GEORGIA DEPARTMENT OF EDUCATION

Kathy Cox, State Superintendent of Schools

Training for Georgia Performance Standards

Days 3 and 4: Classroom Implementation

Facilitator's Guide Grades 3 -5 Mathematics

We will lead the nation in improving student achievement.

Acknowledgements

This training program was developed by the Georgia Department of Education as part of a series of professional development opportunities to help teachers increase student achievement through the use of the Georgia Performance Standards.

For more information on this or other GPS training, you may go to the math webpage through the Georgia Department of Education website under Curriculum and Instruction or use the direct link http://www.gadoe.org/ci_services.aspx?PageReq=CIServMath .

Use of This Guide

The module materials, including a Content Facilitator's Guide, Participant's Guide, PowerPoint Presentation, and supplementary materials, are available to designated trainers throughout the state of Georgia who have successfully completed a Train-the-Trainer course offered through the Georgia Department of Education.

Materials (guides, presentations, etc.) will be available electronically on http://www.georgiastandards.org under the training tab after all trainings of Days 3-4 have occurred. Consult the trainer for availability.

For more information on this or other GPS training, please contact Claire Pierce (404)657-7063 at cpierce@doe.k12.ga.us , Carmen Smith (404)463-1746 at csmith@doe.k12.ga.us , or Dr. Massie McAdoo (404) 463-6924 at mmcadoo@doe.k12.ga.us.

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Overview

Module Goal	Demonstrate a deep understanding of the new Georgia Performance Standards and the standards-based education approach, through thoughtful determination of learning goals for specific units of instruction, development of a balanced assessment plan that includes formative and summative assessments, and the design of instruction that will provide students with the knowledge, skills, and understandings necessary to achieve the learning goals. This goal shall be measured by student performance on progress monitoring and on standardized criterion-referenced tests. Note that the goal will not be reached by any single day of training. It will take preparation and follow up to master this goal.
Objectives	By the end of day four of training, participants will be able to: 1. Identify methods to create an environment that fosters student involvement and cooperation in all classroom activities. 2. Describe what a standards-based mathematics classroom looks like and how to choose appropriate instructional strategies. 3. Design lessons that will support the acquisition of content within the grades 3 – 5 frameworks and help students master the standards.

Module Sequence	This is a two-day course, with approximately 11 hours of instructional time. Prior Preparation—Participants ➢ Gather resources to bring to the training that would help with designing lessons. Introduction ➢ Review of Stages One and Two ➢ Overview of the Training Describing the Standards-Based Classroom ➢ "Math Lab Raided" Activity ➢ Dog Wash Task ➢ Birthday Cookout Task ➢ What We Should See in a Lesson ➢ Strategies Classroom Management ➢ Baseball Pizza Party Task ➢ Quote Activity ➢ Student Involvement and Cooperation Designing Lessons ➢ Polygon Percent Task ➢ The Big Picture ➢ Putting it All Together ➢ Creating and/or finding and revising lessons Action Plan for Redelivery

Module Materials	**Content Facilitator's Kit contents:** ➢ Content Facilitator's Guide (one for each leader) ➢ Complete set of slides (PowerPoint) ➢ Participant's Guide (one per participant and one per leader)
Other materials needed	➢ Name tags ➢ Chart paper ➢ A number of colored markers for chart paper ➢ Sticky notes ➢ Masking tape to post chart paper ➢ Scissors ➢ Pencils ➢ Cellophane Tape ➢ Construction Paper ➢ White copy paper ➢ Extra copies of a lesson plan template ➢ Copies of the grades 3 - 5 curriculum maps (Drafts) ➢ One copy of each of the culminating activities (My Perfect Saturday and Fraction Animals)
	Equipment: ➢ Computer and LCD projector ➢ Speakers for computer
Preparation	Each participant should bring the following to Days 3 and 4: A. Notebooks from Days 1 and 2 of training B. Copy of culminating task (My Perfect Saturday and Fraction Animals) from Day 1 and 2 of training (in notebooks from Day 1 and 2) C. Materials to develop lessons D. Copies of daily templates used in their school/district/system

Introduction

Overview	In the introduction, the participants review key points from stages one and two in the standards-based education process. Then, the group discusses the overview of Days 3 and 4.
Objectives	➢ Identify methods to create an environment that fosters student involvement and cooperation in all classroom activities. ➢ Describe what a standards-based mathematics classroom looks like and how to choose appropriate instructional strategies. ➢ Design lessons that will support the acquisition of content within the grades 3 – 5 frameworks and help students master the standards.
Activities	➢ Review of Stages One and Two ➢ Overview of the Training
Materials	➢ Overhead projector or computer and LCD projector ➢ Transparencies or PowerPoint presentation ➢ Participant's Guide ➢ Parking Lot Poster (create before class)

Introduction

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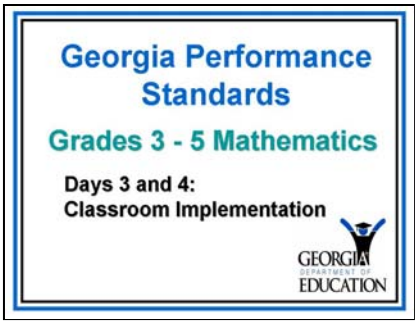
Slide:
GPS Classroom Implementation



Welcome participants to Days 3 and 4 of GPS training.

Although we have introduced ourselves at the Days 1 and 2 training, there may be new participants. Also, a different person may be presenting at the location. Therefore, we should share our contact information.

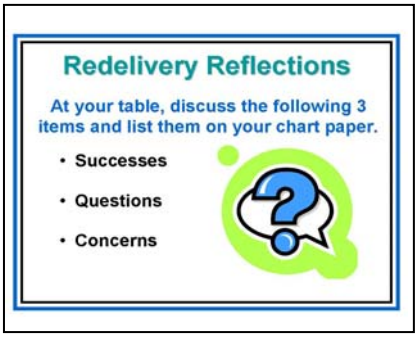
Slide:
Welcome & Getting Acquainted

- Have the participants introduce themselves and attach nametags to help everyone become better acquainted.
- Reviewing the Group Norms will lead to fewer interruptions, especially concerning cell phone usage.
- Share information concerning the GCTM Conference at Rock Eagle and the NCTM National Conference (Atlanta, GA).
- Allow the participants to share any additional announcements that they may have such as good websites, tasks, etc.

Reflections on Redelivery

Ask participants about Redelivery. Be aware that some participants combined Days 1 and 2 during professional development time, and others have not yet redelivered.

- Have each group brainstorm a list of successes, questions and concerns OR compile a whole group list.
- Consider any concerns that need to be addressed throughout these two days of training.



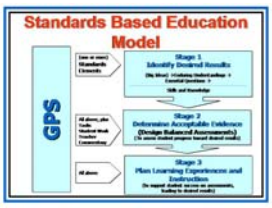
Encourage the participants to reflect on how far they have come since Day 1 of training.

Let them know that they deserve a pat on the back because with each day of training, we have moved closer to the goal of implementing the GPS in order to improve student achievement.

Point out that with each day of training, anxieties are lessened and more confidence is gained. Let them know that it is normal to still have difficult moments because change can sometimes take us out of our comfort zone. They should not become discouraged because they are moving in the right direction and worth while change takes time.

Review of Stages One and Two

Slide:
Standards Based Education Model



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Review of Stages One and Two

In our previous workshops, we worked extensively on understanding and applying Stages 1 and 2. Today, we are going to focus on Stage 3.

Recall the key points from Stages 1 and 2.

Some ideas to be reviewed for Stage 1 include:

- The Big Ideas/Established Goals are in the standards themselves.
- Enduring understandings are formed by grouping or relating core concepts and processes specified in the standards, either explicitly or implicitly; but these understandings specify the kinds of conceptual learning that students will retain beyond the unit and the course.
- By using a variety of modalities to answer essential questions via different tasks, activities, and/or assessments, students will provide evidence of learning.
- The knowledge and skill statements specify what students need to know and be able to do in order to provide evidence of learning, so this helps teachers design appropriate assessments in Stage 2.
- The core concepts and processes are consistent because they are specified in the standards, so our desired results should be similar, if not identical in terms of the big ideas and established goals that we determine; however, because these core concepts and processes may be combined differently in different units, the standards we choose for a unit may look different.

Some ideas to be reviewed for Stage 2 include:

- We need to determine the assessments that will provide the best and most complete evidence of the desired learning goals from Stage 1 before we can plan the tasks and activities that will provide students with the best and most effective opportunities to learn.
- What learning goals have we determined for this unit? What are our achievement targets? Will this assessment generate evidence of learning appropriate to this achievement target? Is this the best assessment format for this achievement target? Will this assessment plan allow multiple opportunities for students to provide evidence of learning? Will students be able to use different modalities to provide evidence of learning?
- A list of assessment formats should be predetermined to use as a preparation guide throughout the course.
- We should work collaboratively with other teachers to evaluate our assessment plans.

- Classroom assessment for learning allows us to use assessment to guide instruction and to obtain a complete and ongoing record of student growth so that we can intervene whenever necessary in order to provide students with more practice, remediation, extension, or alternate means of expressing understanding.

Slide:
Overview

Show slide.

These are the three topics that will be addressed over the next two days.

First, we will spend time investigating what a standard-based classroom looks like. Next, we will discuss classroom facilitation strategies that support standards-based instruction. Finally, we will design lessons to support a cohesive unit on fractions, decimals, and percents.

Describing the Standards-Based Classroom

Overview	In this section, participants will identify and explore the characteristics of a standards-based classroom.
Objective	➢ Describe what a standards-based mathematics classroom looks like.
Activities	➢ "Math Lab Raided" Activity ➢ Dog Wash Task ➢ Birthday Cookout Task ➢ What We Should See in a Lesson ➢ Strategies
Materials	➢ Computer and LCD projector ➢ PowerPoint presentation ➢ Participant's Guide ➢ Internet access or DVD of the videos on the web ➢ Speakers for the computer ➢ Chart Paper ➢ Markers ➢ Graph Paper ➢ Pencils

Describing the Standards-Based Classroom

Slide:
Essential Question 2

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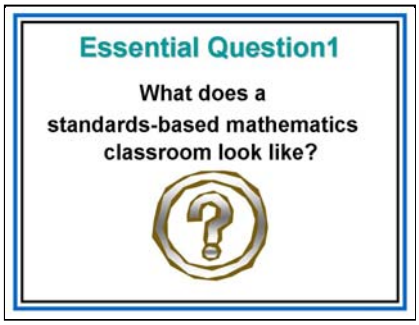

Interrupt for a news bulletin.

What evidence was reported that let you know what type of math lab the police had discovered?

Why are some of those things still regarded as controversial?

Allow a few minutes for discussion in the large group.

Let's take a few minutes and have our own math lab lesson today.

Slide:
Math Lab Lesson

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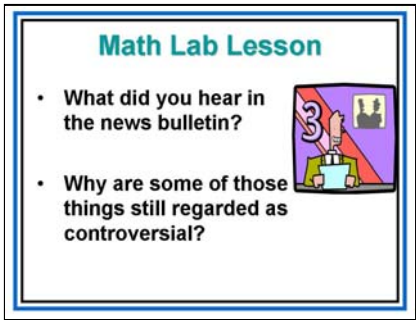


Warm-up:

Slide:
Dog Wash

Dog Wash Story Problem

Facilitator should show the Dog Wash slide to allow a quick practice in using fractions.

Mini-Lesson, Opening, Setting the Stage:

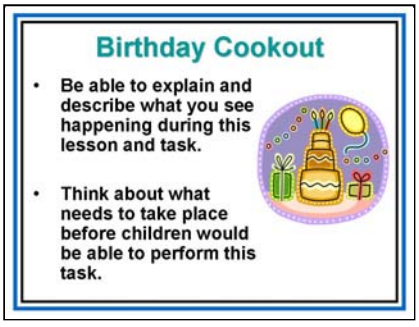
Participants will share how they came up with their solutions and show their work. Facilitator will give practice questions that allow the students to work quick fraction problems. Participants will need to explain how they come up with their answers.

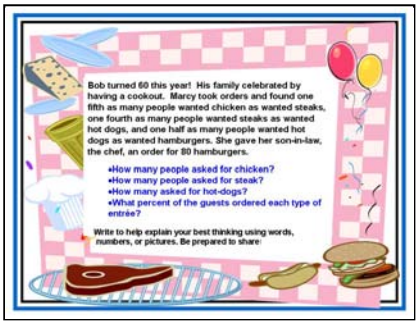
The facilitator may need to question the participants in order to help them remember how the fractions can converted to a decimal and then into a percent and the process that should be followed in order to find the solution.

Work period, activity period:

Allow time for the participants to complete the Birthday Cookout task in the participants' guide. Each small group should put their work on chart paper and be prepared to share their thinking with the large group.

Slide:
Birthday Cookout





Summary, closing:

The facilitator should guide the participants to review what was alike and what was different concerning the group work and develop some generalizations. Include a list of the standards that were addressed in the task along with concepts and skills to maintain.

Show slide and have participants make a posters with the following information.

Allow time for participants to share their posters.

Slide:
What did you see in this lesson?

Show slide.

As the participants are telling what they saw in the lesson, someone should be listing what they say on posted chart paper.

Slide: Show slide.
What should we see?

How does our list compare with the slide and the description in the participant's guide of a standards-based classroom?
Allow discussion.

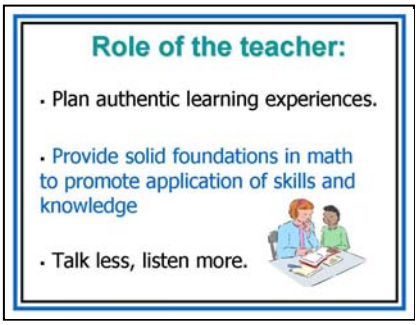
If a teacher has these four components in his/her lessons, does that mean that he/she has a standards-based classroom?
Why or why not?
or
Can the teacher be sure that every student obtains a deep understanding of what is being taught by following those four components?
Why or why not?

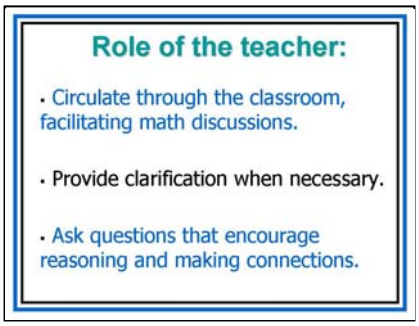
Allow participants to discuss these questions and share their thoughts.

The discussion should lead to clarifying the importance of a standards-based instructional environment. Students should be taking ownership of their learning. This is generally the area that many teachers feel the need for more guidance. The following slides may help in defining their role.

Slides:
Role of the Teacher

Show slides.





Slide:
Role of the Teacher continued

Bullets enter one at a time. Allow discussion as appropriate between them.

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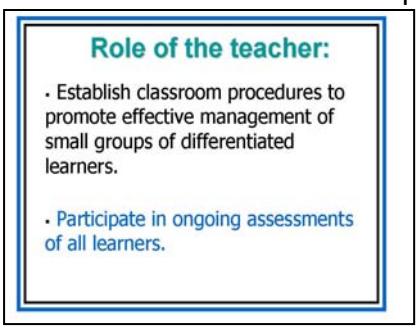
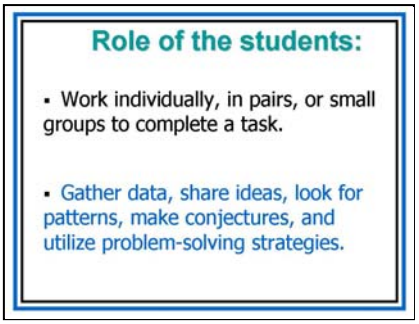
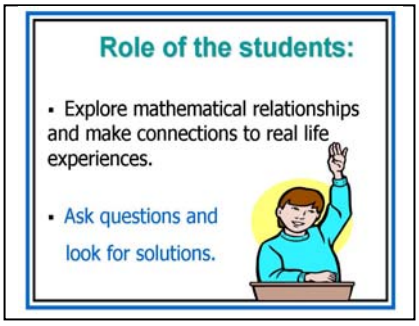


Allowing discussion as needed when exploring the teacher roles should help those feeling overwhelmed to feel better. Encourage participants in the room that have taught this way to give testimonies and assure the other participants that it is much more engaging and rewarding to teach this way.

Now for the role of the students…

Slides:
Role of the students





Bullets enter one at a time. Allow discussion as appropriate between them.

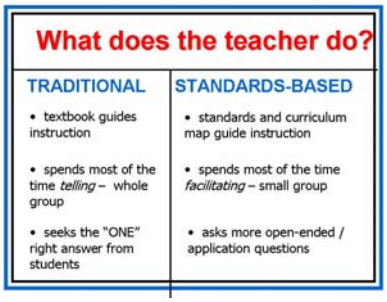
Through discussion, the participants should note that the role of the student assures learning.

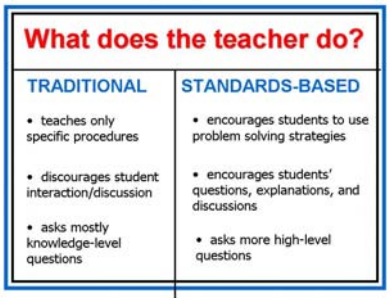
What we have discussed today is very different from what most of us experienced when we were in "traditional" classroom settings as students.

Take a look at the differences in the "traditional" classrooms of our youth and the "standards-based" classrooms of today.

Show slides.

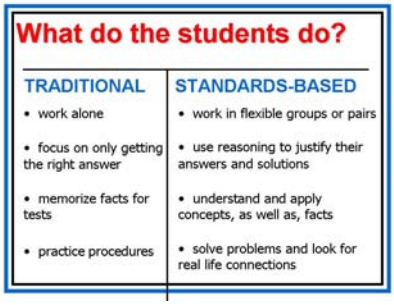
Slides:
What does the teacher do?

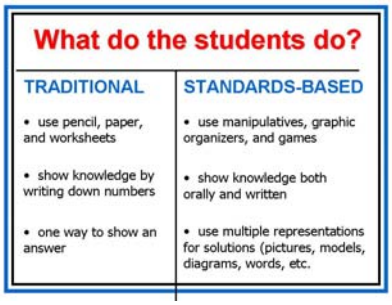




Show slides.

Slides:
What do the students do?





Small slips of paper have one set of the corresponding traditional/standards-based information on them. Divide the large group into six small groups. Each small group of teachers will draw one of the small slips of paper.

As a facilitator, you may want to have these small pieces of paper available in advance. You will find this information below.

The textbook guides instruction.	The standards and curriculum map guide instruction.
Most of the time is spent ***telling*** – whole group.	Most of the time is spent ***facilitating*** – small group.
"ONE" right answer is sought from students.	More open-ended/application questions are asked.
Only specific procedures are taught.	Students are encouraged to use problem solving strategies.
Student interaction/discussion is discouraged.	Students' questions, explanations, and discussions are encouraged.
Mostly knowledge-level questions are asked.	More high-level questions are asked.

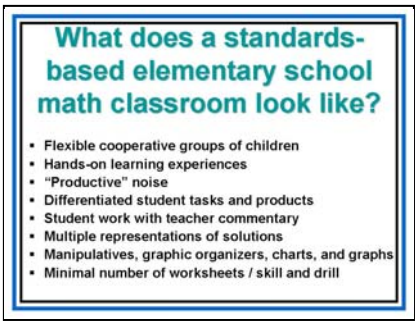
Using the drawn information, they are to think back to when they were in elementary school and what the classroom was like. Then using the same drawn information, they are to think ahead to next year and how their classroom will look.

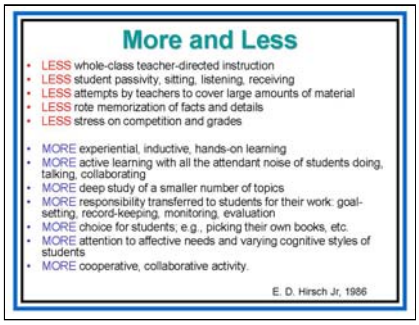
Each small group will give two short (one minute or less) skits that show the contrast of the two (when they were students vs. when they teach next year).

After the last skit, time will be allowed for reflections and comments. Take time to summarize what an elementary school mathematics classroom looks like while showing the next slide.

Slide:
What does a standards-based Elementary school math classroom look like? & More and Less

Show slide.





Questioning students is critical in the standards-based classroom. However, it is not always easy to think of good questions on the spot in a classroom that encourage reasoning and make connections.

Internet access or DVD of the video "Tips from the Trenches"

Speakers for the computer may be needed.

Kay Toliver, is a phenomenal mathematics teacher who has become famous for her hands-on engaging math tasks. She has taught Grades 1 – 7 for 30 year. Her videos and articles demonstrate research based best practices and exemplary questioning techniques. You may view her free video clips at:
http://www.thefutureschannel.com/kay_toliver/kay_toliver_classroom_lessons.php

UGA has video taped several teachers and classrooms across the state. Some of these tapes have been placed on our framework website for 6th and 7th grade.

The direct link to the "Tips from the Trenches" videos is
http://lpsl.coe.uga.edu/mile3/resa/gpsinaction/TipsFromTheTrenches.html#

You may also view
- Judy Powell: Asking questions instead of giving answers.

The direct link to the "Questioning Video" is
http://lpsl.coe.uga.edu/mile3/resa/gpsinaction/QuestioningInClass.html

This video takes place in a classroom setting with students working on an 'Orange Juice' task using ratio and proportion.

At your tables identify three questions you heard the teacher ask and why you think they chose those questions to ask.

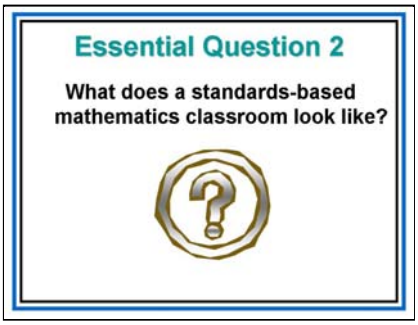
Facilitating the Standards-based Classroom

Overview	In this section, participants will examine the components needed for teachers to create and maintain a standards-based classroom.
Objectives	➢ Identify methods to create an environment that fosters student involvement and cooperation in all classroom activities.
Activities	➢ Baseball Pizza Party Task ➢ Quote Activity ➢ Student Involvement and Cooperation ➢ *Never Say Anything a Kid Can Say!* article
Materials	➢ Computer and LCD projector ➢ PowerPoint presentation ➢ Participant's Guide ➢ Chart Paper ➢ Markers

Student Involvement and Cooperation

Slide:
Essential Question 2

Show slide.

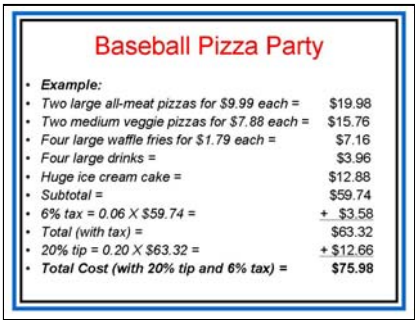


We will examine the components needed to facilitate a standards-based classroom.

As we work through the next task, please bear in mind what you have already observed.

Slide:
Baseball Pizza Party

Show slide.



Encourage the participants to think about classroom management from the teacher's perspective as they work through the Baseball Pizza Party task that is shown in the participant's guide.

Allow them to work in small groups, post their results on chart paper, and share their thinking with the large group.

The participants should discuss the standards that are addressed within this task before moving on to the 'Classroom Facilitation' piece that is next.

When all groups have shared, ask the participants, **"What is classroom faciliatation?"**

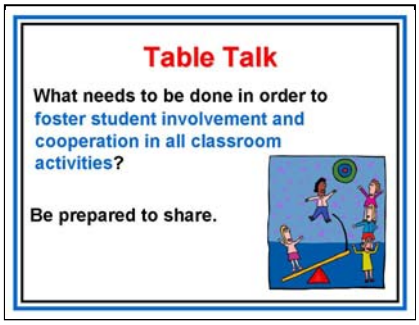
They should respond with something similar to,

"It is all of the things we do in our job so that it is possible for us to teach; such as organizing the students, the room, time, and materials."

Participants should "Table Talk" for ideas about what needs to be done in order to foster student involvement and cooperation in all classroom activities.

Slide:
Table Talk i.e. student involvement

Show slide.



As the groups share their ideas, have a volunteer write them on chart paper posted on the wall. This may be referred to often as this portion of the training is continued.

The three areas below are critical for teachers to be able to foster student involvement and cooperation in all classroom activities. Facilitators should be sure that these are addressed during training.

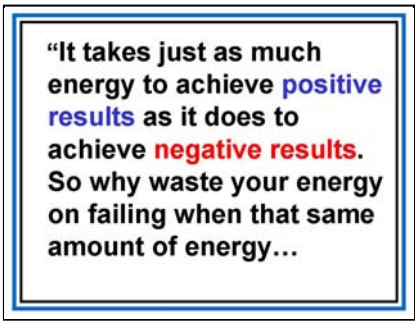
1. **Positive expectations**
2. **Routines and procedures**
3. **Participatory learning**

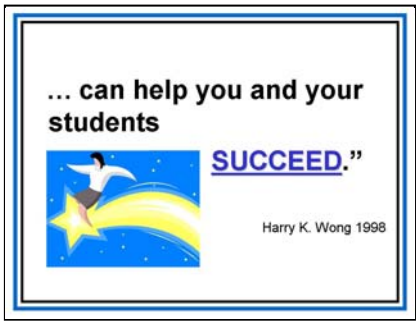
1. POSITIVE EXPECTATIONS:

The "Power of Expectation" is phenomenal!

Slides
Harry K. Wong Quote,

Show slides:





Allow time for the participants to digest these two slides and share their thoughts and opinions.

Slide
Larry Lezotte Quote

Show slide:

Once again, have the participants ponder this quote and discuss their thoughts and opinions.

Research was done in the 1960's by Robert Rosenthal of Harvard University and Lenore Jacobson of the South San Francisco schools that support the fact that if we *expect more from our students than they expect, we will get back more than we expect*.

Oak School gave students a pretest called the *'Harvard Test of Inflected Acquisition'* just prior to the summer break. The next fall, the teachers were told that they were special teachers that had been selected to participate in a special experiment. They were told that the pretest identified special students as 'spurters' or 'bloomers' and that greater intellectual growth was expected from them. In reality, the names were selected at random and not from the pretest.

The teachers were instructed not to tell the students nor their parents that they were special.

At the end of the school year, all of the students were tested again. A significant gain in intellectual growth of those students was evident in the results, yet no significant gains were evident in the other students.

When the teachers were shown the results and congratulated for their success, they commented that it was easy because they had special students that learned fast. After they had been told the truth about the selection of the students, the teachers felt that it was because they themselves were told that they were special teachers. However, in reality, they were also randomly selected to teach these students!

The only variable in this perfectly designed experiment was --- TEACHER EXPECTATION!

Therefore, we should tell our students up front, on the first day of school, that the class will be exciting, they are going to have the best year they have every had, and that they are going to do very well in our class.

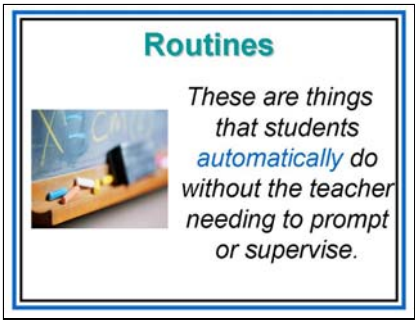
Inform participants that this is an excerpt from the book Pygmalion in the Classroom by Robert Rosenthal and Lenore Jacobson (1968), Holt Rinehart and Winston.

Direct the participants to look at the chart of examples of positive/negative expectations in the participants' guide.

2. ROUTINES AND PROCEDURES:

Slide:
Routines

Routines are the things that students automatically do without the teacher needing to prompt or supervise.



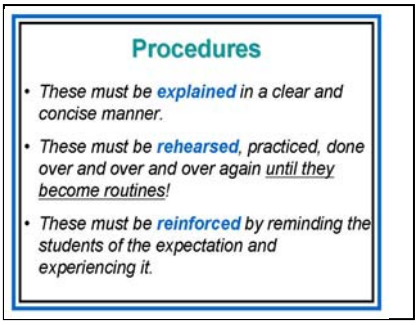
Procedures are how the teacher wants something done and should be clearly stated by the teacher.

- *These must be **explained** in a clear and concise manner.*
- *These must be **rehearsed**, practiced, done over and over and over again until they become routines!*
- *These must be **reinforced** by reminding the students of the expectation and experiencing it.*

Note: *"A rule is a **DARE** to be broken, whereas a procedure is not. A procedure is a **DO**, a step to be learned."* Harry K Wong

Slide:
Procedures

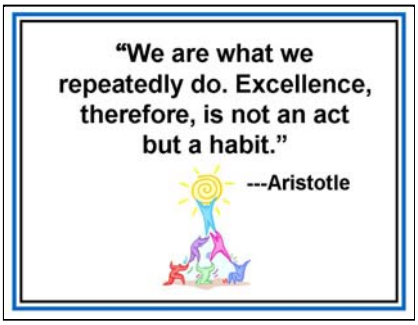
Show slide.



A list of some classroom procedures that need to be explained, rehearsed, and reinforced until they become routines may be found in the participants' guide.

Show slide.

Slide:
Aristotle Quote



This is a good time to stop and reflect on the "Baseball Pizza Party" task that was presented at the beginning of this section of training.
Having the teachers stop and think about the task and what classroom management procedures or routines were needed to assure that the room fostered involvement and cooperation.

Allow time for the teachers to think quietly for a minute, and then share with the group.

Teacher organization should be one of the things mentioned in the conversation. They should note that the materials were already placed on the tables and remember that with the Perfect Saturday task on Day 2, the materials were already packaged and ready for each group. Teachers know their students and should be prepared and organized enough to be ready for them.

3. <u>PARTICIPATORY LEARNING:</u>

Direct participants to the article *Never Say Anything a Kid Can Say!* in the Participant's Guide.

Tell participants that their homework for the night is to read this article and choose three points that speak to them the most and be prepared to share with the group.

At the beginning of day four of training the facilitator should ask participants to share what they chose from the article. Allow time for participants to thoroughly discuss their points of interest.

Designing Lessons and Assessments

Overview	In this section, participants focus on applying what they have learned throughout the GPS training thus far. They evaluate an instructional plan and complete lesson plans.
Objective	➢ Design lessons that will support the acquisition of content within the grades 3 - 5 framework and help students master the standards
Activities	➢ The Polygon Percent Pattern Task ➢ The Big Picture ➢ Putting it all together ➢ Designing lessons
Materials	➢ Chart paper ➢ Markers ➢ Scissors ➢ Markers or Colored pencils ➢ Transparencies or PowerPoint presentation ➢ Highlighter markers ➢ Paper for folded "tent" to label table topic for lessons ➢ Extra copies of a lesson plan template ➢ Copies of the curriculum maps

Designing Lessons

Slide:
Essential Question 3

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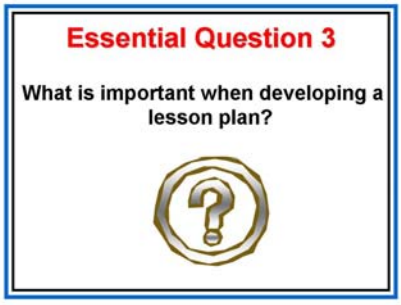


Slide:
What is important?

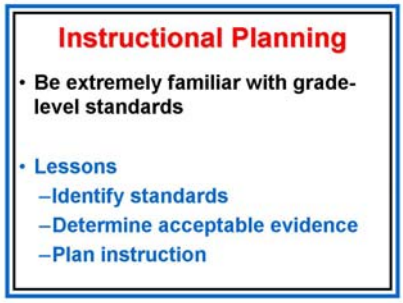
Show slide.

As we begin designing our lessons we need to consider the key ideas that will drive our work.

Go over each bullet on the slide carefully.

Slide:
Instructional Planning

Show slide.

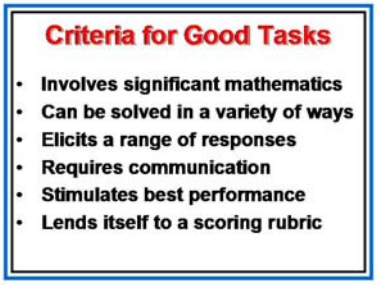


We have already discussed the importance of being familiar with standards and elements.

Copies of the curriculum maps for the grades 3 - 5 Frameworks are also available.

Slide:
Criteria for Good Tasks

Show slide.



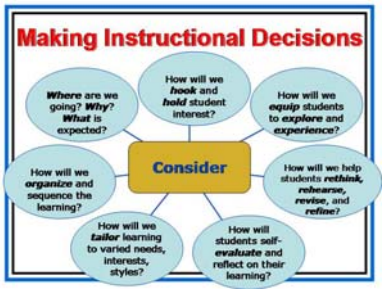
It all starts with assessment, and good tasks are the heart of assessment. Let's review the criteria for good tasks. The tasks we use will be the anchors for our lessons.

The lessons you are writing are to show what needs to happen in the classroom to prepare students for a selected task in the unit.

Discuss each bullet on the slide in depth.

Slide:
Making Instructional Decisions

Show slide.

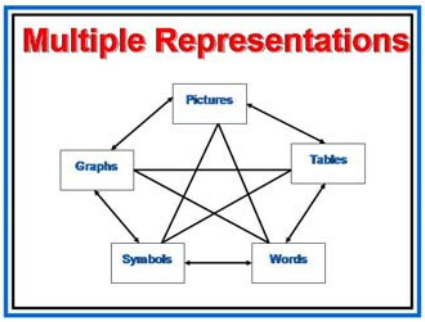


There are a number of additional resources in the participant's guide to help you as you make instructional decisions and consider the types of experiences students will need in order to apply the standards.

This slide supports the WHERETO model mentioned in the Participant's Guide. Explain to them that this is one of many ways to make instructional decisions concerning lesson plans. They should not feel that they have to use this model. However, they should definitely consider the points that are mentioned.

Show slide.

Slide:
Multiple Representations

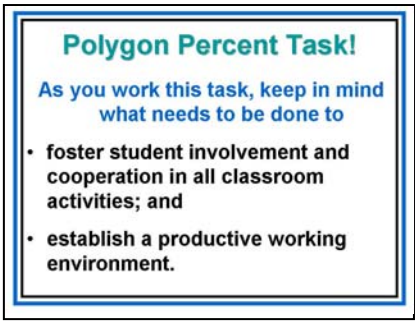


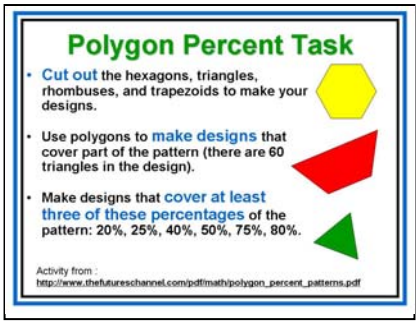
Remember how important these multiple representations are for students' concept development. You will want to be sure to consider a balance of these throughout your lessons.

The task that we are considering for our lesson plan is 'Polygon Percent Patterns' from the FUTURES Channel, 2000. Find it in your Participant's Guide.

Why should we always work tasks and problems before we ut them in our lesson plans?

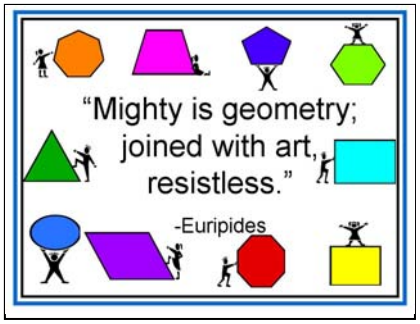
Slide:
Polygon Percent Patterns Task





Have the Participants respond to this question.
Give participants adequate time to work the task.

Slide:
Geometry Quote



What do you remember about what was discussed relative to the four parts of a lesson?

Allow time for participants to reflect and answer the question.

At your tables work together to produce the remaining parts of the lesson.

When the groups finish producing the warm-up, mini-lesson, and summary allow them to share their products with the group.

Now, identify the "Big Ideas" in this unit, and the math content of each task. Discuss whether the order of the tasks is logical and progressive and whether all of the mathamatics associated with the big ideas have been addressed through these tasks.
How does this unit on fractions, decimals, and percents look different from a traditional unit?

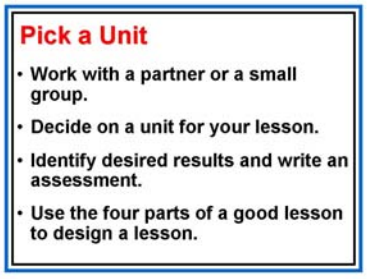
Slide
Units are Big Pictures

Slide
List of Tasks

Allow time for discussion. Have participants share with the group.

Slide:
Pick a Unit

Show slide



- **The unit that you choose to use may be from the 3 – 5 curriculum map framework, or from your system, district, or school. It does not matter. Please use what is best for you.**

- **If your school or system has developed a lesson template, please use that one.**

Give participants adequate time to develop their lessons. Assist with resources and answering questions as needed.

As groups finish, gather their lessons electronically and print them off for each group (if possible). This will help make the sharing time more meaningful.

Try to have them reach a stopping point at an early enough time in the afternoon to share. Should some participants finish early, they may work on an additional lesson, or assist others that are struggling.

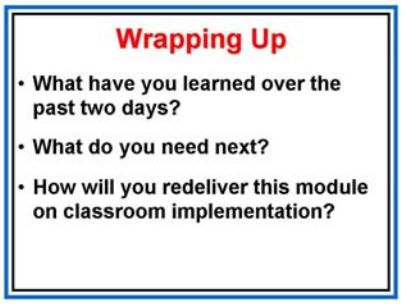
Slide:
Sharing Our Lessons

Show slide.

Have the participants visit each other and share their units.

Slide:
Wrapping Up

Show slide.



Discuss the questions on this slide in large group, making notes for further planning.

As always, let me know how I can help.

Slide:
Discussion of Redelivery Action Plan

Action Plan for Redelivery

Show slide.

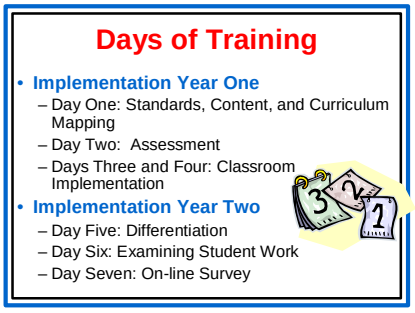
Point out additional resources for teachers of mathematics in the back of the participant's guide.

With time permitting, give them the opportunity to actually write out their redelivery plan before leaving for the day. If that is not possible, strongly encourage them to write it out before the end of the next 48 hours so that it is fresh in their minds and to make it much easier when the time comes for the redelivery.

Assignment

Slide:
Days of Training

Review of Training Dates



We will be having Day 5 of training in the fall concerning 'Differentiation'.

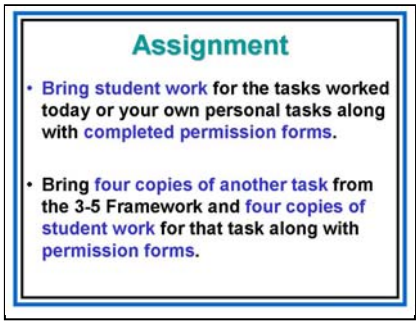
Please continue to bring copies of student work with a copy of the task and signed permission forms to the training.

Day 6 training is 'Examining Student Work' and we would like to have plenty of student work in advance to not only incorporate within the training for Day 6, but also to place in

our new grades 3 – 5 frameworks.

Show slide:

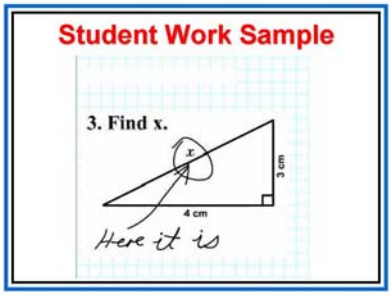
Slide:
Assignment



Slide:
Student Work Sample

Permission forms are included in your Participants' Guide.

Share this humorous sample of student work.



Slide:
Contacts & Give Yourself a Hand

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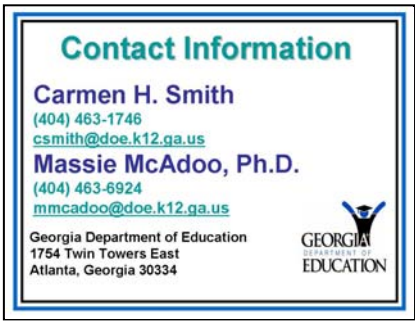


Thank the participants for their hard work and participation over the last two days.
Remind them that we are available via email to answer any questions they may have concerning the training or redelivery.

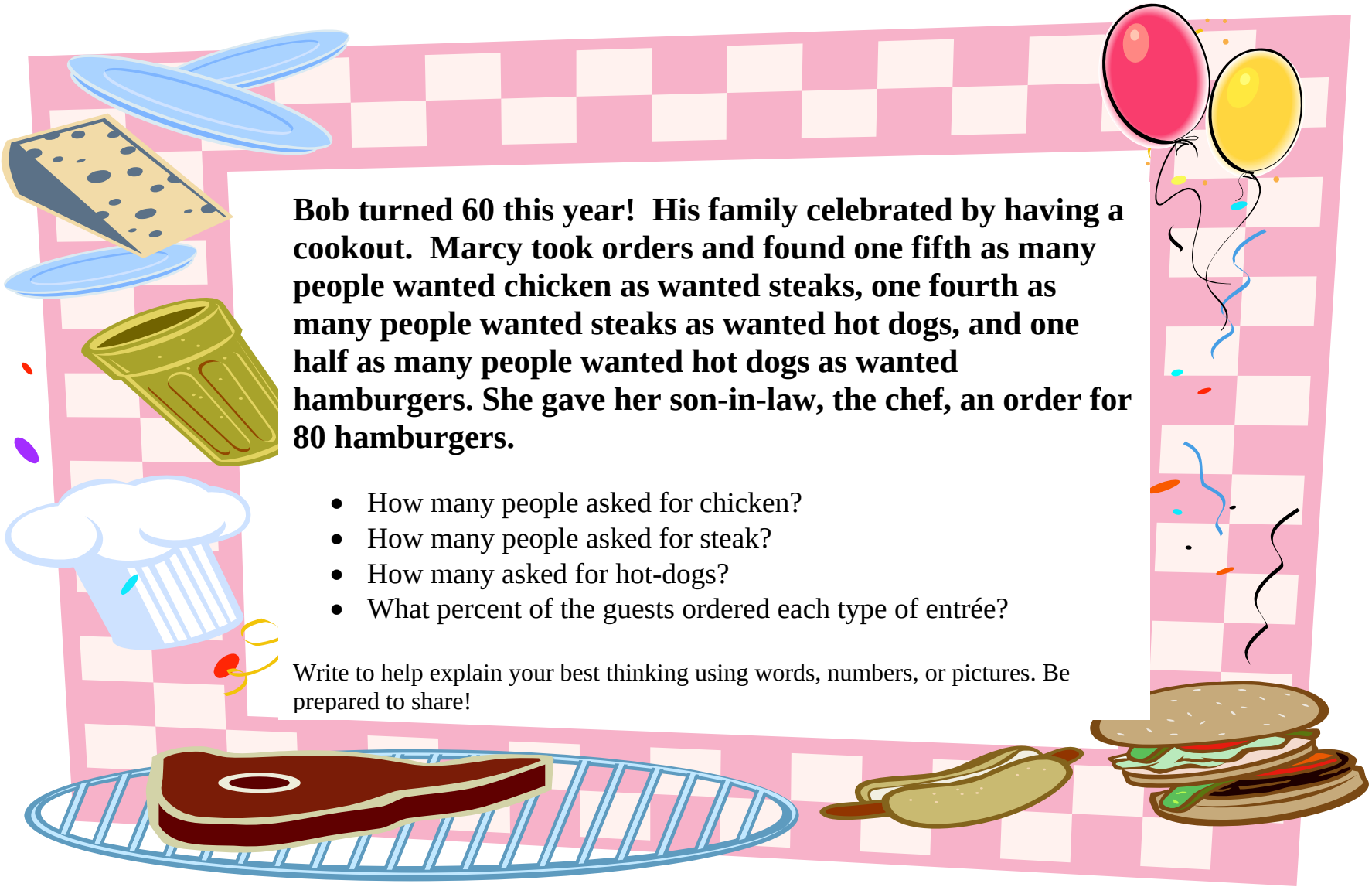
Thank you for all that you do for your students and for the children of GA. Together we are making a difference!

BLANK PAGE ON COLORED PAPER!

Dog Wash Task

Four girls offered to wash the neighbor's dog for $5.00. They didn't know how to divide the money. The dog owner said: "I will pay 4/5 of the total amount equally to the four of you. The first one to tell me how much money each child should receive will get 1/2 of the other 1/5 of the cost in addition to their portion of the original 4/5."

- **If someone gave the dog owner the right answer, how did the money get divided up between the children?**
- **Did the dog owner pay the full price that the children asked? Why or why not?**
- **Write to help explain your best thinking using words, numbers, or pictures.**



Bob turned 60 this year! His family celebrated by having a cookout. Marcy took orders and found one fifth as many people wanted chicken as wanted steaks, one fourth as many people wanted steaks as wanted hot dogs, and one half as many people wanted hot dogs as wanted hamburgers. She gave her son-in-law, the chef, an order for 80 hamburgers.

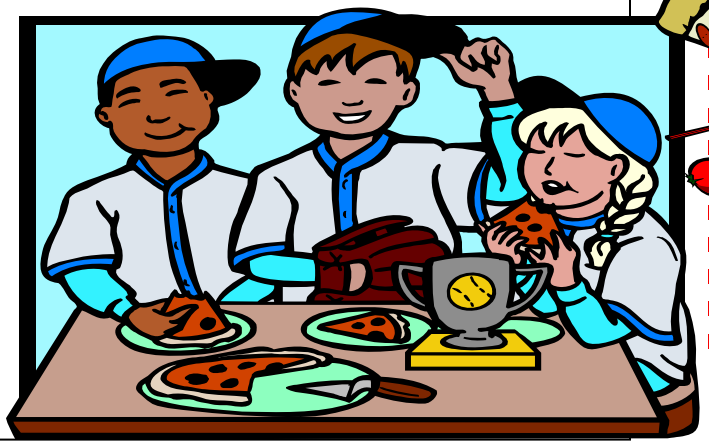
- How many people asked for chicken?
- How many people asked for steak?
- How many asked for hot-dogs?
- What percent of the guests ordered each type of entrée?

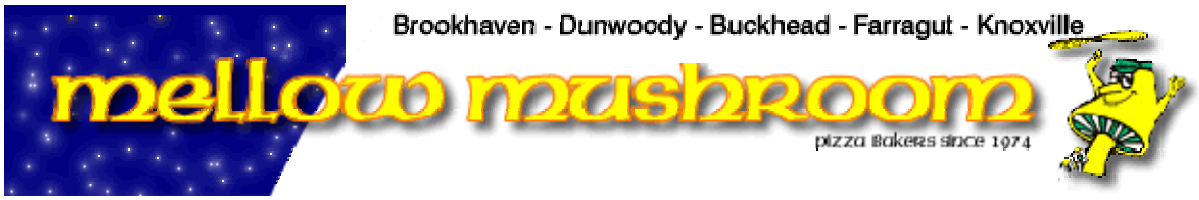
Write to help explain your best thinking using words, numbers, or pictures. Be prepared to share!

You and 4 friends go to Mellow Mushroom restaurant to celebrate your baseball team's big win. You order food for your entire table. The restaurant charges a 6% tax for all food items, and since everyone loved the service, you decide to tip the recommended 20% to your waiter / waitress.

- Remember to write out your table's order and to show all of your work.
- Calculate the total amount, and write a check as your payment (you are paying because you were the captain of the team and are feeling generous!).

Example:
Two large all-meat pizzas for $9.99 each = $19.98
Two medium veggie pizzas for $7.88 each = $15.76
Four large waffle fries for $1.79 each =$7.16
Four large drinks = $3.96
Huge ice cream cake = $12.88.
Subtotal = $59.74
6% tax = 0.06 X $59.74 = $3.58
Total (with tax) = $63.32
20% tip = 0.20 X $63.32 = $12.66
Total Cost (with 20% tip and 6% tax) = $75.98





I

specialty pizzas

House Special - Originated when we first began, this Southern Classic features Pepperoni, Sausage, Ground Beef, Bacon, Mushrooms, Onions, Green Peppers, Black Olives, Tomatoes & Ham.

Small	Medium	Large
$11.20	$16.30	$21.40

Mega-Veggie - Visit this tasty garden and munch on a pizza covered w/Broccoli, Mushrooms, Tofu, Black Olives, Artichoke Hearts, Sun-Dried Tomatoes, Feta, Onions, Green Peppers & Tomatoes. Great w/ or w/out Pesto Sauce!

Small	Medium	Large
$11.20	$16.30	$21.40

House Pesto - Designed by our in-house engineers. This one's got Pesto Sauce, Mozzarella, Spinach, Mushrooms & Tomatoes.

Small	Medium	Large
$9.25	$14.25	$18.40

Gourmet White - The Beatles had "The White Album" & we have the White Pizza. It's got garlic, Extra-Virgin Olive Oil Sauce, 4 Cheeses (Parmesan, Feta, Provolone, Mozzarella), Sun-Dried Tomatoes, Fresh Tomatoes & Onions. *Give Pizz-a Chance*!

Small	Medium	Large
$10.75	$16.10	$21.40

Mighty Meaty - If meat is your treat, then this pizza is for you. It's got Pepperoni, Sausage, Ham, Bacon & Beef.

Small	Medium	Large
$10.75	$16.10	$21.40

salads

Greek $5.75
Lil'..Greek $3.75
Lettuce, Purple Cabbage, Green Peppers, Black Olives, Onions, Black Olives, Tomatoes, Mozzarella & Sprouts

Chef $5.75
Lil'..Chef $3.75
Lettuce, Purple Cabbage, Onions, Green Peppers, Mushrooms, Black Olives, Tomatoes, Mozzarella & Sprouts

Tossed $4.75
Lil'..Tossed $2.55
Lettuce, Purple Cabbage, Tomatoes & Mushrooms

Caesar $5.75
Lil'..Caeser $3.75
Romaine, Lettuce, Croutons, Parmesan Cheese & Caesar dressing

Field..Green $5.75
Lil'..Field..Green $3.75
Play the field with our field green salad. This healthy concoction has a mix of the best & freshest! Topped w. Mushrooms & Tomatoes.

munchies

Spring..Water..Basted..Pretzels….. Parmesan.or..Cinnamon
Half (3) $3.50 Whole (6) $5.75

Garlic..Bread
Whole $1.75
W/ Cheese $2.50

drinks

Fountain & Fruitopia	$1.35
Juices	$1.75
Iced Tea	$1.35

the FUTURES channel

POLYGON PERCENT PATTERNS

Teaching Guidelines

Subject: Mathematics

Topics: Geometry, percents

Grades: 4 - 7

Concepts:

- Polygon
- Percent

Knowledge and Skills:

- Can identify/describe common polygons
- Can convert between percent notation and fraction notation

Materials (for each team):

- three copies of the 60-triangle pattern handout
- five sets of polygons, cut from construction paper, using the "Cutout Patterns" handout
- one glue stick

Procedure:

This activity is best done with students working individually or in teams of two.

Distribute the handouts and polygons. (Instead of cutting out the shapes yourself, you may wish to give the students safety scissors and sheets of colored paper on which the shapes have been copied.)

Explain the assignment to the class. Show students an example that you prepare beforehand, of, say, a pattern which covers 30 of the triangles of the figure, or 50% of it.

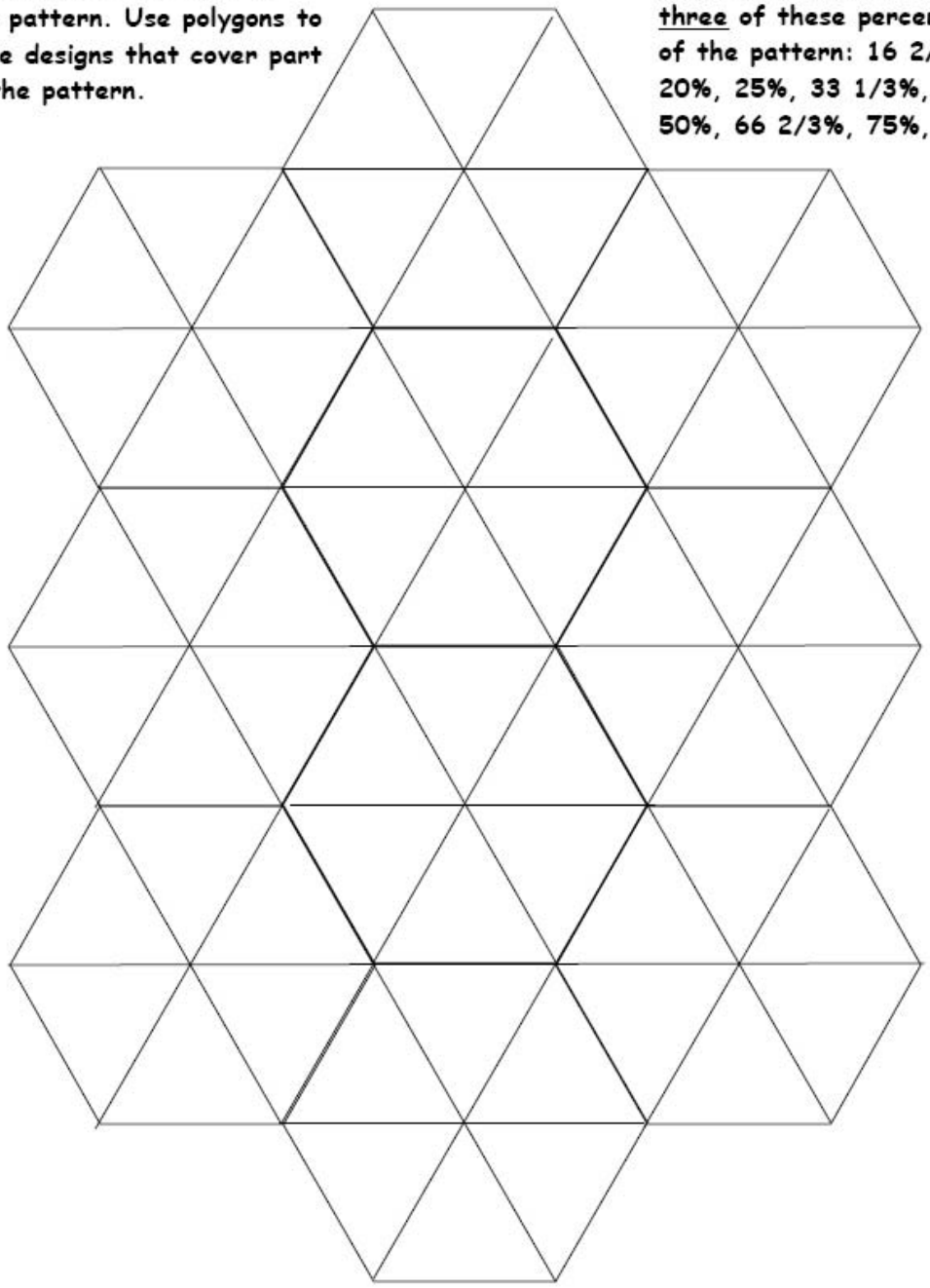
Students will need to work out how to determine the number of triangles their patterns should cover, given the percentage. Give individual help as necessary, but let them try to work this out on their own as much as possible. One good strategy is "guess and check":

a) choose a number of triangles (say, 15),
b) write the fraction that shows the amount of the whole pattern that would be covered (15/60),
c) reduce that fraction and convert it to a percent (15/60 = ¼= 25%). If this is not the percent you wanted, try again, adjusting your guess up or down.

the FUTURES channel

There are 60 triangles in this pattern. Use polygons to make designs that cover part of the pattern.

Make designs that cover <u>three</u> of these percentages of the pattern: 16 2/3%, 20%, 25%, 33 1/3%, 40%, 50%, 66 2/3%, 75%, 80%.



the FUTURES channel

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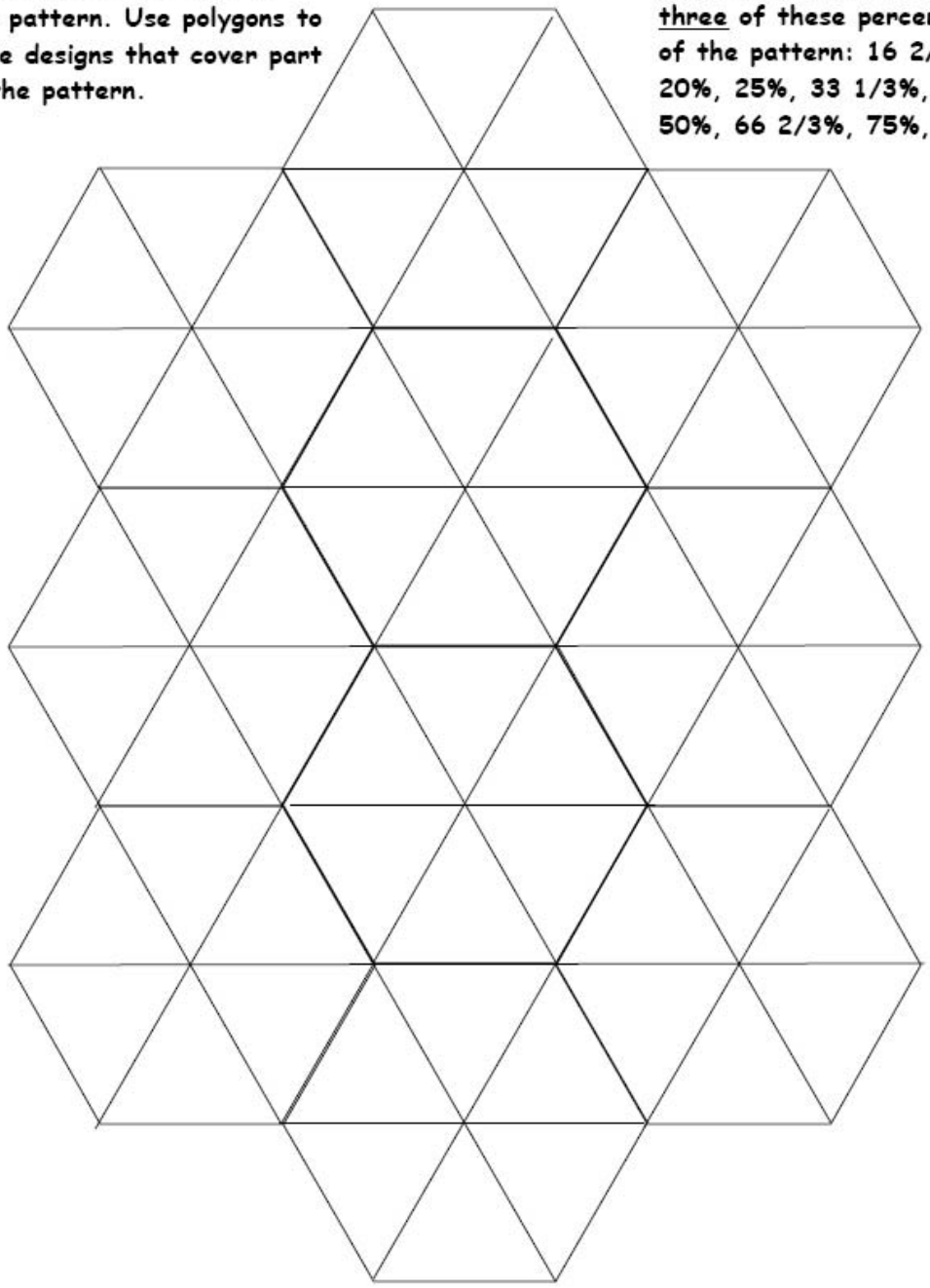

the FUTURES channel

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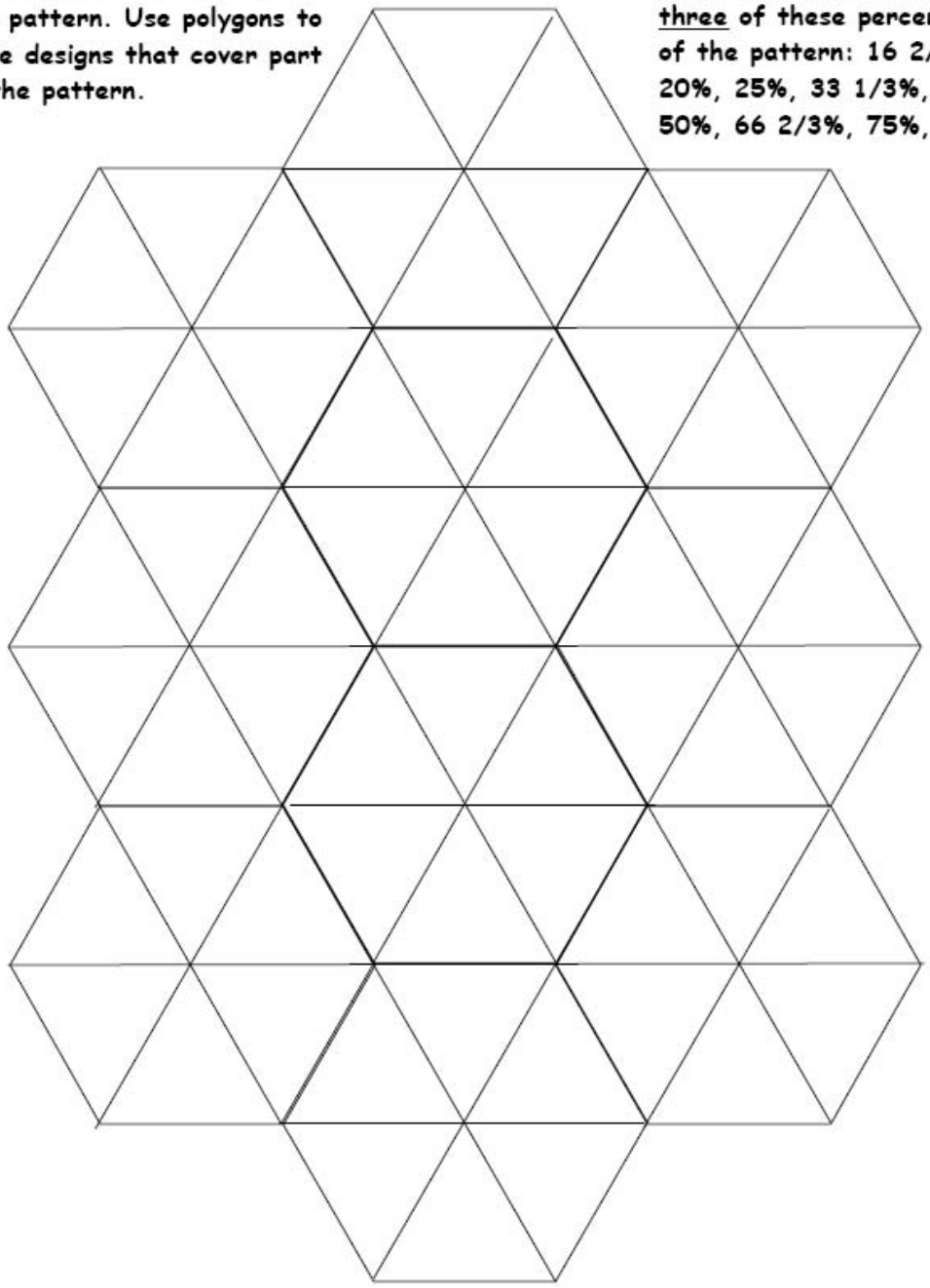

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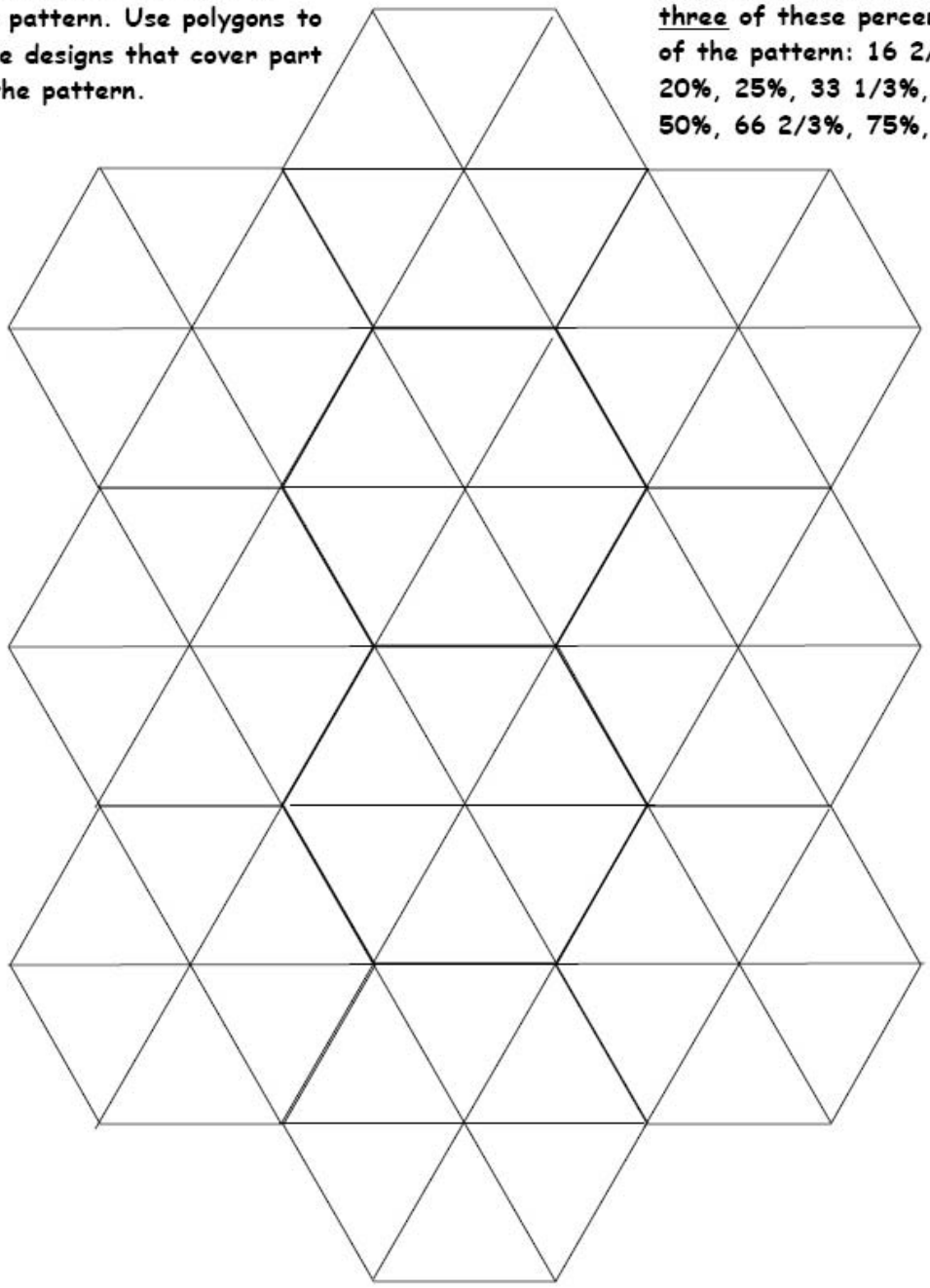
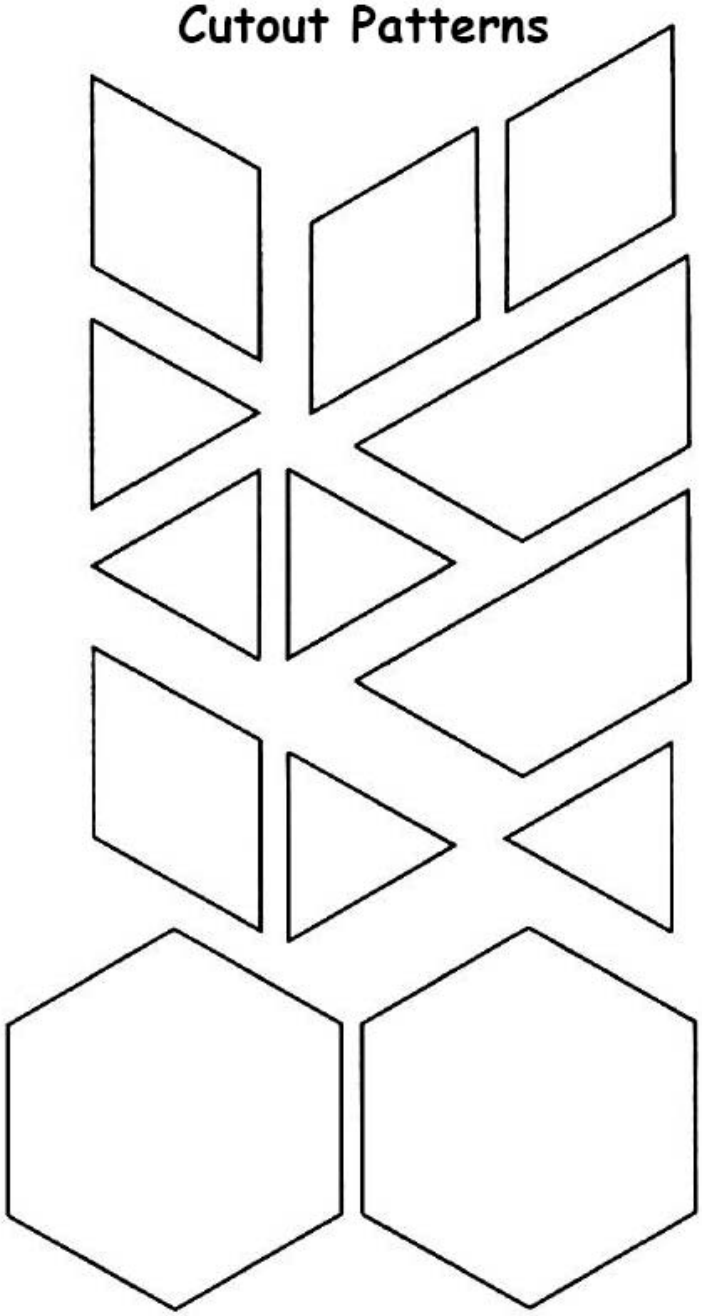


the FUTURES channel

Cutout Patterns

Cut out these hexagons, triangles, rhombuses, and trapezoids to make your designs.



DATE	OBJECTIVE (S)	PROCEDURES/DIFFERENTIATED STRATEGIES	MATERIALS	EVALUATION
MON.	Students should be able to: **GPS:**	_____Teacher directed _____ Student-centered _____Review & Discussion _____Student (one-on-one as needed) _____Small Group _____Whole Group _____Task _____Homework	_____GPS Unit _____Textbook _____Multimedia (internet) _____Literature	____Performance task ____Daily Class Part. ____Oral Responses ____Rubric ____Groupwork ____Teacher Observ. ____Assessment
TUE.	Students should be able to: **GPS:**	_____Teacher directed _____ Student-centered _____Review & Discussion _____Student (one-on-one as needed) _____Small Group _____Whole Group _____Task _____Homework	_____GPS Unit _____Textbook _____Multimedia (internet) _____Literature	____Performance task ____Daily Class Part. ____Oral Responses ____Rubric ____Groupwork ____Teacher Observ. ____Assessment
WED.	Students should be able to: **GPS:**	_____Teacher directed _____ Student-centered _____Review & Discussion _____Student (one-on-one as needed) _____Small Group _____Whole Group _____Task _____Homework	_____GPS Unit _____Textbook _____Multimedia (internet) _____Literature	____Performance task ____Daily Class Part. ____Oral Responses ____Rubric ____Groupwork ____Teacher Observ. ____Assessment
THU.	Students should be able to: **GPS:**	_____Teacher directed _____ Student-centered _____Review & Discussion _____Student (one-on-one as needed) _____Small Group _____Whole Group _____Task _____Homework	_____GPS Unit _____Textbook _____Multimedia (internet) _____Literature	____Performance task ____Daily Class Part. ____Oral Responses ____Rubric ____Groupwork ____Teacher Observ. ____Assessment
FRI.	Students should be able to: . **GPS:**	_____Teacher directed _____ Student-centered _____Review & Discussion _____Student (one-on-one as needed) _____Small Group _____Whole Group _____Task _____Homework	_____GPS Unit _____Textbook _____Multimedia (internet) _____Literature	____Performance task ____Daily Class Part. ____Oral Responses ____Rubric ____Groupwork ____Teacher Observ. ____Assessment

Teacher: Grade: Subject: Content: Week ---, 2007

ELEMENTARY SCHOOL LESSON PLAN

Teacher: **Week of:** **Subject: Math** **Time:**

MONDAY: Topic:						
STANDARDS: GPS	**Methods**	**M**	**T**	**W**	**TH**	**F**
1. Warm-up-	lecture/notes					
2. Problem Solving - Daily Word Problem	guided practice					
3. Guided Practice –	discussion					
4. Independent Practice / Group Work –	questioning					
5. Review –	audio-visual					
Assessment –	home/class work					
HW:	independent study					
TUESDAY: Topic:	student pairs					
STANDARDS: GPS	demonstration					
1. Warm-up-	Lab					
2. Problem Solving - Daily Word Problem	Drill					
3. Guided Practice –	guest speaker					
4. Independent Practice / Group Work –	student project					
5. Review –						
Assessment –		**M**	**T**	**W**	**TH**	**F**
HW:	**Materials**					
WEDNESDAY: Topic:	Textbook					
STANDARDS: GPS	lab equipment					
1. Warm-up-	Handouts					
2. Problem Solving - Daily Word Problem	transparencies					
3. Guided Practice –	manipulatives					
4. Independent Practice / Group Work –	overhead projector					
5. Review –	cassette & recorder					
Assessment –	filmstrip & projector					
HW:	library references					
THURSDAY: Topic:	Computer					
STANDARDS: GPS	group equipment					
1. Warm-up-						
2. Problem Solving - Daily Word Problem						
3. Guided Practice –		**M**	**T**	**W**	**TH**	**F**
4. Independent Practice / Group Work –						
5. Review –	***EVALUATION***					
Assessment –	performance task					
HW:	journal response					
FRIDAY: Topic:	quizzes(fact tests)					
STANDARDS: GPS	test					
1. Warm-up-	project/paper					
2. Problem Solving - Daily Word Problem	daily work					
3. Guided Practice –	lab report					
4. Independent Practice / Group Work –	oral presentation					
5. Review –	group activity					
Assessment –						

Unit Lesson Plan

Stage 1: Desired Results
Teacher: **Grade:** **Time Frame:** 3 weeks **Class: Math**
Big Ideas:
Established Goals:
Enduring Understandings:
Essential Questions:
Knowledge: ***The student will know:***
Skills: GPS: ***The student will be able to:***
Stage 2: Assessment Evidence
Performance Tasks, Projects:

Quizzes, Tests, Academic Prompts:
Other Evidence:
Stage 3: Learning Plan
Activities:

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Georgia Performance Standards Framework for Needs Improvement Schools

Subject / Grade Level: Mathematics Grade 3

Unit 1		Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Part I	Part II					
		9 Weeks	6 Weeks	4 Weeks	5 Weeks	3 Weeks
4 Weeks	5 Weeks	**Geometry & Measurement**	**Fractions & Decimals**	**Data Analysis**	**Algebra: Study of Patterns**	**Putting It All Together**
Whole Numbers						
Algebra Standards will be integrated throughout the year and students will focus on Algebra the last nine weeks.						
Key Standards **M3N1** a, b. **M3N2** a, b, c	**Key Standards** **M3N1** a, b **M3N3** a, b, c, d, e, f, g **M3N4** a, b, c, d, e, f	**Key Standards** **M3G1 a, b, c, d** **M3M1** **M3M2** a, b, c, d **M3M3** a, b, c **M3M4** a, b, c	**Key Standards** **M3N5 a, b, c, d, e, f, g**	**Key Standards** **M3D1 a, b**	**Key Standards** **M3A1 a, b, c**	All Standards
Related Standards **M3A1** a, b **M3M3** b	**Related Standards** **M3A1** a, b **M3M3** b	**Related Standards** **M3A1** a, c **M3M3** c **M3M4** c	**Related Standards** **M3A1** a, c **M3N1** a **M3M2** b	**Related Standards**	**Related Standards**	

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Georgia Performance Standards: Curriculum Map
Subject/ Grade Level: Mathematics Grade 4

1st 9 weeks		2nd 9 weeks		3rd 9 weeks		4th 9 weeks	
Unit 1	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**	**Unit 7**	**Unit 8**
6 weeks	**3 weeks**	**4 weeks**	**4 weeks**	**4 weeks**	**5 weeks**	**6 weeks**	**4-5 weeks**
Radical Rounding: Place Value, Numeration, Rounding, and Estimation	**The Graphs of Math: Venn diagrams, bar graphs and picture graphs**	**Operation Multiplication**	**Devine Division**	**Weighty Figures: Measurement**	**Plane Coordinates and Geometric Figures**	**Dizzy Fractions and Decimals**	**Review and Preview**

All units will include skills to maintain and the Process Standards.

Routine topics such as estimation, computational drill and practice, number patterns and rules, graphing, and problem solving should be addressed on an ongoing basis.

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Georgia Performance Standards: Curriculum Map
Subject/ Grade Level: Mathematics Grade 5

1st 9 Weeks	2nd 9 Weeks	3rd 9 Weeks	4th 9 Weeks

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
4 weeks	**7 weeks**	**7 weeks**	**6 weeks**	**5 weeks**	**7 weeks**
Groovy Graphing	**Divine Decimals**	**Funky Fractions**	**Positively Perfect Plane Figures (2-D)**	**Super Solid Figures (3-D)**	**Putting It All Together**

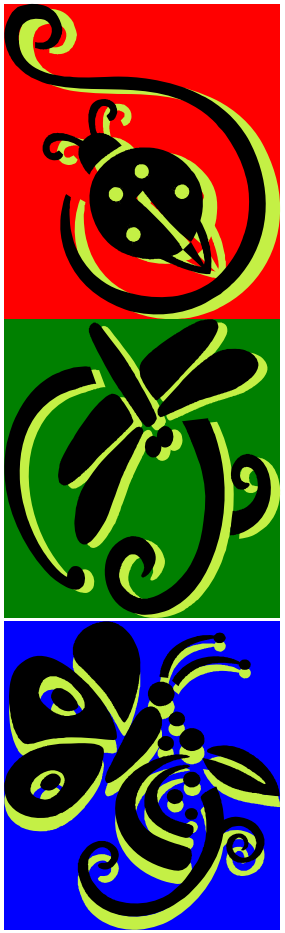
All units will include skills to maintain and the Process Standards.

Routine topics such as add/subtract decimals and fractions with like denominators, whole number computation, angle measurement, length/area/weight, number sense, data usage and representations, characteristics of 2D and 3D shapes and order of operations should be addressed on an ongoing basis.

Culminating Activity!!!

Fraction Animals

- Use the circle fraction pieces to design an animal of your choice
- Cut the pieces apart and label all pieces with the appropriate fraction
- Your animal should be colorful, creative, and atheistically pleasing
- After your animal is complete, add all fractions together to come up with a mixed number
- Change the mixed number into a decimal to assign a value to your animal picture
- All work must be shown to receive full credit



My Perfect Saturday



- Create a circle graph that represents all 24 hours of your "Perfect Saturday"
- Activities should be clearly labeled and represented on your circle graph with a fraction or a percent
- Put all "like" activities together. For examples: all meals should be in one fractional part of the circle
- Give your graph a title
- Be prepared to share