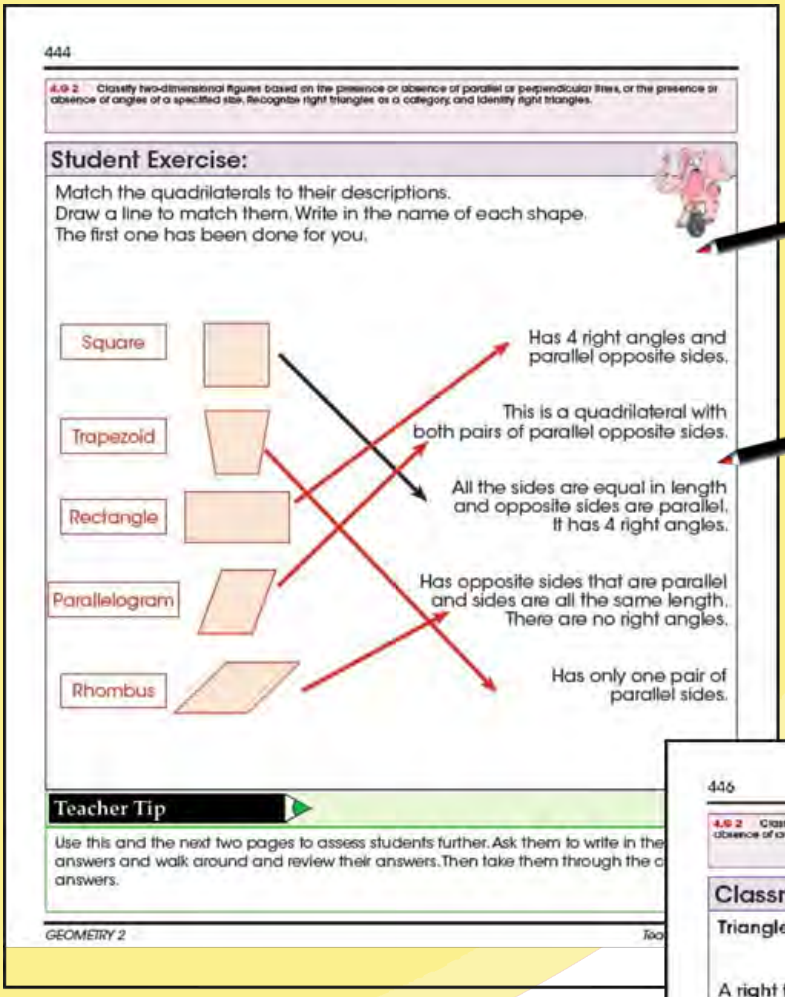
Teacher Edition GEOMETRY 2

Detailed step-by-step lesson plans are provided for every standard. The Common Core State Standards are printed on every page.

Support is provided for SEN and ELL students within each lesson plan.

STEAM into Big Ideas Mathematics

Student Textbook - Traditional



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4.G.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

Student Exercise:

Match the quadrilaterals to their descriptions.
Draw a line to match them. Write in the name of each shape.
The first one has been done for you.

Square

Trapezoid

Rectangle

Parallelogram

Rhombus

Has 4 right angles and parallel opposite sides.

This is a quadrilateral with both pairs of parallel opposite sides.

All the sides are equal in length and opposite sides are parallel. It has 4 right angles.

Has opposite sides that are parallel and sides are all the same length. There are no right angles.

Has only one pair of parallel sides.

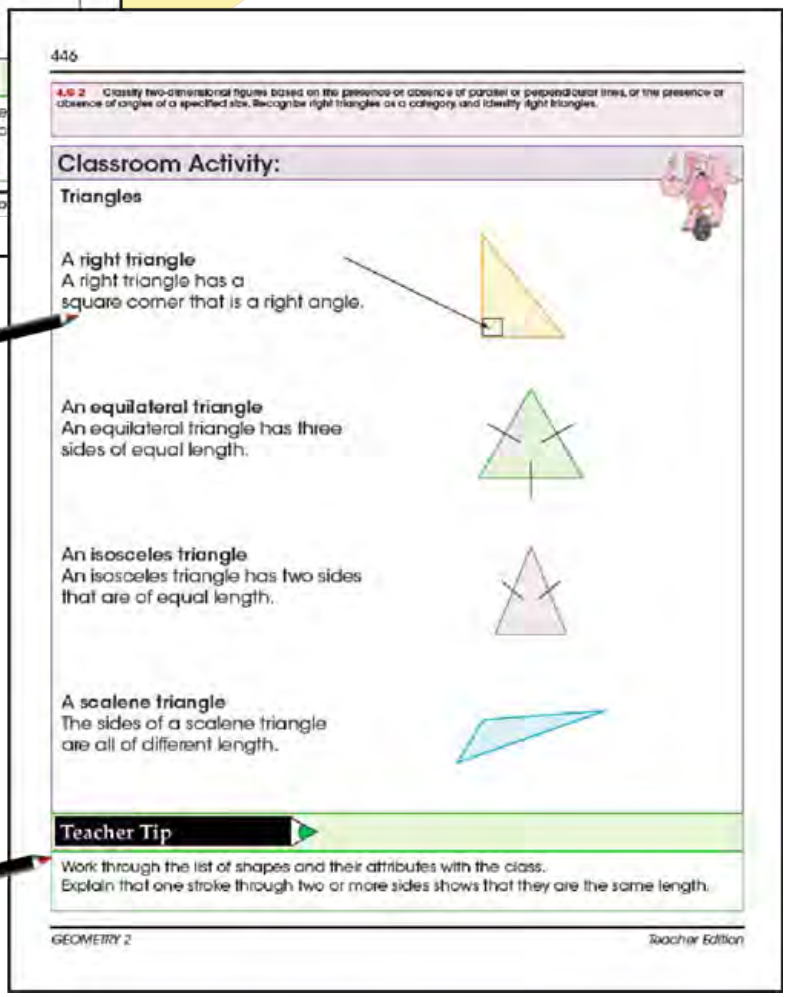
Teacher Tip

Use this and the next two pages to assess students further. Ask them to write in the answers and walk around and review their answers. Then take them through the c answers.

GEOMETRY 2 Tea

Student exercises are visual and engaging.
The teacher tips and answers are removed from the student sections.

Clear diagrams are provided and labeled.



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4.G.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

Classroom Activity:

Triangles

A right triangle
A right triangle has a square corner that is a right angle.

An equilateral triangle
An equilateral triangle has three sides of equal length.

An isosceles triangle
An isosceles triangle has two sides that are of equal length.

A scalene triangle
The sides of a scalene triangle are all of different length.

Teacher Tip

Work through the list of shapes and their attributes with the class.
Explain that one stroke through two or more sides shows that they are the same length.

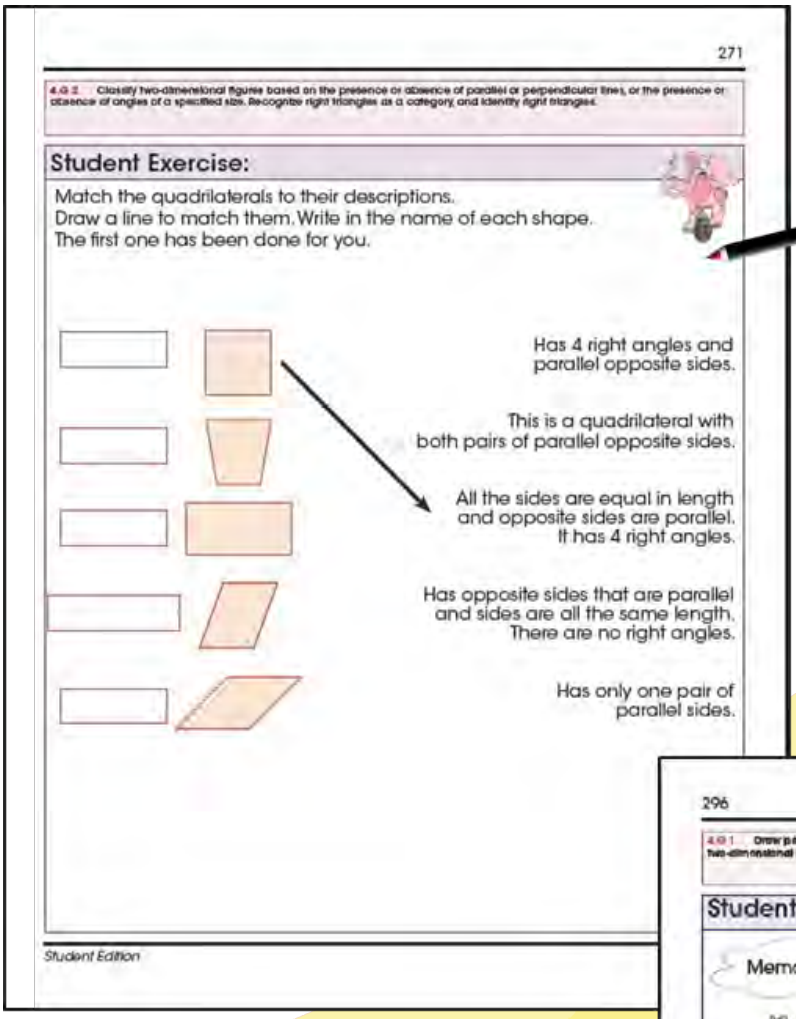
GEOMETRY 2 Teacher Edition

Classroom activities can be completed using sharing boards, used throughout the program. This provides instant feedback for the teacher. Sharing boards can be bought or made cheaply.

Teacher tips are provided to help new teachers.

STEAM into Big Ideas Mathematics

Student Textbook - Traditional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4.G.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

Student Exercise:

Match the quadrilaterals to their descriptions.
Draw a line to match them. Write in the name of each shape.
The first one has been done for you.

Has 4 right angles and parallel opposite sides.

This is a quadrilateral with both pairs of parallel opposite sides.

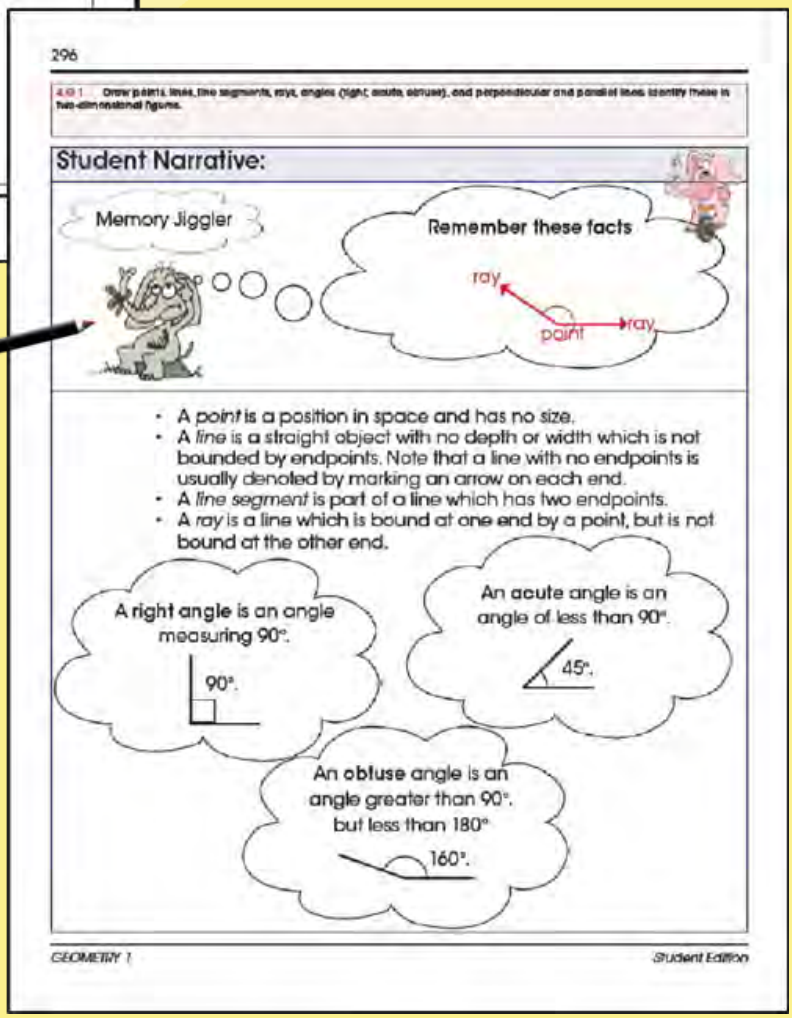
All the sides are equal in length and opposite sides are parallel. It has 4 right angles.

Has opposite sides that are parallel and sides are all the same length. There are no right angles.

Has only one pair of parallel sides.

Student Edition

Student exercises are visual and engaging.
The teacher tips and answers are removed from the student sections.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4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

Student Narrative:

Memory Jiggler

Remember these facts

ray
point
ray

- A *point* is a position in space and has no size.
- A *line* is a straight object with no depth or width which is not bounded by endpoints. Note that a line with no endpoints is usually denoted by marking an arrow on each end.
- A *line segment* is part of a line which has two endpoints.
- A *ray* is a line which is bound at one end by a point, but is not bound at the other end.

A right angle is an angle measuring 90°.
90°.

An acute angle is an angle of less than 90°.
45°.

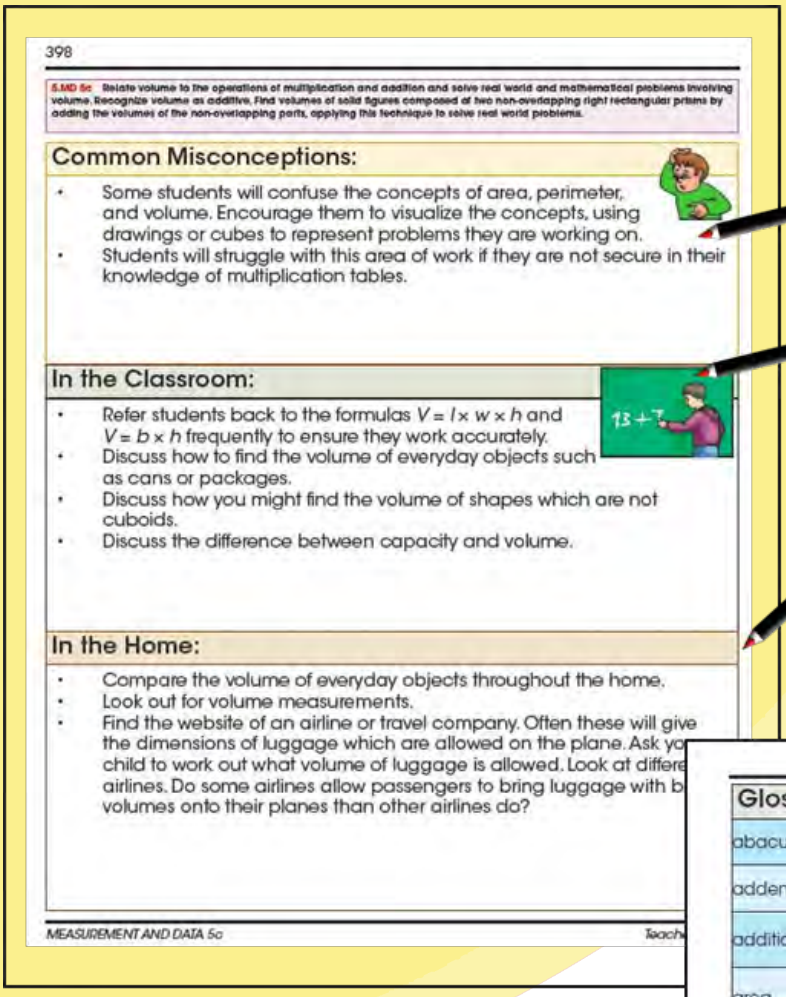
An obtuse angle is an angle greater than 90°, but less than 180°
160°.

GEOMETRY 1 Student Edition

Literacy underpins the program. Students focus on key vocabulary in each strand. Students perform better if they recognize and can apply mathematical language.

STEAM into Big Ideas Mathematics

Student Textbook - Traditional



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5.MD.5c Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.

Common Misconceptions:

- Some students will confuse the concepts of area, perimeter, and volume. Encourage them to visualize the concepts, using drawings or cubes to represent problems they are working on.
- Students will struggle with this area of work if they are not secure in their knowledge of multiplication tables.

In the Classroom:

- Refer students back to the formulas $V = l \times w \times h$ and $V = b \times h$ frequently to ensure they work accurately.
- Discuss how to find the volume of everyday objects such as cans or packages.
- Discuss how you might find the volume of shapes which are not cuboids.
- Discuss the difference between capacity and volume.

In the Home:

- Compare the volume of everyday objects throughout the home.
- Look out for volume measurements.
- Find the website of an airline or travel company. Often these will give the dimensions of luggage which are allowed on the plane. Ask yo child to work out what volume of luggage is allowed. Look at differe airlines. Do some airlines allow passengers to bring luggage with b volumes onto their planes than other airlines do?

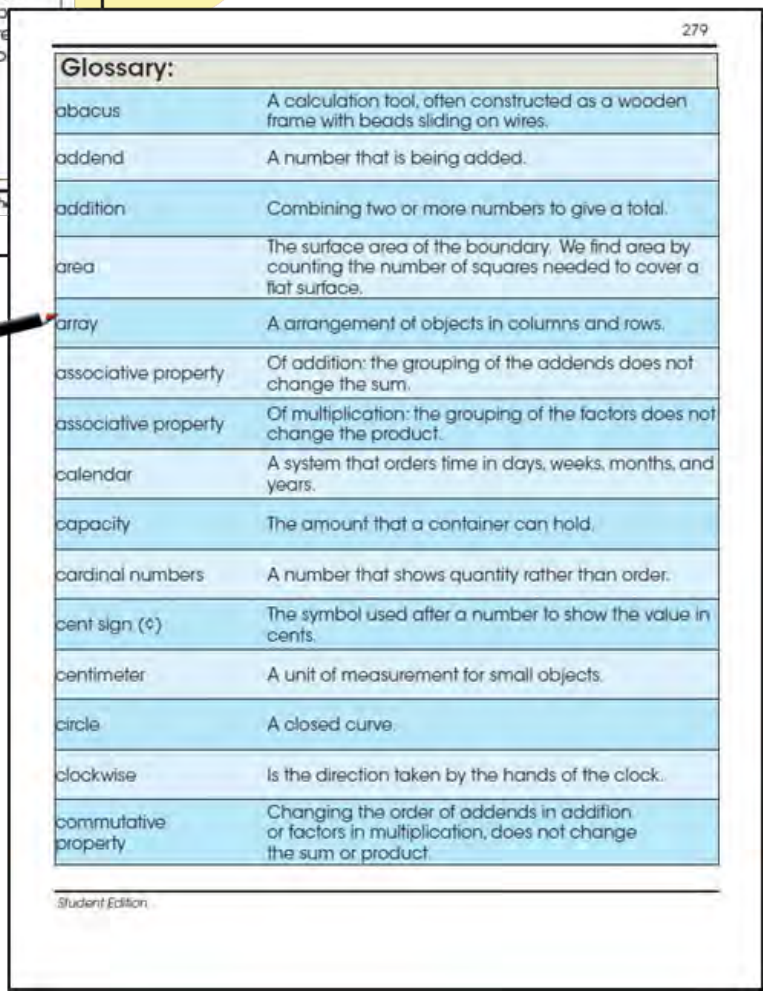
MEASUREMENT AND DATA 5c

Teach

Common misconceptions highlight incorrect conclusions which can be made by students and advises ways to avoid these mistakes.

In The Classroom provides more math focused activities that can be used throughout the school day.

At the end of each strand an In The Home page appears. This page is provided so that families can work together to cover content.



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Glossary:

abacus	A calculation tool, often constructed as a wooden frame with beads sliding on wires.
addend	A number that is being added.
addition	Combining two or more numbers to give a total.
area	The surface area of the boundary. We find area by counting the number of squares needed to cover a flat surface.
array	A arrangement of objects in columns and rows.
associative property	Of addition: the grouping of the addends does not change the sum.
associative property	Of multiplication: the grouping of the factors does not change the product.
calendar	A system that orders time in days, weeks, months, and years.
capacity	The amount that a container can hold.
cardinal numbers	A number that shows quantity rather than order.
cent sign (¢)	The symbol used after a number to show the value in cents.
centimeter	A unit of measurement for small objects.
circle	A closed curve.
clockwise	Is the direction taken by the hands of the clock.
commutative property	Changing the order of addends in addition or factors in multiplication, does not change the sum or product.

Student Edition

A clear glossary helps students to focus on key mathematical terms.

STEAM into Big Ideas Mathematics

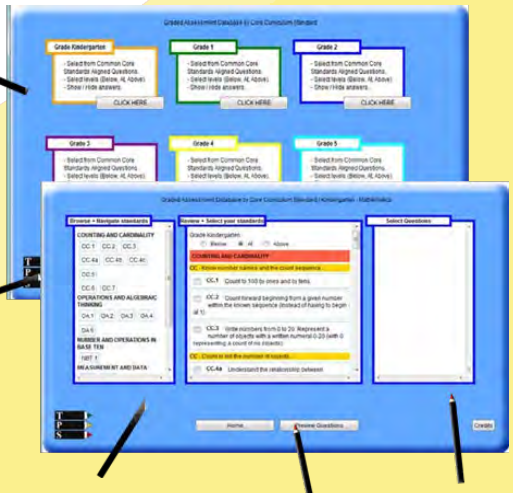
Assessment Database

We encourage benchmark and continual assessment of each student by standard, by student level of ability and by grade. Effective and efficient instruction relies on accurate assessment. The Assessment Database houses over 2,200 assessment questions categorized by grade, standard, and student ability level. For each standard we provide below-grade, at-grade and advanced-grade level questions. Teachers are advised to benchmark students at the earliest opportunity in the first term by using tests we have created or by choosing questions and creating their own tests from the database. During the term we advise teachers to run mini quizzes and/or end of strand tests using our questions. Teachers can print the output as homework and within the license we permit parents to use the database for additional focus for both advanced students and far below grade students. Student performance is tracked within Excel and this data will populate end of term report cards. The questions provided vary between multiple choice and free response. Teachers can be trained how to add, delete or amend questions to suit their requirements. Tests can be personalized for each student, class and/or school.

Open the assessment database. The first screen shows the grades available. Choose the grade to assess.

The product is sold as a site license for one or more schools, or district wide.

On the next screen select which standard you would like to assess on the left hand side.



In the center of the screen you can choose whether you want to use Below, At or Above grade questions. You can also select grades in this box.

Clicking the preview button shows the questions which you have chosen and the form the test will take including lines for the student to fill in their name and class.

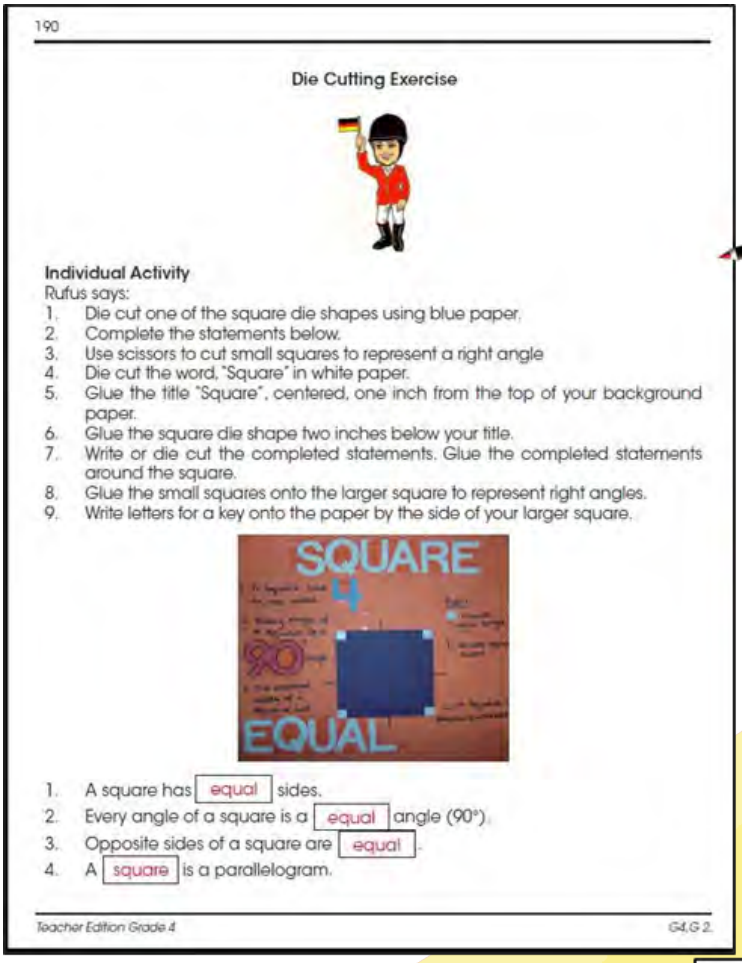
In the right hand box questions are displayed on the standards you have selected. If you would like to remove a question simply uncheck the box.

STEAM into Big Ideas Mathematics

Understanding Math through Art & Activity Guides

Action Based Curriculum is a British company that has focused its energy on providing excellent materials,which are approved by 'nasen'- nationally approved for all learners, including those with disabilities, ELL and special education needs.
Action Based Curriculum helps students to access learning through their fun, action based, and fully inclusive crafting and reader activity book materials.
Each mathematics content standard for K-8 is addressed using a combination of mathematics, literacy and science inquiry-based projects with crafting equipment and reader books.
The teacher/writers have created linked personal, social and health education (PSHE) topics to assist teachers in an integrated subject delivery saving much time. Key topics such as *Anti-bullying, Family, Healthy Me, Community, and Going Green* can be found within the program. Twenty four topics are included.
The arts activities are excellent visual assessments. A die cutting machine is used to allow all students to cut perfect shapes. Each student creates a personalized output. Most materials are reusable.

STEAM into Big Ideas Mathematics



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Die Cutting Exercise

Individual Activity

Rufus says:

1. Die cut one of the square die shapes using blue paper.
2. Complete the statements below.
3. Use scissors to cut small squares to represent a right angle
4. Die cut the word, "Square" in white paper.
5. Glue the title "Square", centered, one inch from the top of your background paper.
6. Glue the square die shape two inches below your title.
7. Write or die cut the completed statements. Glue the completed statements around the square.
8. Glue the small squares onto the larger square to represent right angles.
9. Write letters for a key onto the paper by the side of your larger square.

1. A square has [equal] sides.
2. Every angle of a square is a [equal] angle (90°).
3. Opposite sides of a square are [equal].
4. A [square] is a parallelogram.

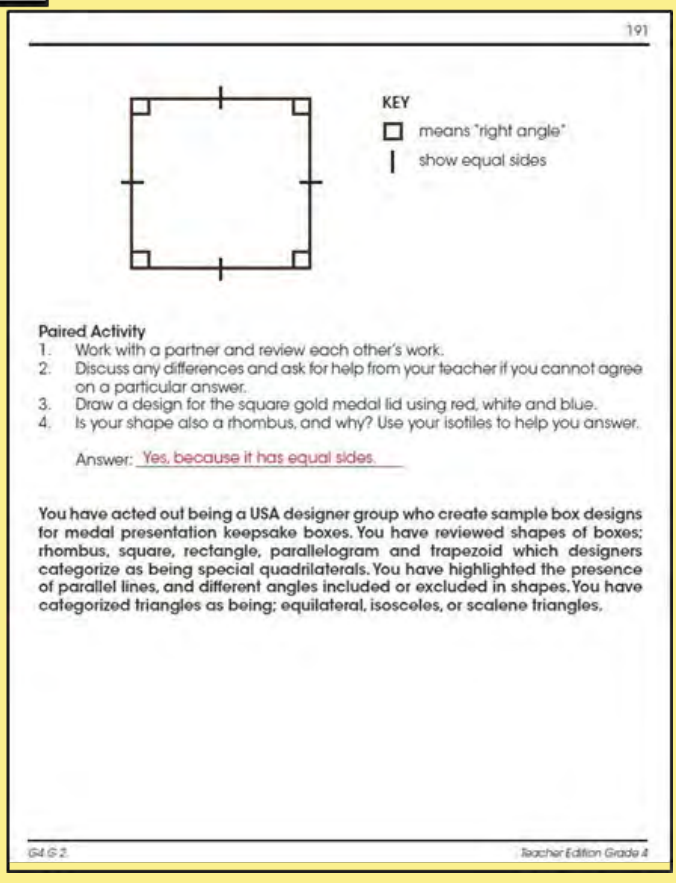
Teacher Edition Grade 4 G4.G.2.

A series of one hour crafting activities aligned exactly to grade appropriate mathematics and covering elements of science and ELA content.

Each crafting exercise is specifically linked to a personal, social and health topic as well as specifically covering the mathematical content.

Role play is included in some of the activities helping to bring the subject alive for all students.

One teacher wrote, "*It not only focused children on the outcome of the activity, but helped them produce work to a very high standard that gave great sensory benefits.*
It was motivational due to the independence it gave them."



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KEY

□ means "right angle"

| show equal sides

Paired Activity

1. Work with a partner and review each other's work.
2. Discuss any differences and ask for help from your teacher if you cannot agree on a particular answer.
3. Draw a design for the square gold medal lid using red, white and blue.
4. Is your shape also a rhombus, and why? Use your isotiles to help you answer.

Answer: Yes, because it has equal sides.

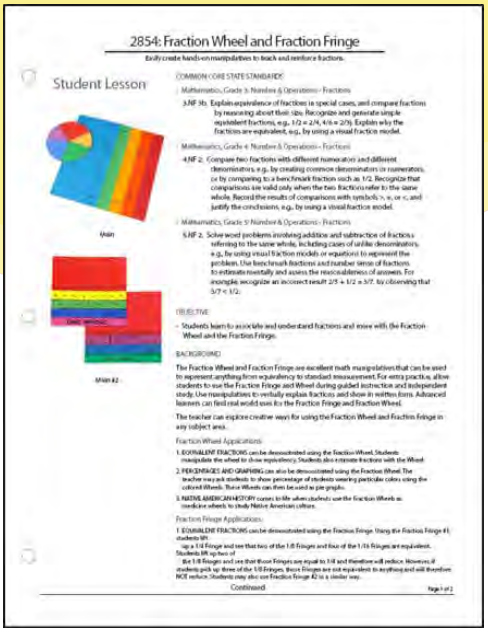
You have acted out being a USA designer group who create sample box designs for medal presentation keepsake boxes. You have reviewed shapes of boxes; rhombus, square, rectangle, parallelogram and trapezoid which designers categorize as being special quadrilaterals. You have highlighted the presence of parallel lines, and different angles included or excluded in shapes. You have categorized triangles as being; equilateral, isosceles, or scalene triangles.

G4.G.2. *Teacher Edition Grade 4*

STEAM into Big Ideas Mathematics

Modeling Math - Video Arts Guide

Ellison Education is a well-known provider of die cutting machine equipment and die shapes and has created, from scratch, a series of lesson plans for teachers to review or reteach students content of each strand K-8.
A matching video for the teacher will hugely assist teachers who may be concerned with art. The die cutting machine does all of the intricate work, and these communications-based lesson plans with videos will greatly aid all struggling students. Often making models will unravel misconceptions for students.
The low text results in English Language Learners being able to master the mathematics content through art projects.
Students can create the colorful Fraction Fringe and Wheel to represent fractional units, find equivalent fractions, compare fractions, solve fraction word problems and represent ratios.
Students can design versatile spirals for any subject area from counting and cardinality and geometric solids. Invite students to make their own spirals for oral reports and presentations.
Use die-cuts for guided instruction, group work, independent practice and assessment.


2854: Fraction Wheel and Fraction Fringe

Student Lesson

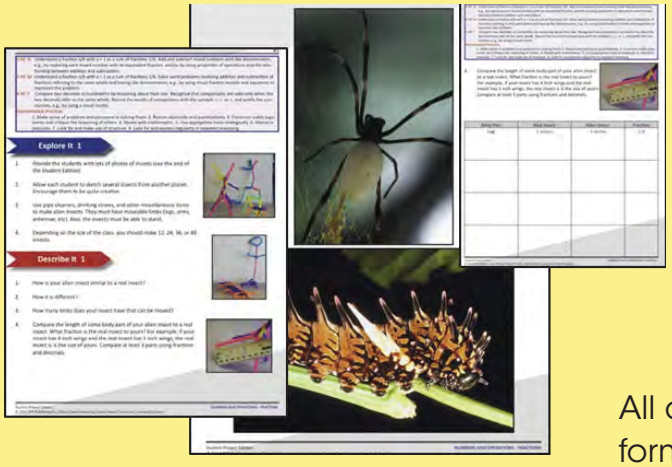
STEAM into Big Ideas Mathematics

STEP 3 - STEAM projects – STEM and Amelia Rose and other activity reader books

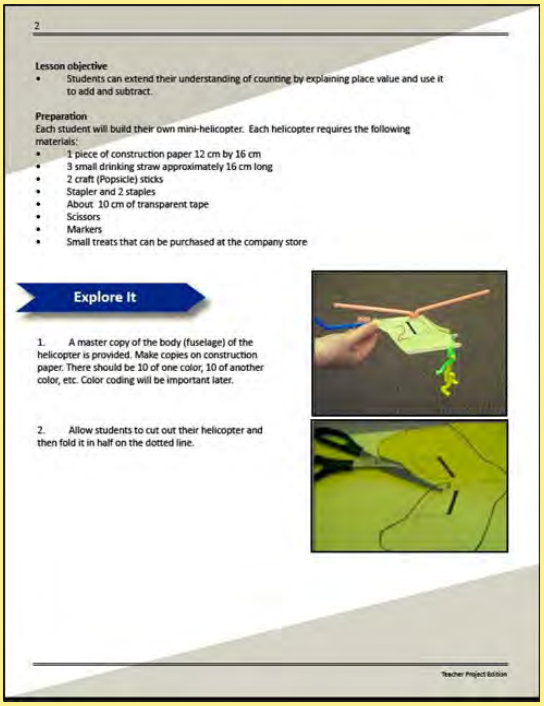
STEM Project Editions

The STEM Project Edition, for grades K through 5, takes mathematics instruction to a whole new level. Students learn Common Core State Standards Mathematics content by using fun projects. They design and build a variety of devices and use mathematics to measure, describe, and predict their operation. STEM projects work well as a visual assessment at the beginning or end of a unit of instruction. They can also be used to tie unrelated concepts together. Mathematical Process Standards are clearly addressed and utilized in every project.

Our STEM project editions provide project-based, career-targeted challenges related to specific standards. For every strand a project is available for teachers and students. Each project is underpinned with literacy. Grade 4, Numbers, Operations, Fractions: students make "alien insects" from craft supplies. They learn how to work with fractions as they compare features of their imaginary alien insects to actual insects. It is important that there are either 12, 24, 36, or 48 total insects so there are plenty of options for fractions. In the second section of the learning cycle, students apply fractions as they analyze a song. Comparing the various sections of the song provides opportunity to use fractions. In the third section, students determine the size of the stage and how it can be divided to provide adequate sections for each dance team. The manipulation of fractions is stressed. The insects, music, and stage all come together when students make a stop-action video.



All activities are written in a three-part learning cycle format that allows students to learn by experiencing the concept, not just hearing about it.



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Lesson objective

- Students can extend their understanding of counting by explaining place value and use it to add and subtract.

Preparation

Each student will build their own mini-helicopter. Each helicopter requires the following materials:

- 1 piece of construction paper 12 cm by 16 cm
- 3 small drinking straw approximately 16 cm long
- 2 craft (Popsicle) sticks
- Stapler and 2 staples
- About 10 cm of transparent tape
- Scissors
- Markers
- Small treats that can be purchased at the company store

Explore It

1. A master copy of the body (fuselage) of the helicopter is provided. Make copies on construction paper. There should be 10 of one color, 10 of another color, etc. Color coding will be important later.

2. Allow students to cut out their helicopter and then fold it in half on the dotted line.

Have No Fear!

"STEM" is a buzz word. However the university writers have been creating STEM lesson plans for two decades.
The instructions are clear and concise.
Teachers can receive excellent professional development at their school or at the university.
Have no fear, we are here to help you deliver STEM activities.

Kindergarten students learn classification and measurement as they race toy cars by similar groupings.

Second graders design and build custom mini-choppers to learn how to add multi-digit numbers.

Fourth grade students learn fractions by designing and building alien insects and making a stop-motion video of them dancing on a stage.

STEAM into Big Ideas Mathematics

Assessment and Universal Access

Continual assessment is paramount. TPS provide visual and tactile, written and verbal assessments.
You will see formative, during and summative assessments.
Four key tools are provided for interactive and written assessments.

- Assessment Generator
- Interactive Software Tool
- Intervention Focus Tutorial
- Interactive Homework System

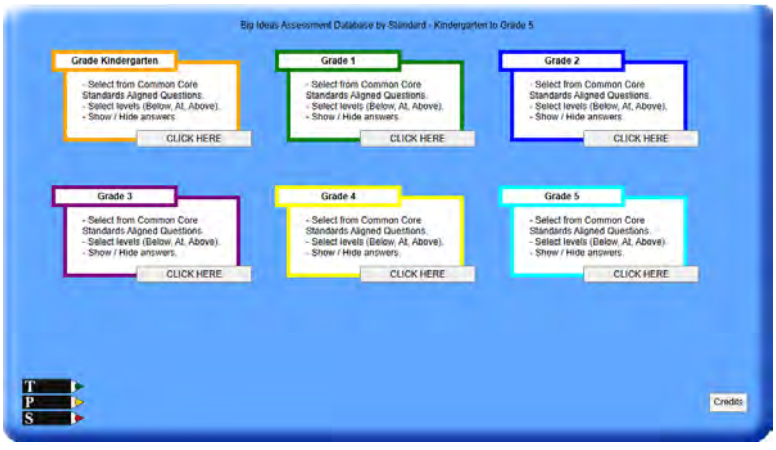
In addition, TPS provide benchmark tests and literacy with mathematics assessment workbooks in the online teacher support library. Universal access is a key consideration throughout the core components and libraries of additional supporting materials are provided.

A road map is provided to assist teachers to navigate the program and address the needs of their diverse students.

STEAM into Big Ideas Mathematics

Access to the Assessment Database

1. Login to see the STEAM into Big Ideas Mathematics Menu and then select Big Ideas - Online Assessment Library.
2. Select the Big Ideas Assessment Database by Standard.
3. Once open, a window will display showing icons each relating to a grade.
4. Select the grade of your choice and a new window will display showing the Standards.
5. Use the button at the top of the center window to select questions at At Grade (Level 2).
6. By using the window on the left you can select a standard and the window in the middle will move to that position.
7. By selecting a specific standard in the center window you will notice that the standard is highlighted in green. This means that it has been selected.
8. To deselect that indicator simply uncheck the box.
9. In the right box towards the top you can switch between multiple choice, open ended or a mix of both styles of question by selecting the appropriate button.
10. In the right box you can see an overview of chosen questions which can be deselected and reselected by using the checkbox.
11. Please check the box associated with the standard(s) you wish to use and then select 'Preview Questions' at the bottom of the window.
12. This will display a window with questions listed.
13. You can edit the front cover page directly in this window to personalize the test.
14. You can also turn the answers on and off and, if turned on, answers will display in red.
15. Use the print button to print the test using your own print manager on the PC.
16. Press the 'Return to Selected Standards' to review and update the chosen questions again, or press the Home button to return to the grade selection screen.



Access to the Interactive Software Tool

Student Access.

1. Login to see the STEAM into Big Ideas Mathematics Menu and then select Big Ideas - Online Assessment Library.
2. Select the Interactive Assessment Tool - Online Tests and Quizzes.
3. Put your username and password in where it says Username and Password and login.
4. Click Test/Assignment Inbox.
5. Choose the test to take and click 'Take Test'.
6. Click the box next to the correct answer, then click 'submit'.
7. You will be told if your answer is right or wrong.
8. When you finish your test, you will be told your score.

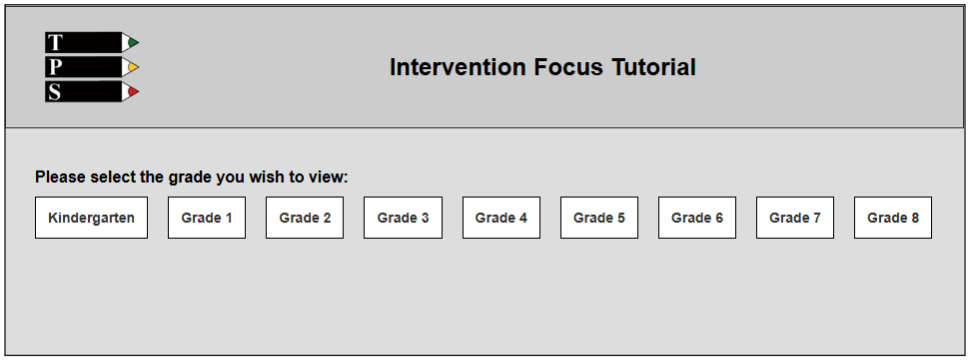
Teacher Access

1. Login to see the STEAM into Big Ideas Mathematics Menu and then select Big Ideas - Online Assessment Library.
2. Select the Interactive Assessment Tool - Online Tests and Quizzes.
3. Put your username and password in where it says Username and Password and login.
4. At this point choose which action to take.
5. Add/edit a user.
   a. Enter or amend name, username, password, e-mail, school and teacher assigned to.
   b. Set user role to Student.
   c. Click add or update user
6. Add/edit a test.
   a. Enter or amend test title and description.
   b. Set type to test.
   c. Select appropriate category from dropdown list.
   d. Add suitable tags for search function.
   e. Click create or update.
7. Add/edit a question.
   a. Select test name from dropdown list.
   b. Select style from dropdown list.
   c. If appropriate enter the alt text for an associated image.
   d. Amend the specimen question appropriately.
   e. Add or amend the specimen answer appropriately.
   f. Click save.
8. Assign Student.
   a. Select test to assign.
   b. Select user(s) that will have the test assigned to.
   c. Enter the number of times the user will attempt the test and each question.
   d. Click add user.

STEAM into Big Ideas Mathematics

Access to the Intervention Focus Tutorial

1. Login to see the STEAM into Big Ideas Mathematics Menu and then select Big Ideas - Online Assessment Library.
2. Select the Big Ideas Intervention Focus Tutorial.
3. A new window will appear asking you to select the grade you wish to view.
4. When required close the window to exit and return to the program grade level menu.
5. Select the grade you wish to view – whichever you select the following instructions will apply.
6. This is the only time grade information appears meaning that the content of the focus tutorial can be used with all and any students and only the teacher knows which grade the content actually relates to. This makes learning for students performing at a lower grade much easier and removes any associated stigma.
7. A second window will appear that displays the mathematics strands and buttons underneath with the standard number.
8. Where more than one standard relates to the presentation the button will show all standard numbers.
9. Select the standard(s) you wish to view by using the appropriate button.
10. The focus tutorial for that standard(s) will display the first page.
11. Each page can be printed if required.
12. Each page has a great deal of white space and far less text to help with the understanding of the math subject. All pages have been extracted from the student textbook, however one page in the textbook will be displayed on two or more pages in the focus tutorials.
13. When you have finished viewing the page press the arrow key to display the next page. You can also use the arrow keys to page back and forth or jump to a specific page using the box at the top right.
14. Continue displaying the pages until as required.
15. To return to the grade level menu select the return to menu at the top left.
16. To return to the grade selection from the grade level menu, select the return to menu at the top left.

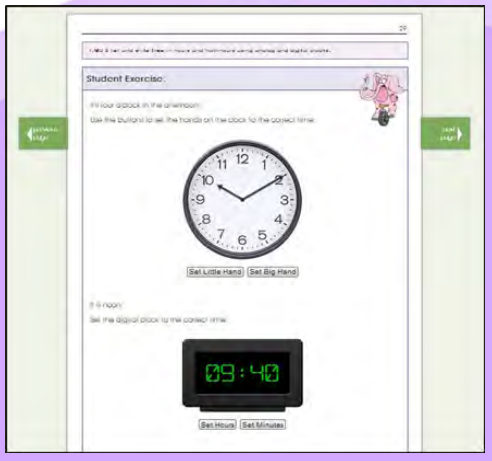


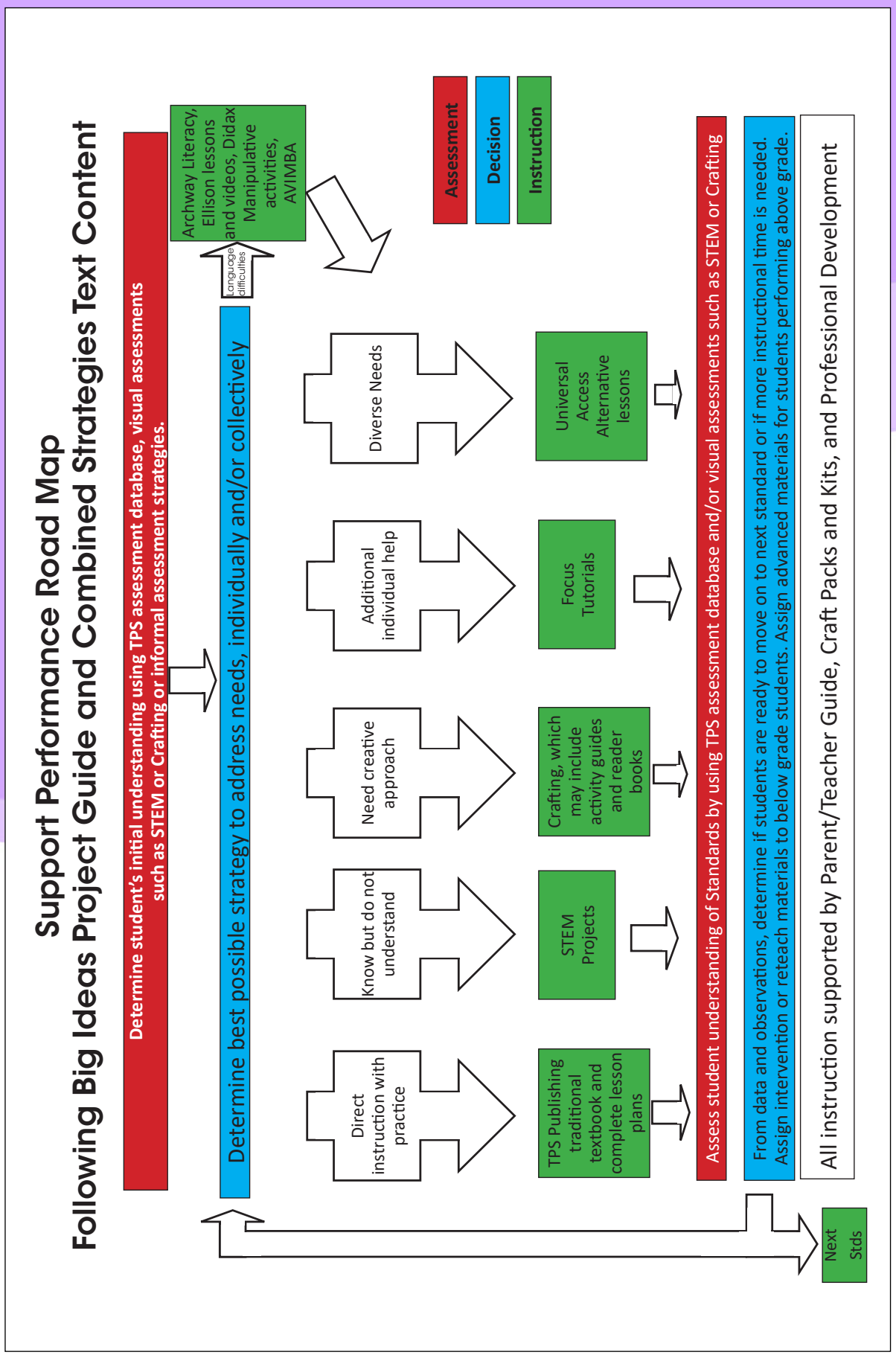
STEAM into Big Ideas Mathematics

Interactive Homework System

TPS Publishing Inc. has developed an interactive homework system, which can be accessed through the web. This means that students can complete their assigned homework activities wherever there is an internet connection; no excuse for lost papers anymore!
The interactive homework system provides activities for grades K-5 mathematics. Each Common Core State Standard is covered, with multiple exercises available for each.
Our system will store the students' results as well as how many attempts it took them to reach the correct answer. This is a useful system, which will enable caregivers and teachers to review student work and progress on a regular basis.

All results from our interactive homework system can also be imported and stored using the Avimba system. This means that all work or attempts at work can be shared between students, parents and teachers.




Support Performance Road Map
Following Big Ideas Project Guide and Combined Strategies Text Content
Determine student's initial understanding using TPS assessment database, visual assessments such as STEM or Crafting or informal assessment strategies.
Determine best possible strategy to address needs, individually and/or collectively
Archway Literacy, Ellison lessons and videos, Didax Manipulative activities, AVIMBA
Language difficulties
Assessment
Decision
Instruction
Diverse Needs
Additional individual help
Need creative approach
Know but do not understand
Direct instruction with practice
Universal Access Alternative lessons
Focus Tutorials
Crafting, which may include activity guides and reader books
STEM Projects
TPS Publishing traditional textbook and complete lesson plans
Assess student understanding of Standards by using TPS assessment database and/or visual assessments such as STEM or Crafting
From data and observations, determine if students are ready to move on to next standard or if more instructional time is needed. Assign intervention or reteach materials to below grade students. Assign advanced materials for students performing above grade.
All instruction supported by Parent/Teacher Guide, Craft Packs and Kits, and Professional Development
Next Stds

STEAM into Big Ideas Mathematics

Reader Books

Exciting reader books have been written appropriate for each grade reading ability. In Grades K-2 the teacher/writers focus on the topic of sport at the Olympics to motivate students to read, write, communicate and exercise. Each book adds to the literacy element of the program engaging students with fun stories. For lower grades the students may read or be read to. Colorful graphics illustrate the books. Within each book are further exercises and links to other PSHE resources.

In grade 3 the writers have created a fictional family. Each chapter covers a personal, social or health education topic.

Each chapter is linked to a likely family event. Educational paper craft packs are linked to each chapter. The craft packs act as visual assessment tools.

Grade 4 students return to the Olympic Games. Geography and social reviews are linked to coverage of grade 4 mathematics. Students learn about countries outside of the U.S.A.

Grade 5 students will review 21st Century families. There are many types of family units. Students learn to understand the variances there can be and work together to accept each unit. The reader book is a gentle introduction to the subject and is optional. The Amelia Rose Explores science books include ELA and math aligned to the Common Core State Standards for Mathematics content too.

Beginning with simple sentences in Kindergarten, the reader books engage students with fun characters and stories. Poetry and drama is incorporated as well as links to the Action Based Curriculum ancillary resources focusing on PSHE subjects such as Anti-bullying and Healthy Eating.

STEAM into Big Ideas Mathematics

Universal Access Reteach Library

TPS (Teacher, Parent, Student) **Publishing Inc.** is focused on providing curriculum-aligned, inclusive-materials which can be used by teachers, parents/caregivers and students. Our materials are created in digital and/or printed format. We created the materials to match the order of the Common Core State Standards and can re-package the content to suit the prefered order of each school district and individual school. As educators we want teachers and caregivers to have the ability to choose a personalized format.

We do provide our proposed year planner for each grade as described within this document. The Literacy and Reteach Library School License provides schools with our Archway literacy program, Grades K-3 Practice Workbooks, grades 4-6 Math with Literacy Review Books, grades 6-8 Math Anxiety Reduction Test Preparation and Review Books, and SMILE (Science, Mathematics, Investigation, Literacy and Experimentation).

In addition to this library we provide for K-3 classes a Universal Access Teacher/Parent book. Within this product we provide hands on activities for diverse student groups with specific instructional support for teachers with ELL, Advanced and At Grade students. Ideal for large diverse populations in inner cities.

For K-2 we provide Teacher Manipulative Conceptual Understanding Activities which are additional to the textbook content. The textbook manipulatives are affordable and often made by students.

Alternative lessons are provided for ELL, Intensive Level, At-grade Level, and Advanced Level students.

STEAM into Big Ideas Mathematics

Universal Access Reteach Library

Often teachers are faced with challenging situations in their classrooms; dozens of students, all with diverse needs. How is one teacher to address all of the specific needs? We have many resources which are web based and housed within our Reteach Library. Reduction of stress is a large factor for ensuring students do not fail tests. By focusing on the math language and pinpointing and resolving misconceptions, students who are borderline can pass their annual tests.

All students are engaged regardless of ability. No student feels left behind and bored by the lesson. ELL students are integrated into the lesson and not segregated. All students cover the key topics in the relevant standards for the grade's mathematics. Within this library we also include many literacy with mathematics exercises that can be set for homework and we provide levels 1 to 3 for math with literacy in middle schools. These materials are written for grades 4,5 and 6, however provide content for reteaching older students still at that reading grade level.

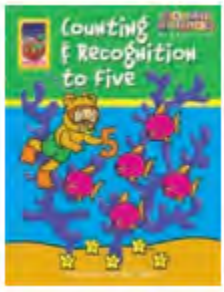
Many students need to use manipulatives throughout Kindergarten to grade 8 to help master content.

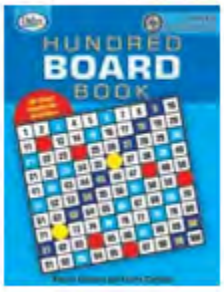
Didax Common Core Class Manipulative Kits, grade Kindergarten to 8 have been designed to work alongside the reteach library materials and intervention focus tutorial.

Each kit provides a variety of activities to connect the use of manipulatives to written methods. Each kit has a Common Core State Standards Aligned guide including suggestions for appropriate use of materials to illustrate content standards.

From grade 1 each book detailing activities to cover Common Core State Standards content also includes virtual manipulatives to use on interactive white boards.

The kits are very important in every grade. The Didax Common Core Class Manipulative Kit, grade Kindergarten Includes Early Math Learning Centers Book with CD, Unifix® Ten Frame Trains, Counting and Sorting Set, Counting and Recognition to Five Book, Addition to Five book, Ten Frame Towers Set, 3D Attribute Solids, Unifix Height Chart, Attribute Blocks,





STEAM into Big Ideas Mathematics

Didax Manipulative Kits

Didax Common Core Class Manipulative Kit, Grade 1

Includes Write-and-Wipe Ten Frame Mats, Blank Number Lines, Unifix Cubes, Unifix Ten Frame Trains, Hundreds Boards, Hundred Board Book, Magnetic Number Lines, Write On/ Wipe Off Clock Faces, Color Counters, Pattern Blocks, Pattern Block Book, Beginner Fraction Circles and Squares Math Balance, Working with the Math Balance.

Didax Common Core Class Manipulative Kit, Grade 2

Includes Place Value Safari game, Math Balance, Working with the Math Balance, Unifix Graphing Base, Tape Measures, Number Structure Set, Shape Tracer Set, Geoboards, Time Sudoku Game, Dice Activities for Money, Money Sudoku, Unifix Cubes, Magnetic Number Lines.

Didax Common Core Class Manipulative Kit, Grade 3

Includes Blank Number Lines, Number Structure Set, Flexitable Multiplication Grid, Magnetic Fraction Tiles, Elapsed Time Number Lines, Color Tiles, Geoboards, Plastic Polygons, Unifix Cubes, Common Core Collaborative Cards for Base Ten, Common Core Collaborative Cards for Fractions, Common Core Collaborative Cards for Algebraic Thinking.

Didax Common Core Class Manipulative Kit, Grade 4

Includes Product Parfait Game, Fraction Squares, Magnetic Number Lines, Geostix, Dice Activities for Multiplication book, Common Core Collaborative Cards for Base Ten, Common Core Collaborative Cards for Fractions, Common Core Collaborative Cards for Algebraic Thinking.

Didax Common Core Class Manipulative Kit, Grade 5

Includes Unifix Equation Connections, Dry Erase Graphing Boards, Common Core Collaborative Cards for Base Ten, Common Core Collaborative Cards for Fractions, Common Core Collaborative Cards for Algebraic Thinking, Interlocking Fraction Circles, Interlocking Fraction Circles Teachers Guide, Deluxe Fraction Circles, Deluxe Fraction Squares, Omnifix Cubes, 3D Problem Solving with Omnifix Cubes book, Plastic Polygons.

Didax Common Core Class Manipulative Kit, Grades 6–8

Provides a variety of activities to connect the use of manipulatives to written methods. The guide has suggestions for appropriate use of materials to illustrate content standards. Books include a CD with virtual manipulatives for IWB. Includes Graphing Dry Erase Boards, Dry Erase Coordinate Boards, Interlocking Base Ten, Working With Algebra Tiles Kit, Geofix Geometry Set, Working with the Geoboard book, Geoboards.

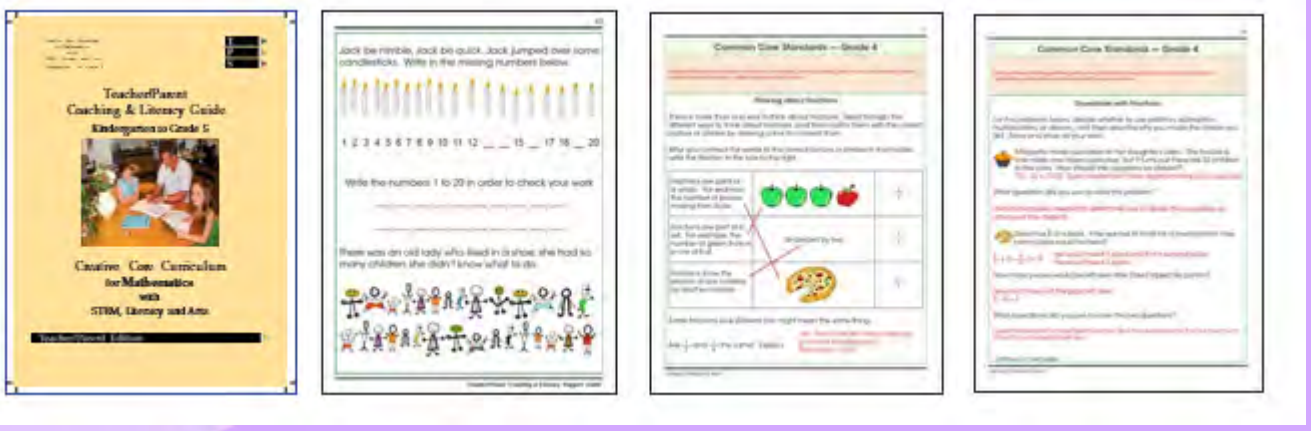
STEAM into Big Ideas Mathematics

Teacher/Parent Guide

TPS (teacher, parent, student) provides parent/caregiver-ready materials including a series of mathematics with literacy activities. These activities may be assigned by teachers to set as homework for students, attempted alone or with a parent/guardian. The pages are to be freely copied as a teacher resource and appear in the teacher/caregiver handbook. The performance of each student on each task can be recorded and stored in AVIMBA. The results are synchronized to the database and can be transfered to report cards. These data can then be used as comparisons, and to show student progress.

We all know the importance of good cooperation and support from home. The program's Parent Guide provides information and ideas for how caregivers can work with the teachers to enhance the education of their child.

The guide has three key sections; Our philosophy for teaching mathematics, the Common Core State Standards for Mathematics, Literacy and Coaching by grade. The coaching guide is a great tool to unravel misconceptions and/or to make available for substitute teachers. The literacy worksheets within the Parent Guide are provided on the teacher blackline master. Caregivers can be confident that by completing the worksheets they are assisting their children in mastering the mathematics content in each year.



Blackline Master

The usual master sheets are included for your use such as a 100 chart, a number line, shapes, tables. We have also added a lotto game. In addition we provide the student textbook vocabulary and At Home pages together with the literacy worksheets, which are by standard and provide useful homework or further class assessment materials.

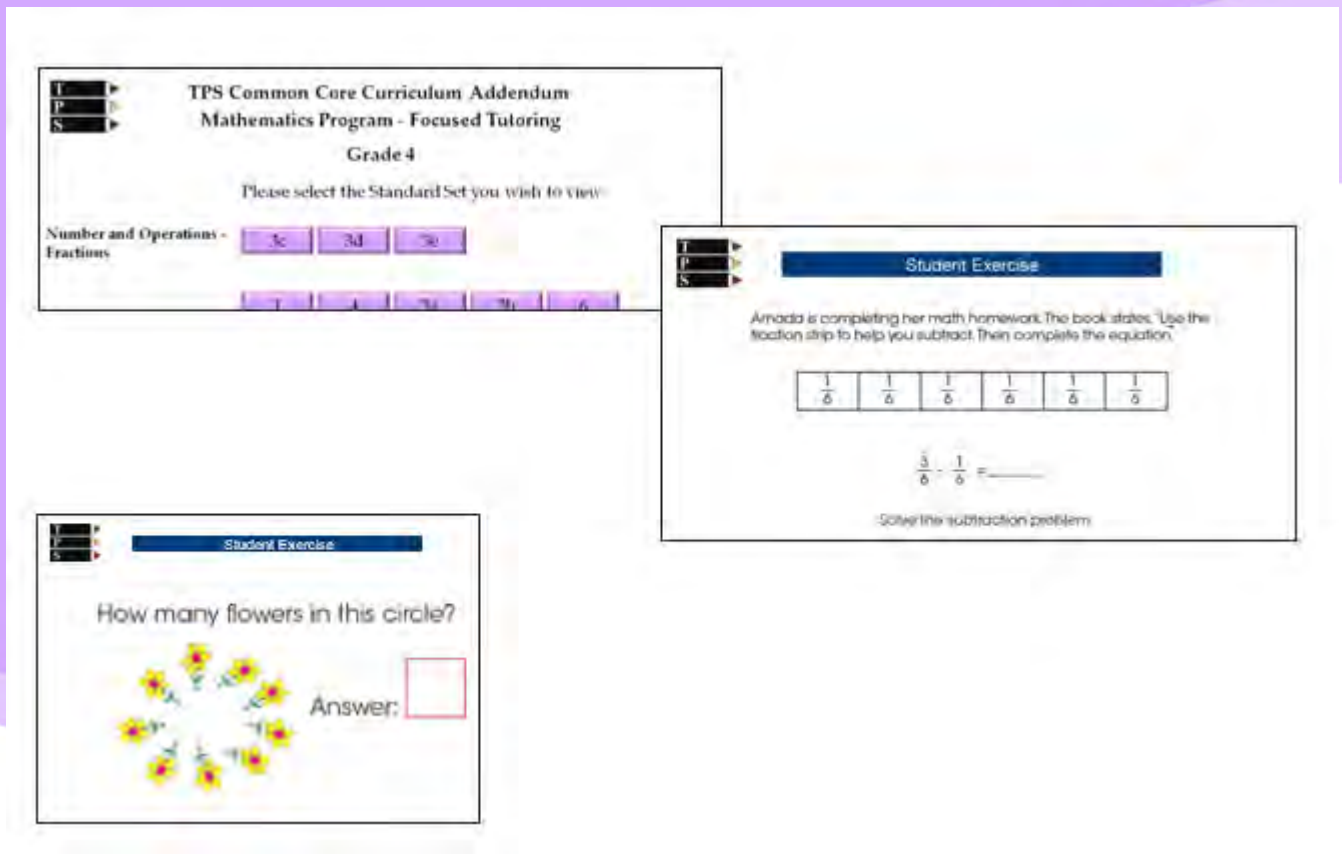
STEAM into Big Ideas Mathematics

Focus Tutorial and K-5 Workbooks

Although our lesson plans are inclusive, there will still be students who struggle with mathematics. Often the cause is low English language skill levels. The STEAM approach will work well for these students. We also provide focus tutorials, by standard, using PowerPoint to assist teachers and/or caregivers who wish to provide one-to-one or small group reviews.

The basic concepts are all covered within this presentation and adults can work with students at the pace of each student.

A class, school or district license is available.



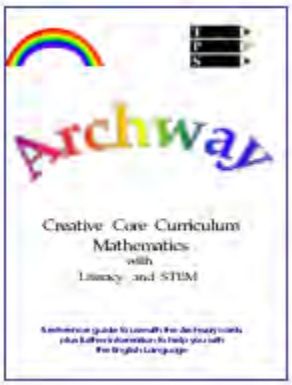
The focus tutorial is a web based presentation covering mathematics content in each grade. It is recommended for use by students who really struggle with traditional textbook learning, either due to low English Language skills or other special educational needs. It can also be useful to students with gaps in learning who are At Grade.

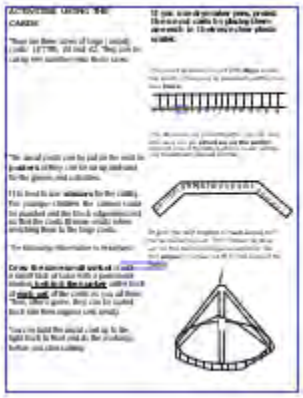
We provide web based interactive workbooks K-5. Review exercises by standard provide aligned resources to use before examinations in conjunction with the Assessment Database questions. The workbook can be used in the classroom and/or at home. The product can be purchased in print format.

STEAM into Big Ideas Mathematics

Archway

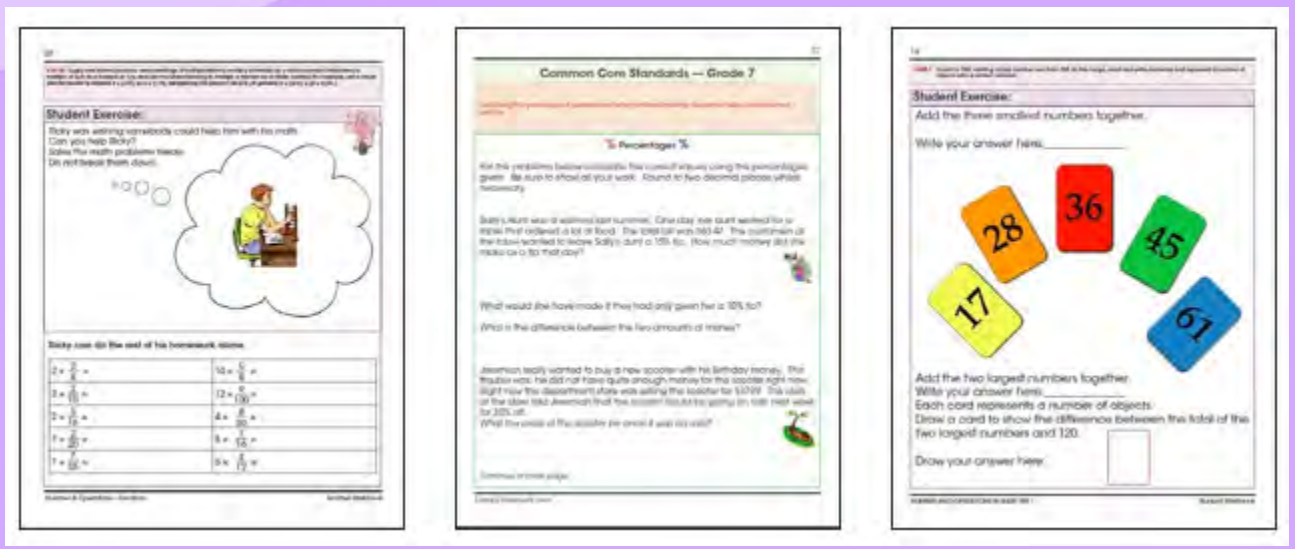
One of our teacher/writers, Lynda Lunn, has made it her mission to help students to be able to read and write. We provide this mini program to assist all of the ELL students in your classes. By using the focus tutorial, Ellison Education video content, art projects and Archway; ELL students progress more quickly.





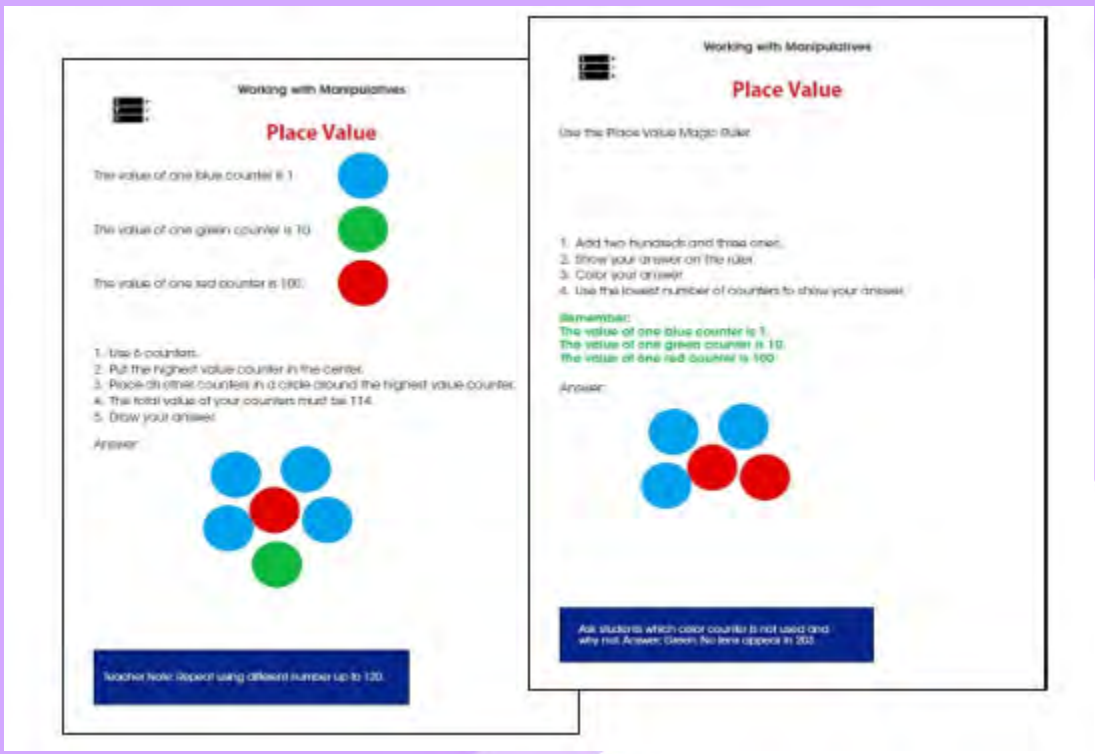
Workbooks

We provide workbooks with formative and summative questions. We provide mathematics with literacy exercises and math anxiety reduction activities for test preparation.



STEAM into Big Ideas Mathematics

For K-2 we provide manipulative conceptual understanding activities and focus on numbers 0-20 using a variety of approaches including poetry with manipulatives.



Student Facing Materials

For the following components there is a student edition. The content is wrapped within the teacher edition.

- Textbook
- Math workbooks (math with literacy, math anxiety reduction test preparation)
- Math with Literacy written exercises
- STEM projects
- STEAM projects
- Reader books
- Online Interactive Homework

STEAM into Big Ideas Mathematics

AB Curriculum - STEAM

The A In STEAM

To put the A into STEM and create STEAM, TPS and AB Curriculum adds arts and craft activities in which students focus mathematical skills within an arts project. For example, in the beginning of *Understanding Shapes* students create insect and other animal shapes with use of fractions.

All of the projects included within our program are nasen-approved. This approval means that the National Association for Special Educational Needs has reviewed these activities and the basis upon which they were built. The projects are inclusive and appropriate for very diverse populations. Projects can be completed with no stigma by all students. Each project requires communication and is linked to a reader book, which is provided for each grade. The partners create materials encompassing our belief that 'Every parent matters' and 'Every child matters'. The program provides dozens of arts and crafts projects that are varied and interesting and can also be used for lunch, after school or summer programs.

Activity Guide Topics are:

I Love My Life, Family, Healthy Me, Baby Science parts 1-4, Community, Enterprise, Magic Math, Word Play, Antibullying, Humans and Other Animals, Life Processes, Going Green, Safety on the Internet, I Love my Pet, Olympic Games, My Family, Transitions Pre school to Elementary, Transitions Elementary to Middle, Stay Safe, Going for Goals, Emotions, Handling Data, Food, Nature, Wild Animals, Transport, Understanding Shape, Farm Animals.

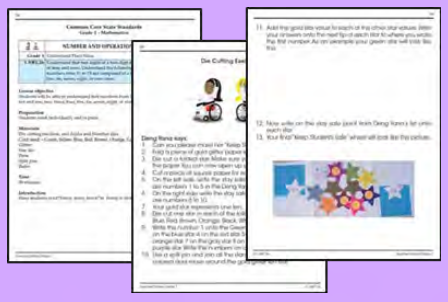
Educational Paper Craft Packs are:

All About Me, Family Tree, Ancient Egypt, Back to School, Careers, Communication, Down on the Farm, Ecosystems, Knight in Shining Armor, Music, My Home, My Journey, My Planet, Pretty as a Princess, School Days, Solar System, Sports, Transportation, Wheels in Motion, Birthday, Friends, I love my Pet, My Vacation, Sleepover.

Each project is precisely aligned to each Common Core State Standard and provides materials for teachers to cover personal, social and health topics as options.

STEAM into Big Ideas Mathematics

Each grade is thematic and for grade 1 our arts and crafts component focuses on all grade 1 Mathematics Common Core State Standards, and for the cross curricular element has children reading, communicating and learning how to compare humans with other animals.



Within chosen projects you will find other personal, social and health topics included such as *Stay Safe*.

We provide these materials to align to SMARTER Balanced Assessment Consortium in grades 3 through 8.

K-5 Project - Students and Parents/Caregivers - We created Magic Math to help students understand some key areas of mathematics using an arts and craft approach. Fraction facts are included.

Students really enjoy craft activities, especially when using a die cutting machine. If they are tied directly to required mathematics concepts and reading, even better. Our Activity Guides and Educational Paper Craft Packs provide exciting projects for both teachers and students. Imagine on the first day of a new school year starting with *All about me*. In about two hours all students will be communicating and working as a team.

STEAM into Big Ideas Mathematics

Within Grade Dependencies

TPS has made sure that we focus teachers on key topic areas early in the year. Examples of Major Within-Grade Dependencies:

Students must begin work with multiplication and division (3.OA) at or near the very start of the year to allow time for understanding and fluency to develop. Note that area models for products are an important part of this process (3.MD.7). Hence, work on concepts of area (3.MD.5–6) should likely begin at or near the start of the year as well.

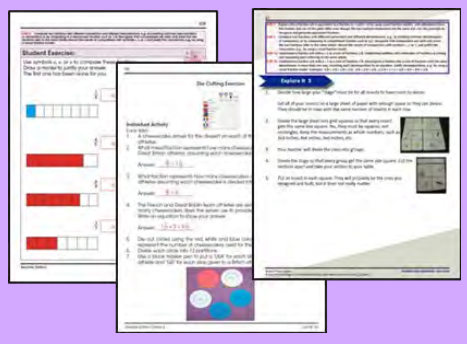
The Yearly Planner for materials from TPS Publishing aligns with the current recommendations of leading organizations in mathematics education for the scope and sequence of topics. As seen below, in TPS, 3.OA begins in Week 2, and in full progress in Weeks 5 & 6. About the same time 3.MD 5 & 3.MD 6 begin in Weeks 8 & 10.

As more information from Smarter Balanced Consortium and/or PARCC becomes available, we can easily adjust our sequence to reflect best evidence-based practices.

Focus and Connection Standards to Practices

The TPS program asks for some standards to get more time, depth, and student consideration; and for connections between mathematics practices and standards. In our more complex project editions and crafting editions we provide ample opportunities to make connections. There are salient places within the traditional, the crafting, and the Project Editions for student decisions to be made with lots of ambiguous problems to be solved. It is not so much that the opportunities to connect to Mathematical Practices increase in the same manner from traditional, to crafting, to Project Editions, so much as the non-stated need and the forcing of students and teachers to make more and more mathematical practices decisions increases. The Mathematical Practices can be emphasized in any lesson, but they are harder to avoid in the crafting and Project Editions.

In terms of in-depth focus, when complexity means depth, crafting and Project Editions have significant complexity involved in them. When depth means time and effort spent on skills and knowledge, then the traditional lessons also show depth.



STEAM into Big Ideas Mathematics

TPS also provide TK programs.

- STEAM Themes – a full STEAM program covering the requirements of TK
- STEAM into TK – A California aligned TK program
- Live and Learn – An arts focused TK program

You can view the three options by using the following link and access information.

Please follow this URL and, when prompted, enter the username and password below.

https://tpspublishing.com/my-resources/

STEAM into TK Program (Early Years)
Username - STEAMKEY
Password – steamkey

STEAM Themes Program
Username - STEAMKST
Password – steamkst

Note: These are case sensitive.

Live & Learn Program
Username - STEAMKLL
Password – steamkll

Follow the links above and when prompted enter the User ID and Password. You will then be asked to agree the terms of the review before being presented with the menu. Each subject and grade has its own sub-menu.

Transitional Kindergarten

TPS has created their TK STEAM Mathematics program with a key aim of providing students with an excellent introduction to the topics they will need to complete, aligned to Common Core standards, in Kindergarten.

As a STEAM program provider TPS has also ensured that the program provides:

1. Communication and Language Development
2. Physical Development
3. Personal and Emotional Development in Society
4. Behavorial Development
5. Literacy Development
6. Global Knowledge
7. Imagination, Arts and Design Development
8. Formative and Summative Assessment

STEAM into Big Ideas Mathematics

A key strategy of the program is to deliver Science, Technology, Engineering, Arts and Mathematics learning within the same lessons and underpin all content with a strategy of teaching these subjects together with literacy.

TPS is an adopted Mathematics K-8 Program supplier; Creative Core Curriculum for Mathematics, with STEM, Literacy and Arts, K-8.

This program has been adopted in California, Florida, North Carolina, and Georgia States. The TK program has been developed to provide transitional kindergarten teachers and/or caregivers with content that will gently guide students into Kindergarten.

You will see that some strategies hail from England. The Early Years approach to learning has led to many students arriving in Kindergarten with far improved reading and writing skills. The country has a high number of English Language Learners and special education students. To ensure all lesson plans are inclusive STEAM projects have been created; their visual and tactile content is exciting for all students and provides all students with opportunities to master key concepts.

The program has focused on the following key areas of development.

Mathematics

TPS wanted to provide materials so that each student would have the opportunity to develop and maximise their skills in mathematics. TPS considered the requirements of Kindergarten Common Core Standards and our STEAM program has heavy emphasis for knowing number names, the counting sequence and counting to tell the number of objects. For Measurement and Data TPS has included activities for students to describe and compare measurable attributes and classify objects, and count the number of objects in categories. Students learn about the rainbow colors and this assists in sorting objects. Students can recite the days of the week and the months of the year.

Identification of, and being able to describe common shapes is the main content of our TK Geometry section.

Throughout the mathematical content you will see that TPS has embedded the mathematical practice content that is used in Kindergarten. The TPS STEAM TK program demands students problem solve and work, with determination and perseverance, both individually and/or in small groups, to resolution. The students have to reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others. This is especially true when working in small group projects. The emphasis on modeling is high as visual and tactile learning is fundamental to our program. The use of the Ellison die cutting machine provides a level playing ground for all students and is core to TK learning. The time for cutting is low as you can cut five die shapes at a time. With adult supervision, the students love to use the machine and it assists their gross and fine motorskills.

A key area of learning that is often not given enough time is for students to learn about the tools they need to use and how and why they must use those tools. TPS has created lessons to encourage knowledge of using appropriate tools. Within our lives precision is a requirement for most careers. TPS has ensured development of precision skills within each of

the projects. Each project demands that students look for structure and repeated reasoning, and understand how to make use of it.

TPS teacher/writers have included some exposure to understanding and using numbers, calculating simple addition and subtraction problems; and allowing students to determine spaces, and measurement.

Here are some overview comments about key mathematics areas.

Counting and Cardinality

- TK.CC.3 Write numbers from 0-30. Students count reliably with numbers from 0 to 30, and can place them in order.
- TK.CC.5 Given a number from 1-20, students count out that many objects.

Measurement and Data

- TK.MD.4.a. Recite the days of the week and know the months of the year.
- TK.MD.3 Classify objects into given categories.

Geometry

- TK.G.2 Correctly names shapes regardless of their orientation or overall size.

Literacy Development

- The TPS TK Program includes Archway, a program created to help EL students and their families to learn to speak and write English. For all students in TK there is a major focus encouraging students to link sounds and letters, to learn lower and upper case letters and to begin to read and write letters. The program includes activity reading materials and activities include acting out, singing, poetry and assessment pieces to encourage students to love literacy.
- **Reading**: TPS would like students, in Kindergarten, to read and understand simple sentences. In TK, TPS includes materials to help study lower case and upper case letters. Listening skills are developed so that students can demonstrate understanding when talking with others about what they have heard.
- **Writing**: TPS wants students in TK or in Kindergarten to be able to write words in ways which match their spoken sounds and to be able to write simple sentences. TPS focuses writing on tracing letters and numbers in TK.

The following standards are used within the program.

- **2.2** Identify all uppercase and lowercase letters.
- **3.1.a** Demonstrate basic knowledge of one-to-one letter sound correspondences by producing the primary sound for each consonant.
- **3.1.b** Associate the short sounds with common spellings (graphemes) for the five major vowels.
- **3.b** Read common high-frequency words by sight (e.g., the of, to, you she, my, is, are, do, does).

- **4.4** Recall details in a familiar story including questioning, summarizing, predicting, and ordering of sequence.
- **1.7** Describe people, places, things (e.g., size, color, shape), locations, and actions
- **2.2** Understand and use accepted words for categories of objects encountered in everyday life.
- **1.5** Engage in copying letters and words in print

Communication and Language

- Communication and language development involves giving students opportunities to experience a rich language environment. The TPS projects provide opportunities for individual, paired and small group problem solving within which students will listen, understand and contribute. The program also seeks to develop their confidence and skills in expressing themselves and has included assessments where teachers and parents can consider the level of comprehension being achieved by each student. The program guides students to speak and listen in a range of situations.
- Listening and attention: The reader activity books are used to ensure that students listen attentively. They listen to the stories, and can accurately anticipate key events. Students can respond to what is being said and make relevant comments, ask quality questions and take appropriate actions. Within the projects the process ensures that students give their attention to what their team members and/or teacher say, and respond appropriately. Opportunities are provided for students to multi task and can respond while engaged in another activity.
- Understanding and following instruction: Both as teachers and parents/caregivers we want students to follow instructions involving several ideas or actions. Throughout the program we encourage students to ask and/or answer the 'how' and 'why' questions about many experiences, some their own, some from listening to others, and in response to stories or events.
- Speaking: it is important, from TK, to ensure that students can express themselves effectively, and can share content; they need to demonstrate awareness of listeners' needs. Within the projects and reader activities TPS requires that students use past, present and future forms accurately when talking about events that have happened or are to happen in the future. Plenty of opportunities are provided for the students to develop their own explanations and using Act It Out, speaking or completing art works, students demonstrate that they can connect ideas to events.

Health and Body Development

- The TPS TK program was developed to ensure provision for covering physical development and a keen awareness of the students' body and self care. From this early stage TPS wants to support parents/caregivers in helping the students to know about their own bodies and how they can be healthy. TPS has incorporated this into their mathematics

program and has plenty of activities within which students are active and interactive. TPS wants students to develop their co-ordination, control, and movement. Healthy Me, The Food Plate, Olympic exercises, and other projects ensure that students understand the importance of choosing healthy foods and exercise.

- **Movement in space**: The Olympic exercises are especially good for students to learn, practice and demonstrate their control and co-ordination in varying spaces. Students can make small or large movements and are confident in judging the space around them. As with mathematical tools, TPS offers advice and assistance to teachers to help students understand the equipment and tools effectively, including pencils for writing through to staying safe on a balance bar.
- **Healthy Lifestyle**: There are many references to health within the program. In Humans and other Animals, students can study the skeleton and learn about the parts of their body. The Olympic materials were built to provide information about the importance for good health, of physical exercise, and a healthy diet, and talk about ways to keep healthy. Stay Safe is a classroom project that can be used in class to help students know how to stay safe. Basic hygiene and personal needs are covered.

Personal and Emotional Development in Society

- The TPS TK STEAM program helps every student develop a positive sense of themselves, and to appreciate others. The projects are communications based and team building underpins each project allowing students to form positive relationships, be respectful to those around them and to develop and improve their social skills. Behavior and knowing that each person has feelings, including themselves and being able to manage those feelings and to understand what is acceptable social behaviour is important and will result in high self confidence. TPS provides Emotions and Captain Confidence projects. Within these projects students work to develop their confidence, try new activities, and speak and/or act out feelings. Within the projects they have to make choices, some individual and some as part of a team.
- The program includes many activities where each student will talk about themselves and their families. As they work together they will consider and learn about the accepted behavior in social events, and they will adapt to be accepted in society.
- All of the materials have been designed to ensure cooperation and to help teachers and parents/caregivers encourage respect. Students are asked to take turns, to listen to others and to respect to those around them. The students form positive relationships and by the end of TK can communicate well.

Global Knowledge

- The TPS TK program contains career targeted content and sets out to ensure students are exposed to the physical world around them, and can understand how they are part of that world. TPS wants students to have a sense of community; local, country and global. The projects provide opportunities to explore and to observe plants, animals and

countries around the world. Students think about how people from different locations live and the varying environments. TPS uses a gentle approach to introducing engineering and technology and concepts.

- Humans and their Community: It is important that students understand that people can be different; languages, traditions and beliefs.
- Environments: students need to understand that people and other animals live in different types of environments and will observe how change affects us all. Students will study similarities and differences between animals, plants and the world around them.
- Technology: TPS wants students to develop their knowledge of technology and be able to understand and use it as they reach Kindergarten. In TK an adult assisted environment usually exists in our classrooms. The TPS materials provide teacher notes with how they may use technology with TK students so that they can recognize some of the more common tools used, and that there is a range of technology used in places such as homes and schools.

Imagination, Arts and Design Development

- TK students usually have the least inhibitions and TPS materials include use of their vivid imaginations within acting, singing, role play, and poetry activities. Students believe they are playing but are exploring and using a wide range of instruments, choosing tools, and using their minds to create results that demonstrate their thoughts, ideas and feelings. The art work ensures they form basic skills in choosing colors, and understand different textures.
- The core characteristics of our STEAM program are:
  1. cross curricula learning within which students can explore at play
  2. hands on inquiry based learning - students work individually, in pairs, or small groups and are focussed on problem solving and achieve outputs that show conceptual understanding
  3. critical thinking and creativity - students develop their own strategies using critical thinking and creativity.

Science

TPS wants to provide a quality inquiry based Science foundation to each student in TK. Below is a table of the Science Standards.

Summary Table of Science Foundations

Scientific Inquiry

- **1.0** Observation and Investigation 1.1
- **2.0** Documentation and Communication 2.1

Physical Sciences

- **1.0** Properties and Characteristics of Nonliving Objects and Materials

STEAM into Big Ideas Mathematics

- **2.0** Changes in Nonliving Objects and Materials

Life Sciences

- **1.0** Properties and Characteristics of Living Things
- **2.0** Changes in Living Things 2.1

Earth Sciences

- **1.0** Properties and Characteristics of Earth Materials and Objects
- **2.0** Changes in the Earth 2.1

Imagination, Arts and Design Development

Formative, ongoing and summative assessment is core to any program.

Teachers, parents/caregivers and students need to understand how each student is progressing. For each student, we need to then plan how the next steps can be taken and will lead to mastery.

The benchmark tests provide formative, ongoing and summative data.

The STEAM projects provide ongoing assessment and summative data as students are observed in a very visual and tactile way. This allows the teacher/parent/caregiver to reflect, and to then shape learning experiences for each child reflecting those observations.

Teachers and caregivers can further plan the materials to use through communications with pictorial/modeled evidence. The paper/online assessments are user friendly. TPS has aligned the assessments to mirror the style of the future grade 3 Smarter Balance and PARCC testing. However, the time required for each assessment is kept short so as not to detract from the more visual assessments that can be gained from the project work.

It is important that intervention work is carried out in TK and help for a student is provided as early as possible.

The adopted K-8 programs include tools for intervention, which are nasen approved. For TK we can use the Didax manipulatives lesson plans in volume 4 and the starter kits 1 and 2, together with Archway to assist struggling students.

By the end of the year

Transitional Kindergarten mathematics is about providing a firm base in all core subjects to children and at the same time, provides each student with the confidence to act individually, as a team and family member.

Transitional Kindergarten Scope and Sequence

Using the STEAM content provided by TPS, teachers and caregivers can assist the students and excite them about core subject content.

The program content is activity and inquiry based and has great conceptual understanding coverage.

STEAM into Big Ideas Mathematics

Language is a key focus of the content across all activities.

Students are trained to be able to observe, speak and act out their thoughts. Communications are vital for success in their next adventure of Kindergarten.

TPS, for mathematics, focused initially on recognition and understanding of numbers up to 30, starting with recognition of numbers up to 5. The Didax manipulatives online lesson plans and Number Poetry are key products to provide this content. The STEM Helicopter project provides exciting, visual and tactile representation of numbers and practice is provided within the homework and activity books.

Students are provided with a variety of manipulatives activities in order to learn how to place numbers in order and to count objects reliably.

The arts projects provide both individual and team practice and assessment opportunities. Each child or team has an output and, using the Ellison Die cutting equipment, the students have a level playing field making the lesson plan content, inclusive. The arts projects are approved by nasen.

Students learn how, when given a number from 1-20 to count out that many objects.

The themed reader activity books and Amelia Rose series assess all subjects as we move through the school year.

TPS stands for teachers, parents and students and we felt it important to have a focus on family, community and the world around us.

Under Measurement and Data, we start by having students learn the days of the week and knowing the months of the year. The reader activity book, Elizabeth Claire and her Magic Carpet cover these topics and provides activities for students. Teaching literacy with numeracy is a key strategy within our STEAM program.

Students then learn to sort and classify objects and recognize colors. Students learn to name common shapes and find examples of them in everyday life irrespective of their size or orientation.

To assess student learning TPS does provides both written and verbal assessments.

TPS has created a TK-Grade 8 toolkit and teachers can make choices for their preferred order of teaching and components to use. However, TPS provide a lesson plan list for TK and specific K-G8 pacing plans to show the TPS proposed plan for scope and sequence.

Please see the relevant grade level attachment.

TPS will work with any school to review and revise documents should teachers wish to reorder the sequence.

STEAM into Big Ideas Mathematics

For example, as educators, we know that some teachers in specific grades prefer to teach content in a different domain order to other grade teachers.

The TPS approach is to teach to the emphases standards first, using the supporting cluster content. All content must be covered within the school year and we use our STEM, traditional and arts content to fit all required content into the school year.

TPS K-8 Emphases Scope and Sequence

TPS has worked with school pilots to create the current pacing plans.

For each grade we have merged the content from the most popular components used from the TPS toolkit. TPS then ordered and calculated the lesson time required and aligned the order to major emphases standards.

Please refer to the detailed pacing plans attached.

TPS created the format for the pacing plans in conjunction with teachers.

TPS wanted a simple approach to ensure teachers had an at a glance summary.

The standard reference and wording is presented so that the teacher is always informed about the content being delivered.

Next we provide a summary with short codes to list out the components to be used. The components list is in the order of teaching and also has the page numbers shown.

The lesson plan totals then show under the relevant header of either Major, Supporting or Additional Cluster and a grand total of lesson time for that standard is then visible.

The total lesson time per grade for each type of clustered lessons is calculated at the end of each grade.

TPS provides full professional development and during the introduction of the program we plan out, with each school, a diary and by month planner.

An example is shown for grade 1.

TPS K-8 How To Use The Program

The following pages set out how TPS advise schools to use the program.

Within the information we detail our group of partnering companies and highlight which students will benefit most from the variety of components in our TPS tool kit. You will also see a road map to assist you.

The text which follows is also provided within each teacher's traditional textbook and is available online.

STEAM into Big Ideas Mathematics

Implementation and Support

TPS does not ship and drop its teachers!

TPS supports you throughout the school year.

TPS provides:

a. Ongoing support via webinars and/or the toll free telephone number we provide to teachers.

b. Initial on-site training can be provided

c. The teacher implementation guide is provided online in the teacher support area and/or in print

Teacher Training Implementation Guide

This guide will detail the three key steps for using our program.

- Big Ideas Project Guides
- Online Assessment Tools
- TPS Toolbox – including online libraries with materials for diverse student populations and providing summative STEM and arts projects, together with reader activity books.

The guide is split into two sections: Teacher Training Information and Community Guide.

<u>Teacher Training Information</u>

How to use and navigate the program – a tour of core print components and how to use the online materials.

How to implement the program in the classroom – This includes pacing plans, scope and sequence documents, and criterion and standards maps.

How to use assessment tools – Information is provided for how to use the assessment tools including links to instructional videos for each of:

- Big Ideas Assessment Generator
- Big Ideas Interactive Homework System
- Big Ideas Intervention Focus Tutorial
- Big Ideas Interactive Software Tool

The importance of storytelling – TPS provides reader/activity books including Amelia Rose, and Hedy and Andre. Amelia Rose features in each project guide. Hedy and Andre readers should be used in conjunction with the summative STEM projects in the online STEAM library K-5.

Online libraries – There are over 12 libraries available and these provide materials to use for diverse student populations. TPS provides STEM and arts projects for students working below

through advanced grade level. The Big Ideas - Inclusive Community Reader Activity Library includes Archway, a program for new families without English. A mentor works with families to help them learn to read, write and speak English.

Multilingual Learners (MLLs) in California

TPS provides a plan and continual assessment for MLLs. The content is within all Big Ideas Projects, and some specific online tools. The content ensures full participation in grade-level content, clear teacher guidance, coherent language supports integrated within the math material, and summative STEM, arts and student journal assessments designed to accurately gauge their understanding, aligned to California's English Language Development (ELD) standards. The content is summarized below.

Criterion 1: Simultaneous content, math practices, and language development

Big Ideas Project Guide

- Language Goals
- Vocabulary
- Word Wall

Criterion 2: Language Features of Mathematical Tasks

Big Ideas Project Guide

- Group tasks
- ELD Support
- Language Journal

Criterion 3: Language Supports

Big Ideas Project Guide

- Language Goals
- Vocabulary
- Word Wall
- Group tasks
- Language Journal
- Discussion
- ELD Support
- Preliminary exercises
- Big Ideas: Inclusive Community Reader Activity Library – Archway
- Big Ideas: Inclusive Community Reader Activity Library – Careers Cartoon Books

Criterion 4: Leveraging Students' Assets

Big Ideas:

- Discussion
- Preliminary exercises
- At Home and in the Community

- Cognates listing
- Language Journal
- Big Ideas: Inclusive Community Reader Activity Library – Archway
- Big Ideas: Inclusive Community Reader Activity Library – Careers Cartoon Books
- Big Ideas - Teacher Support - Blackline Master - Picture Glossary Cards, Math Language Homework

Student Journal Summative Tasks

Criterion 5: Formative Assessment of Content, Math Practices, and Language

- Language Goals
- Vocabulary
- Word Wall
- Student Journal Summative Tasks
- Archway
- Big Ideas - Teacher Support - Blackline Master - Picture Glossary Cards, Math Language Homework
- Big Ideas - Inclusive Community Math After School PSHE Library - Starter Kits 1&2 and Word Play
- Online Assessment Library – Assessment Database - Level 1-3 Online assessment questions

Community Guide - how to provide caregivers with materials and information, and work together for the maximum success of students. It contains information about:

- Program research
- Big Ideas information as set out by the California State Education Board of Education
- TPS approach to Big Ideas and Project Information
- Component listing
- Online menu information
- Environmental Principles and Concepts – information about content and the TPS approach

STEAM into Big Ideas Mathematics

Assessment

The Implementation Guide sets out information about the TPS continual assessment of students.

Pages 6-10 – Multilingual Learners (MLLs) in California – TPS is an early adopter of the requirements of CA State Board of Education MLLs content. A student journal is provided to ensure all students and specifically MLLs are continually assessed for English, Mathematics and Science.

Pages 11-41 – Information about the multiple assessment types available in the program. There are assessments in each of the core components and assessment tools and in supplemental libraries.

Benchmark tests are provided; teachers are trained how to use the online assessment tools and can add their own personalized questions in 20 styles into the interactive assessment tool. The assessment generator provides multiple choice and open ended questions with three skill levels by standard, across all grades.

The STEM and arts projects provide formative and summative visual and tactile assessments.

TPS provides projects with rubrics as summative assessments.

An interactive homework database allows teachers to set work for students individually and/or by class. The teacher can track the students' attempts and this helps with noting their misconceptions.

The intervention focus tutorial provides across grades student textbook content. The teacher/caregiver can see the grade and standard; the student cannot. This removes any stigma and allows teachers to set work for far below through to advanced students

Page 42- 63 - Information appears for how to start the first week of school, and explains initial assessments. Detailed information appears for the varying assessments teachers can use and there are detailed steps for using the assessment tools together with videos.

STEAM into Big Ideas Mathematics.

Finally, please know that the textbooks will be available in color with hard or soft covers. TPS will also offer soft cover, black and white options.

We hope you enjoy the program. Should you have any questions, or need technical assistance, we are happy to respond to all and any queries.

See out webpages for further information.

Use this QR Code.