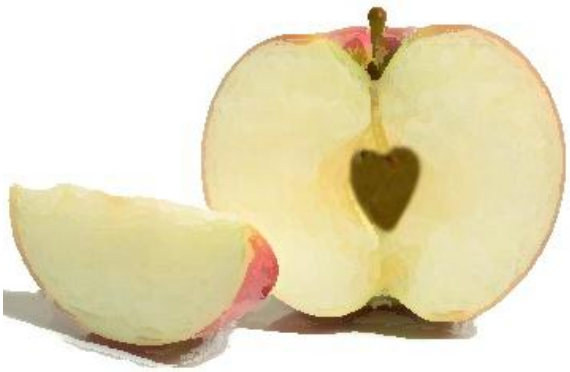


Getting to the Core

Geometry

Fourth Grade

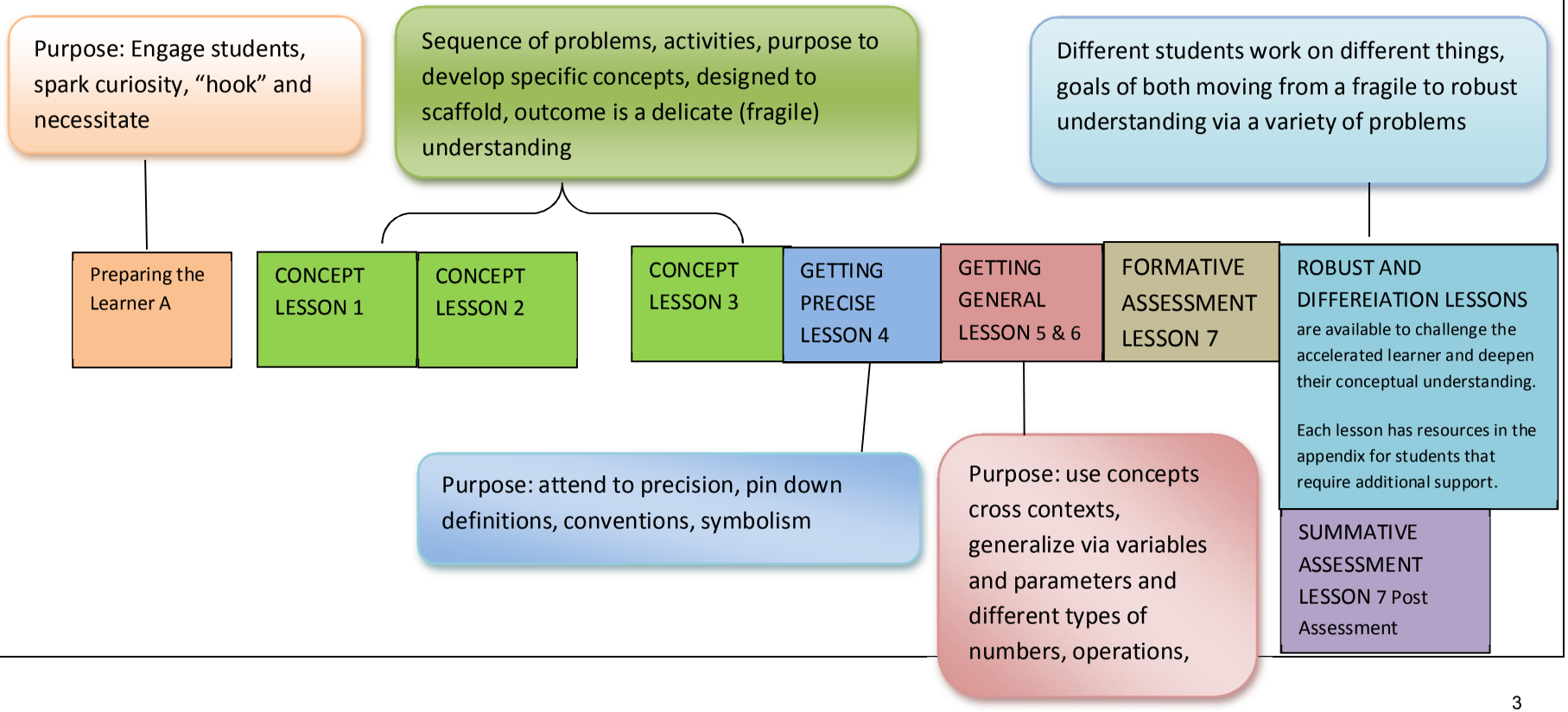
Table of Contents

Santa Ana Unified School District Common Core Unit Planner-Mathematics

Unit Title:	Geometry	
Grade Level/Course:	**4th Grade**	**Time Frame: 9 days**
Big Idea (Enduring Understandings):	**Objects can be described, classified and analyzed based on their attributes.**	
Essential Questions:	• How can parallel and perpendicular lines be identified? • How can you use only a right angle to classify all angles? • What geometric components make up figures? • What properties do geometric objects have in common?	

Instructional Activities: Activities/Tasks

Units have many types of lessons that have different **purposes**



Designing for Opportunities for Standards for Mathematical Practice happen at the Unit Level
From: Bill McCallum, Ph.D., University of Arizona

21st Century Skills:	**Learning and Innovation:** ☒ Critical Thinking & Problem Solving ☒ Communication & Collaboration ☒ Creativity & Innovation **Information, Media and Technology:** ☒ Online Tools ☒ Software ☒ Hardware	
Essential Academic Language:	**Tier II:** • **Clarification** • **Collaboration** • **Norms** • **Argument** • **Parallel** • **Perpendicular** • **Angle** • **Acute angle** • **Obtuse angle** • **Right angle** • **Presence** • **Absence** • **Vertices** • **Equilateral** • **Isosceles** • **Scalene**	**Tier III:** • **Piggyback** • **Compass Rose**
What pre-assessment will be given? Geometry Pre-Assessment		**How will pre-assessment guide instruction?** The Geometry pre-assessment will inform the teacher with the data needed that will show what students already know, what they donôt

	know, and what possible misconceptions there might be.	
Standards	**Assessment of Standards** (include formative and summative)	
Common Core Learning Standards Taught and Assessed (*include one or more standards for one or more of the areas below. Please write out the complete text for the standard(s) you include.)*	**What assessment(s) will be utilized for this unit?** *(include the types of both* ***f****ormative assessments (***F****) that will be used throughout the unit to inform your instruction and the summative assessments (***S****) that will demonstrate student mastery of the standards.)*	**What does the assessment tell us?**
Common Core Mathematics Content Standard(s): **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 angles. (Two dimensional shapes should include special triangles, e.g., equilateral, isosceles, scalene, and special quadrilaterals, e.g., rhombus, square, rectangle, parallelogram, trapezoid.)**	F: Collaboration throughout the unit of study. F: Picture Sort Activity F: Shape Handout Activities F: Note Taking Guide F: Student Math Journal S: Geometry Term Book S: Culminating Town Activity S: Pre-Assessment S: Post Assessment	Ongoing evidence of studentsô understanding of concepts presented. Diagnostic information for intervention or acceleration. Student comprehension of unit concepts and the Big Idea: **Objects can be described, classified and analyzed based on their attributes.**
Opportunities for listening, speaking, reading, writing, and thinking (*Cite Literacy Standards (as applicable):* **Listening and Speaking**: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on othersô ideas and expressing their own clearly. **4.1.a** Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussions. **4.2. b** Follow agreed-upon rules for discussions and carry out assigned roles.	Teacher evaluation of student speaking and listening: F: Ask and answer questions in pairs and collaborative groups during and after lessons. F: Work collaboratively using Collaborative Conversation sentence frames to create classroom norms for the unit of study.	When talking about mathematics in pairs and collaborative groups, do students follow protocol/rules/

4.2.c Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remark of others. **4.1.d** Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.		routines for collaborative discussions?

Standards of Mathematical Practice:	(*Check all that apply*) ☒ 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 use of structure. ☒ 8. Look for and express regularity in repeated reasoning.	**Opportunities for Observable Data** *(How will students demonstrate these Mathematical Practices?)* • **Collaborative discussions integrated in all lessons.** • **Constructing reasonable and fact based evidence to defend their mathematical reasoning and conclusions.** • **Culminating Activity** • **Completion of Geometry Flip Book** • **Completion of 2-dimensional figures**
Resources/ Materials:	**Text(s) Titles: HM Grade 4 Textbook, Saxon Math Series** **Mathematical Tools: Rulers, circles (1/4th of a cutout for each student)** **Media/Technology: Discovery Science Geometry Videos, You Tube, *ST Math- Geometry*** **Supplementary Materials: Tape, glue, marshmallows, coffee stirrers, construction paper**	
Interdisciplinary Connections:	**Cite several interdisciplinary or cross-content connections made in this unit of study (i.e. literature, science, social studies, art, etc.)** • **Literature (*The Greedy Triangle)*-You Tube video** • **Art – Geometry Performance Task**	

Differentiated Instruction:	**Based on desired student outcomes, what instructional variation will be used to address the needs of English Learners by language proficiency level?** • **Sentence frames are provided in varying degrees of difficulty to facilitate academic language and conversations.** • **Use of visual organizers to assist processing mathematical ideas.** • **Scaffolding by teacher as necessary to support the English Learner.** • **Explicitly teach key academic vocabulary.** • **Use of manipulates to facilitate conceptual understanding.**	**Based on desired student outcomes, what instructional variation will be used to address the needs of students with special needs, including gifted and talented?** **Special Needs-** • **Inclusion of Appendix to provide additional resources to help prepare students. *** • **Opportunities for verbal rehearsal of concepts.** • **Use of visual organizers.** • **Explicitly teach key academic vocabulary.** **Accelerated Learners-** • **Concepts of each day's lessons have been extended to include a higher level of depth of complexity.** • **Accelerated students can create their own representations as an extension to deepen their understanding of the mathematical concepts.**

4th Grade Unit- Theory

The 4th grade Geometry Unit was based on research that explains how students develop their understanding of geometric concepts. In order to ensure students success in geometry and to develop their ability to think and reason in a geometric context, The van Hiele Model of the Development of Geometric Thought was utilized. The van Hiele model is a sequential model that has a five-level hierarchy of geometric thinking. In this unit we will be addressing the first three levels.

The van Hiele Levels of Geometric Thought Summary

(From *Elementary and Middle School Mathematics, Teaching Developmentally*, by John Van de Walle, Karen Karp, and Jennifer Bay-Williiams. Pearson Education, Inc., Boston (2010).)

Level 0: Visualization- Students know vocabulary, can identify shapes by its appearance, and can begin to classify shapes by similarities and differences.

Level 1: Analysis- Students begin to recognize parts of shapes, and as they look at them they make generalizations to understand the properties of shapes. Students refine their understanding of symmetry, angle classification (right, obtuse, acute), parallel and perpendicular.

Level 2: Informal Deduction- Students begin to understand the relationship between properties. For example, ñIf all four angles are right angles, then the shape must be a rectangle. If it is a square, then all angles are right angles. If it is a square, then it must be a rectangle.ò If-then reasoning is established to lead to logical arguments of properties.

Level 3: Deduction-Students begin to develop definitions, theorems, corollaries, and postulates to establish geometric truths. Students are able to make conclusions based on abstract statements about geometric properties.

Level 4: Rigor- ñThe objects of thought at level 4 are deductive, axiomatic systems of geometry.ò (Generally the level of college geometry courses)

The levels are sequential, hierarchical, and not age dependent. Our goal is to guide students through the progression of these levels.

Big Idea: Objects can be described, classified and analyzed based on their attributes.

Mathematical Standards:

Major emphasis standard : 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 Supporting Standard: 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.

Essential Questions:

How can parallel and perpendicular lines be identified?

How can you use a right angle to classify all angles?

What geometric components make up figures?

What properties do geometric shapes have in common?

4th Grade Common Core Unit Overview: Week 1

	Lesson: Prep A	Lesson 1	Lesson 2	Lesson 3
Activities	* Pre-Assessment * "Sierpinski Triangle" *Collaborative Conversation	*Compare and Contrast a triangle with a rectangle *Geometric figure sort * Presentation of sort *Create a Geometry word bank	*Perpendicular Picture Sort *Parallel Picture Sort *Collaborative Conversation	* Math Talk with ST Math *Color code angles utilizing $\frac{1}{4}$ of a circle as a reference for a right angle.
Materials to Compile	*Pre-Assessment *Post Content and Language Objectives *Sierpinski Triangle Handout *Collaborative Conversations Sentence Frames- 1 per group *Chart paper *Math Journals	*Post Big Idea and Essential Questions *Post Content and Language Objectives *Geometry Figure Handout *Construction paper (1 piece per group) *Scissors *Glue for each group *Chart Paper * Collaborative Conversations Sentence Frames	*Post Content and Language Objectives * Collaborative Conversations Sentence Frames *Glue for each group * Parallel T-Chart handout *Parallel picture sort handout *Perpendicular T-chart handout *Perpendicular picture sort handout *Math journals *Highlighters *Parallel video Clip *Perpendicular video clip	Content>Test Drive Games> 4th grade> Optional Objectives> Line and Angles>Parallel or Perpendicular *Post Content and Language Objectives * Collaborative Conversations Sentence *Shapes handout *Construction Paper * Crayons: red, blue, yellow *Circle cutout (each student will use a $\frac{1}{4}$ piece)
Homework	Journal Entry	Lesson 1 Homework Handout	Lesson 2 Homework Handout	Angles Homework Handout

4th Grade Common Core Unit Overview: Week 2

	Lesson 4	Lesson 5	Lesson 6	Lesson 7	Lesson 8
Activities	* Math Talk with ST Math * Geometric Terms video * Create a geometric terms foldable	* Watch a video and take notes on how a shape changes when a side is added	*"Pick Up Stick Game" * Students will create shapes using sticks and marshmallows *Students will draw the shape and label its parts in their journal	*Geometry Performance Task: create a map *Write two sets of directions from one place to another	Assessment
Materials to Compile	Content> Test Drive Games> 4th grade> Optional Objectives> Line and Angles> Which Angle> Level 1 *Post Content and Language Objectives * Post Collaborative Conversations Sentence Frames *Construction paper (1/student) *Tape or glue *Scissors * Math journals Discovery Education Video	*Greedy Triangle video *Note taking guide *Post Content and Language Objectives * Post Collaborative Conversations Sentence Frames	*Post Content and Language Objectives * Post Collaborative Conversations Sentence Frames Stir sticks per student: 5-whole stir sticks 5- 2 ½ inch stir sticks 5-3 ½ inch stir sticks *Mini Marshmallows- 20 per student *baggies *Math journals *Greedy Triangle note taking guide- for reference	*Post Content and Language Objectives * Post Collaborative Conversations Sentence Frames *12x18 Construction paper (1/student) *Rulers *Geometric Performance Task sheet	*Assessment (same as Pre-Assessment)
Homework	Lesson 4 Homework	Greedy Triangle Homework handout	Lesson 6 homework	Take map home and practice	

SAUSD Common Core Lesson Planner Math Teacher:

Unit: Geometry **Lesson:** Prep A	**Grade Level/Course:** 4	**Duration:** 60 minutes **Date:**
Common Core and Content Standards	**Listening and Speaking**: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on otherséideas and expressing their own clearly. **4.1.a** Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussions. **4.2. b** Follow agreed-upon rules for discussions and carry out assigned roles. **4.2.c** Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remark of others. **4.1.d** Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.	
Materials/ Resources/ Lesson Preparation	• Pre-Assessment • Post Big Idea and Essential Questions • Post Content and Language Objectives daily • Sierpinski Triangle handout ï 1 per student • Collaborative Conversation Sentence Frames ï 1 per group • Chart paper for Collaborative Talk Norms • Math Journal	
Objectives	**Content:** Students will participate in two collaborative conversations, compare and contrast a small group discussion with a whole group discussion, and create classroom collaboration norms.	**Language:** Students will discuss ñSierpinski Triangleò to compose classroom collaboration norms.
Depth of Knowledge Level	☐ **Level 1: Recall** ☒ **Level 2: Skill/Concept** ☒ **Level 3: Strategic Thinking** ☐ **Level 4: Extended Thinking**	
Standards for Mathematical Practice	☒ **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 use of structure.** ☒ **8. Look for and express regularity in repeated reasoning.**	
Common Core Instructional Shifts in Mathematics	☒ **Focus on the Standards** ☐ **Coherence within and across grade levels** ☒ **Rigor (Balance of conceptual understanding, procedural skill & fluency, and application of skills)**	

Academic Vocabulary (Tier II & Tier III)	TEACHER PROVIDES SIMPLE EXPLANATION	**KEY WORDS ESSENTIAL TO UNDERSTANDING**	**WORDS WORTH KNOWING**
		Clarification Collaboration Norms Argument	Piggyback
	STUDENTS FIGURE OUT THE MEANING	Expand Evidence	Interrupting Respect
Pre-teaching Considerations		Student desks should be arranged in collaborative groups of four for the entire unit. Student should be able to work successfully in collaborative groups.	

Lesson Delivery

Instructional Methods	**Check method(s) used in the lesson:** ☐ **Modeling** ☒ **Guided Practice** ☒ **Collaboration** ☒ **Independent Practice** ☐ **Guided Inquiry** ☒ **Reflection**
Lesson Opening	**Prior Knowledge, Context, and Motivation:** The purpose of this lesson is to practice how to work together in collaborative groups. Students will have a collaborative discussion which may include argument.

Lesson Continuum

Body of the Lesson: Activities/ Questioning/ Tasks/ Strategies/ Technology/ Engagement

Lesson Overview

Teacher Directions

- Pass out pre-assessment and explain to the students that the purpose of the test is to see what they already know. They should not worry if they donôt know the answers, just do the best they can. The same test will be given at the end of the unit to measure growth.
- Introduce Content and Language Objectives.
- Discuss ways to have a respectful discussion. Explain that in a discussion it is ok to agree and disagree, but that it must be done in a respectful way. To facilitate this we will be using sentence frames. Pass out the sentence frames for collaborative conversation and review them.
- Pass out ñSierpinski Triangleò to each student. Ask each student to count how many triangles are in the picture. Give students 5 minutes to count the triangles on their own, and then ask them to discuss their answers with their collaborative group. Students should be able to give an answer and justify or explain how they got it. If the students have different answers, (which is expected), have them use the sentence frames to debate the answer.

Differentiated Instruction:

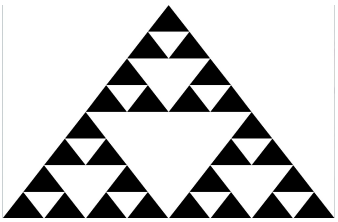
English Learners: Collaborative sentence frames are provided on Collaborative Conversations handout.

Students Who Need Additional Support:

See Appendix

Accelerated Learners:

Allow students to create their own shape-like version of the Sierpinski Triangle. This activity can be extended over two days.



- To continue practicing collaborative conversations, have the students pair up with a second collaborative group to again debate their answers. After approximately 10 minutes, open a discussion with the whole class comparing/contrasting their two discussions. What issues came up when working in a larger group as opposed to a smaller group? How did the group handle disagreement? What norms need to be established for collaborative talk? Work with the students to create a list of 4-6 norms
    - Suggested norms
        - We listen to one another.
        - We share our own ideas and explain them.
        - We respect one anotherôs ideas, even if they are different.
        - We respectfully disagree and try to see the other view.
        - We let others finish explaining their ideas without interrupting.
        - We take turns and share time.
- Explain that throughout the unit the class will be using the norms in their collaborative groups and have them copy the norms into their math journal.
- Review Content and Language Objectives.
- Homework ï In student math journals, students write a paragraph describing a successful collaborative group. (What would you see? What would you hear?)

Lesson Reflection	
Teacher Reflection Evidenced by Student Learning/ Outcomes	

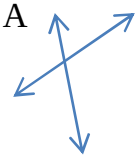
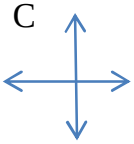
Pre-Assessment

Directions: Answer each question. Some questions may have more than one correct answer.

1. Which of these is a line segment?

A  B  C 

2. Which lines below are parallel?

A  B  C 

3. Which polygon has two sets of parallel lines?

A  B  C 

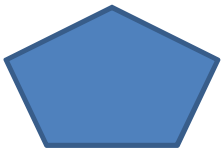
4. How many acute angles are in this polygon?

A 5

B 4

C 3

D 2



5. Draw an obtuse angle:

6. Which shapes have an obtuse angle?

A  B 

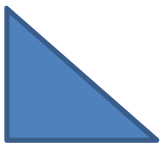
C  D 

7. Draw a shape with at least one right angle. Label the parts of the shape.

8. Which of these shapes have NO right angles?
   A right triangle
   B rectangle
   C acute triangle

9. Which shapes have TWO sets of parallel lines?
   A triangle
   B rectangle
   C trapezoid
   D parallelogram

10. Alex is teaching Nicolas about triangles. He says the triangle below is an acute triangle. Is he right or wrong? Explain how you know?



Collaborative Conversation Sentence Frames

What to say when you want clarification…

- Will you explain that again?
- I have a question about what you said about _____.
- Do you mean that _____?
- Could you expand a little bit on what you said about _____?
- Could you give an example of what you mean by _____?

What to say when you want to build on another's idea…

- You made a good point when you said _____.
- My idea is related to _____'s idea. I think _____.
- I see what you're saying. I agree because _____.
- My idea builds on _____'s idea. I think _____.
- I'd like to piggyback on that idea. I think

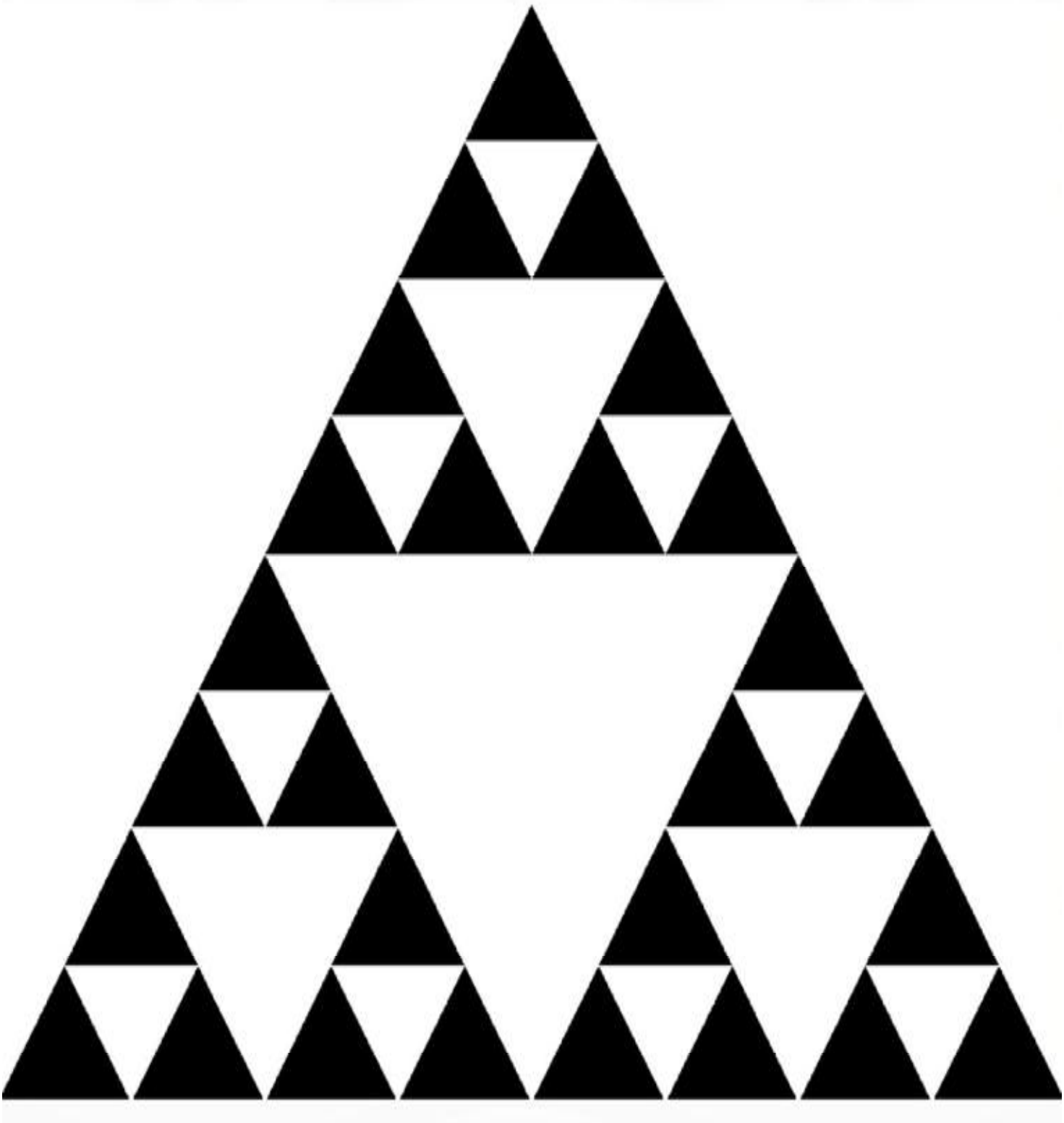
What to say when you disagree…

- I see what you're saying, but I think that _____.
- Another way to look at it is _____.
- I do agree with what you said about _____, but I think _____.
- I see it another way. Based on _____, I think _____.
- Another possibility might be _____.
- I have a different answer. I wrote down

What to say when you want to cite evidence from the text…

- On page____, paragraph _____, the author says _____.
- When I read _____ on page _____, I thought that _____.
- I think the text supports my thinking on page _____, paragraph _____, by stating that _____.
- Another example of _____ is on page _____, paragraph, where the author states_____.

Sierpinski Triangle



SAUSD Common Core Lesson Planner Math Teacher:

Unit: Geometry **Lesson: 1**	**Grade Level/Course:** 4	**Duration: 60 minutes** **Date:**
Common Core and Content Standards	**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.	
Materials/ Resources/ Lesson Preparation	• Post Big Idea and Essential Questions • Post Content and Language Objectives daily • Geometric Figure Handout • construction paper ï 1 piece per group • scissors • glue • homework handout • Chart paper for Word Bank • Collaborative Conversation Sentence Frames	
Objectives	**Content:** Students will identify the properties of various geometric objects.	**Language:** Students will explain their rationale for sorting shapes and be able to justify their reasoning.
Depth of Knowledge Level	☒ **Level 1: Recall** ☒ **Level 2: Skill/Concept** ☒ **Level 3: Strategic Thinking** ☒ **Level 4: Extended Thinking**	
Standards for Mathematical Practice	☒ **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 use of structure.** ☒ **8. Look for and express regularity in repeated reasoning.**	
Common Core Instructional Shifts in Mathematics	☒ **Focus on the Standards** ☒ **Coherence within and across grade levels** ☒ **Rigor (Balance of conceptual understanding, procedural skill & fluency, and application of skills)**	

Academic Vocabulary (Tier II & Tier III)		KEY WORDS ESSENTIAL TO UNDERSTANDING	WORDS WORTH KNOWING
	TEACHER PROVIDES SIMPLE EXPLANATION		
	STUDENTS FIGURE OUT THE MEANING		

Pre-teaching Considerations	Student desks should be arranged in collaborative groups of four for the entire unit. Student should be able to work successfully in collaborative groups. Review posted norms. Students should be familiar with creating a Double Bubble Thinking Map (Compare and Contrast). Students should have background about triangles and rectangles.

Lesson Delivery

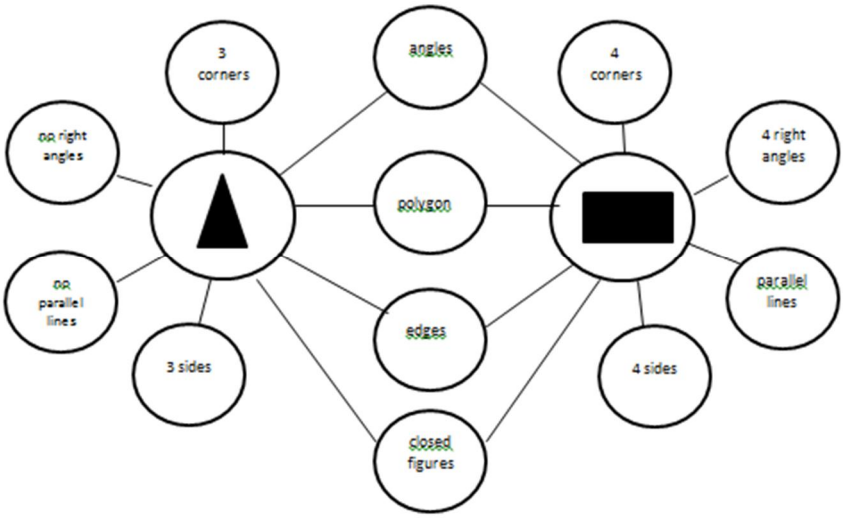
Instructional Methods	**Check method(s) used in the lesson:** ☐ **Modeling** ☐ **Guided Practice** ☒ **Collaboration** ☒ **Independent Practice** ☒ **Guided Inquiry** ☒ **Reflection**
Lesson Opening	**Prior Knowledge, Context, and Motivation:** Students will be familiar with classifying shapes based on their properties.

Lesson Continuum

Body of the Lesson:
Activities/ Questioning/ Tasks/ Strategies/ Technology/ Engagement

Lesson Overview

Math Warm-up
Display the triangle and rectangle and ask the students to compare and contrast them using a Double Bubble map in their math journal. Possible student answers shown below.



Differentiated Instruction:

English Learners:

We sorted our shapes by _____ because _____.

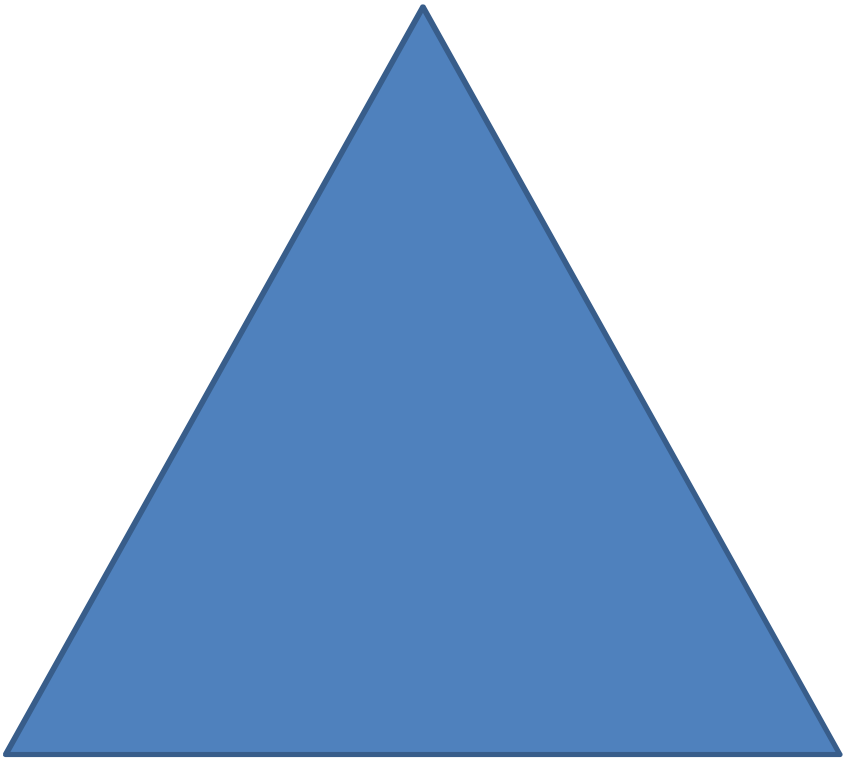
Students Who Need Additional Support:

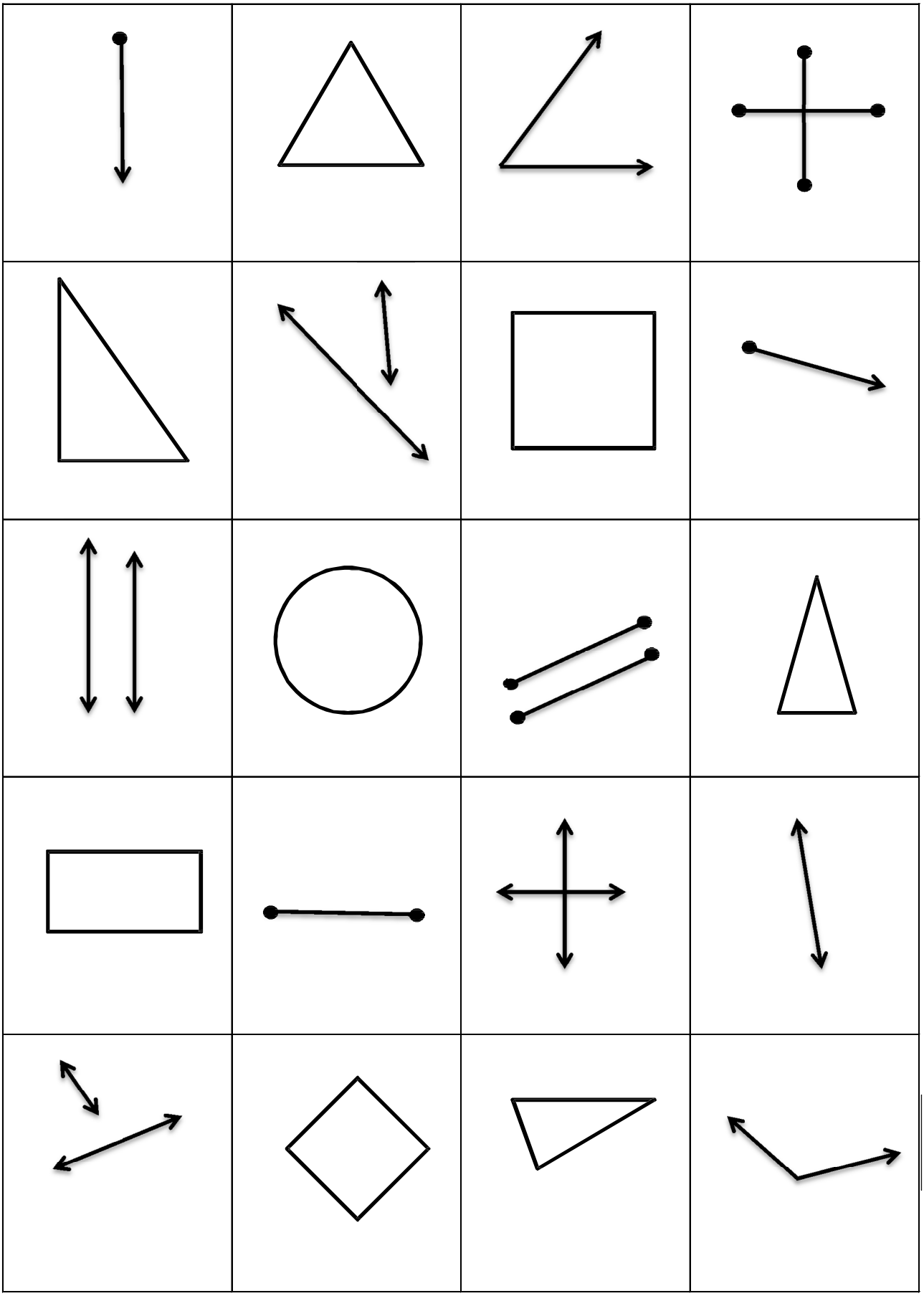
See Appendix

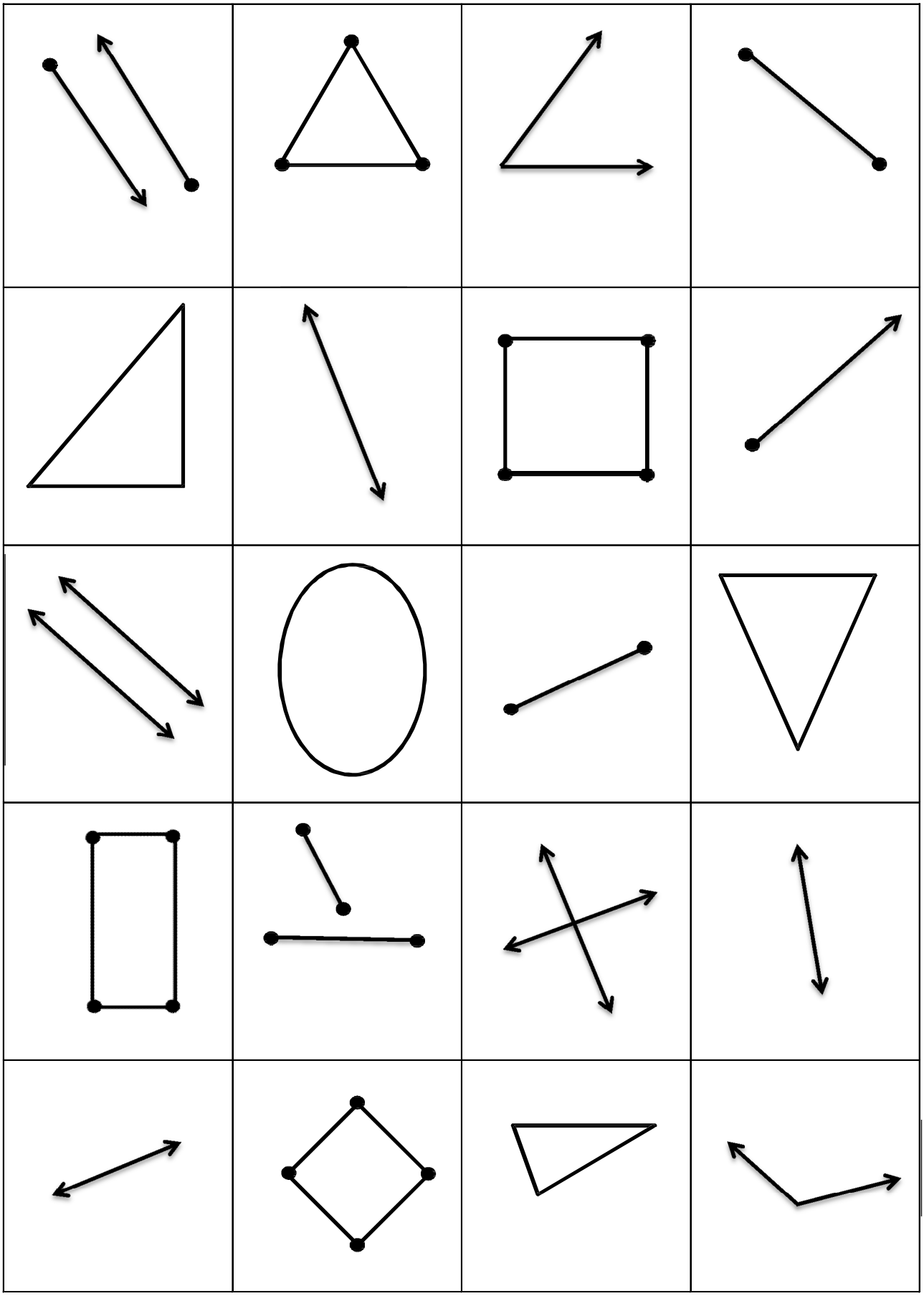
Accelerated Learners:
Have the students resort the shapes in another way and explain their reasoning.

	Teacher Directions • Introduce Big Idea and Essential Questions. Once you have introduced them please display them throughout the entire unit. • Introduce daily Content and Language Objective • Review Collaborative Conservation Frames • Pass out one piece of construction paper, geometric figure handout, glue, and scissors. • Tell the students that they will be sorting their geometric figures into groups after they have cut them out. Each group will decide how to sort the figures based on a common geometric property (their choice). • Remind students to follow group norms. • Tell students that they will be presenting their completed sort to the class, and the class will guess how the shapes were sorted. • Give students 5-10 minutes to discuss, sort cards, and glue them on the construction paper. • Collaborative groups will write the property they used to sort the figures on the top of the construction paper so that it can be folded and hidden from view. • All groups should present one of their groupings. Each collaborative group will guess how the shapes were sorted and write the group answer on a student whiteboard or piece of paper. When all groups have attempted to guess, the presenting group will explain how they sorted. • As groups are presenting the teacher will create add the following terms to the word bank of geometric terms as they are generated by the students: line segment, point, ray, line, angle. • After all groups have presented, the students should answer the essential question ñWhat properties do geometric figures have in common?ò in their math journals. Closure Review Content and Language Objectives Homework • Lesson 1 homework handout	
Lesson Reflection		
Teacher Reflection Evidenced by Student Learning/ Outcomes		

Shapes for Prior Knowledge Activity- Lesson 1







Lesson 1 Homework

Name:_____

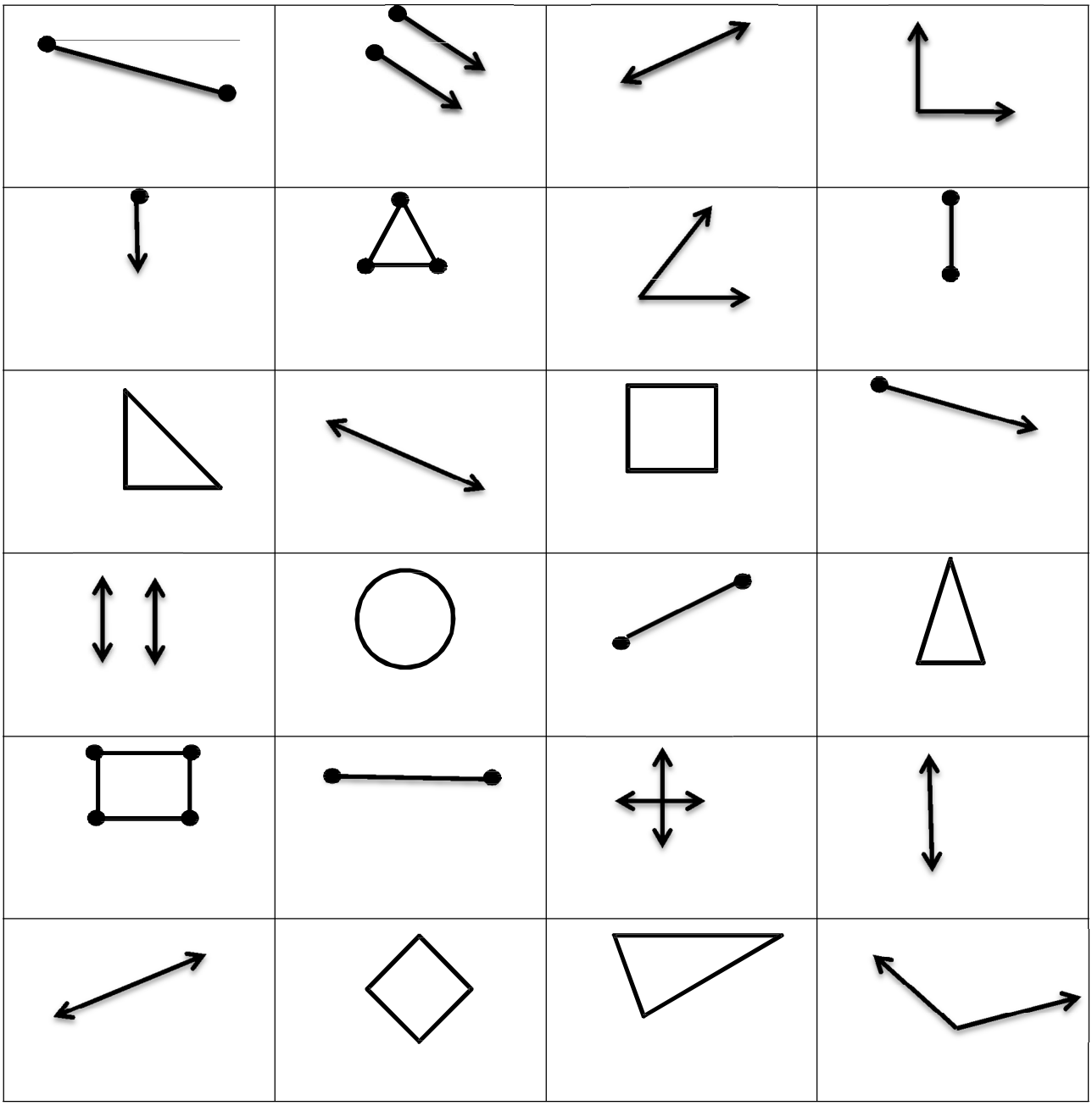
Color the **lines yellow**.

Color the **line segments blue**.

Color the **rays orange**.

Color the **lines green**.

Color the **points red**.



SAUSD Common Core Lesson Planner Math Teacher:

Unit: **Lesson: 2**	**Grade Level/Course:** 4	**Duration: 60 minutes** **Date:**
Common Core and Content Standards	**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.	

Materials/ Resources/ Lesson Preparation	• Review Big Idea and Essential Questions
	• Post Content and Language Objectives daily
	• Collaborative Conversation Sentence Frames
	• glue for each group
	• parallel T-chart handout
	• parallel picture sort handout
	• perpendicular T-chart handout
	• perpendicular picture sort handout
	• math journals
	• highlighters
	• Lesson 2 homework
	• 2 Video segments (2 minutes each)
	  ○ Show Parallel Video Clip http://app.discoveryeducation.com/player/?assetGuid=0d80ed2b-2c86-4aab-a4aa-062d612f09eb&fromMyDe=0&isPrinterFriendly=0&provider=&isLessonFromHealth=0&productcode=US&isAssigned=false&includeHeader=YES&homeworkGuid=
	  ○ Perpendicular Video Clip http://app.discoveryeducation.com/player/?assetGuid=0d80ed2b-2c86-4aab-a4aa-062d612f09eb&fromMyDe=0&isPrinterFriendly=0&provider=&isLessonFromHealth=0&productcode=US&isAssigned=false&includeHeader=YES&homeworkGuid=	

Objectives	**Content:** Students will sort figures by their lines (parallel, perpendicular, and intersecting)	**Language:** Students will define parallel and perpendicular lines.
Depth of Knowledge Level	☒ **Level 1: Recall** ☒ **Level 2: Skill/Concept** ☒ **Level 3: Strategic Thinking** ☐ **Level 4: Extended Thinking**	
Standards for Mathematical Practice	☒ **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 use of structure.** ☐ **8. Look for and express regularity in repeated reasoning.**	

Common Core Instructional Shifts in Mathematics		☒ **Focus on the Standards** ☐ **Coherence within and across grade levels** ☒ **Rigor (Balance of conceptual understanding, procedural skill & fluency, and application of skills)**	
Academic Vocabulary (Tier II & Tier III)	**TEACHER PROVIDES SIMPLE EXPLANATION**	**KEY WORDS ESSENTIAL TO UNDERSTANDING** Parallel Perpendicular	**WORDS WORTH KNOWING**
	STUDENTS FIGURE OUT THE MEANING		
Pre-teaching Considerations		Student desks should be arranged in collaborative groups of four for the entire unit. Student should be able to work successfully in collaborative groups. Review posted norms.	

Lesson Delivery

Instructional Methods	**Check method(s) used in the lesson:** ☐ **Modeling** ☒ **Guided Practice** ☒ **Collaboration** ☐ **Independent Practice** ☒ **Guided Inquiry** ☒ **Reflection**	
Lesson Opening	**Prior Knowledge, Context, and Motivation:** Students should have background knowledge of parallel and perpendicular lines.	
Body of the Lesson: Activities/ Questioning/ Tasks/ Strategies/ Technology/ Engagement	**Lesson Overview** Review lesson 1 homework **Teacher Directions** • Introduce Big Idea and Essential Questions. Once you have introduced them please display them throughout the entire unit. As you proceed through the lessons you may want to add students or class generated answers to the questions. • Introduce daily Content and Language Objective • Review Collaborative Conservation Frames Activity 1 • Show Parallel Video Clip (2 minutes) http://app.discoveryeducation.com/player/?assetGuid=0d80ed2b-2c86-4aab-a4aa-062d612f09eb&fromMyDe=0&isPrinterFriendly=0&provider=&isLessonFromHealth=0&productcode=US&isAssigned=false&includeHeader=YES&homeworkGuid= • Pass out Parallel Picture sort handout and Parallel T-chart. In collaborative groups, have the students cut out pictures and then take turns choosing a picture card and placing it on the T-chart. They should explain to the group where they are placing the card and why. Continue until all pictures have been sorted. During	**Differentiated Instruction:** **English Learners:** This picture shows _____ lines because_____. This picture doesn't show _____ lines because _____. **Students Who Need Additional Support:** See Appendix

Lesson Continuum

	the sort, the teacher will monitor the groups and ask questions about where the cards were placed. Students should be able to justify the placement of each picture card. Once cards are correctly placed, students may glue them to the chart. • To check the sort, complete a whole class sort of the cards. Project the T-chart on the board, have students come up and choose a shape, place it on the chart, and explain why. Students who disagree with the placement could then raise their hand and explain why the picture card should be moved. • Add parallel lines to your word bank. Activity 2 • Show Perpendicular Video Clip (2 minutes) http://app.discoveryeducation.com/player/?assetGuid=0d80ed2b-2c86-4aab-a4aa-062d612f09eb&fromMyDe=0&isPrinterFriendly=0&provider=&isLessonFromHealth=0&productcode=US&isAssigned=false&includeHeader=YES&homeworkGuid= • Pass out Perpendicular Picture sort and Perpendicular T-chart. In collaborative groups, have the students cut out pictures and then take turns choosing a picture card and placing it on the T-chart. They should explain to the group where they are placing the card and why. Continue until all pictures have been sorted. During the sort, the teacher will monitor the groups and ask questions about where the cards were placed. Students should be able to justify the placement of each picture card. Once cards are correctly placed, students may glue them to the chart. • To check the sort, complete a whole class sort of the cards. Project the T-chart on the board, have students come up and choose a shape, place it on the chart, and explain why. Students who disagree with the placement could then raise their hand and explain why the picture card should be moved. • Add perpendicular to the word bank. Closure • Review Content and Language Objectives • Review Essential Question ñHow can parallel and perpendicular lines be identified?ò Have students write the essential question and their answer in their math journal. If time, allow a few students to share their answers. Homework: • Handout ï Students will look for parallel and perpendicular lines in their home/neighborhood. They will draw a sketch of what they find.	**Accelerated Learners:** Students can work individually on their picture sort for parallel and perpendicular lines. They will present to independently to the class. Students can extend the homework by creating their own True/False statements.

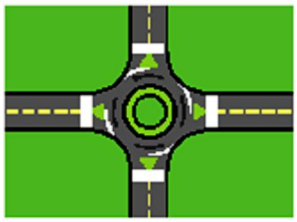
Lesson Reflection	
Teacher Reflection Evidenced by Student Learning/ Outcomes	

Parallel T-Chart

Parallel Lines	No Parallel Lines

Parallel Picture Sort

Parallel Picture Sort

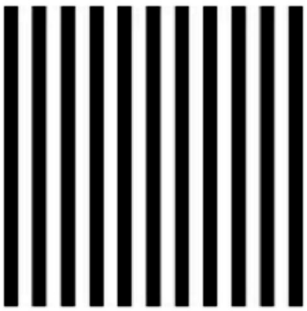


Perpendicular T-Chart

Perpendicular Lines	No Perpendicular Lines

Perpendicular Picture Sort

Perpendicular Picture Sort



Recording Sheet

What parallel and perpendicular lines do you see in or around your home or neighborhood? Sketch and label your results below.

SAUSD Common Core Lesson Planner Math Teacher:

<table>
<tr><td>Unit:
Lesson: 3</td><td colspan="2">Grade Level/Course:
4</td><td>Duration: 60 minutes
Date:</td></tr>
<tr><td>Common Core and Content Standards</td><td colspan="3">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.</td></tr>
<tr><td>Materials/ Resources/ Lesson Preparation</td><td colspan="3">• Review Big Idea and Essential Questions
• Post Content and Language Objectives daily
• Collaborative Conversation Sentence Frames
• ST Math
• Shapes Handout ï 1 per student
• Construction paper
• crayons
• Circle cutout- 1 per group of 4 students (each student will use a ¼ piece)</td></tr>
<tr><td>Objectives</td><td colspan="2">Content:
Students will understand that a right angle is 90 degrees, an obtuse angle is bigger than a right angle, and an acute angle is smaller than a right angle</td><td>Language:
Students will be able to describe right, acute and obtuse angles.</td></tr>
<tr><td>Depth of Knowledge Level</td><td colspan="3">☒ Level 1: Recall ☒ Level 2: Skill/Concept
☒ Level 3: Strategic Thinking ☐ Level 4: Extended Thinking</td></tr>
<tr><td>Standards for Mathematical Practice</td><td colspan="3">☒ 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 use of structure.
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<tr><td>Common Core Instructional Shifts in Mathematics</td><td colspan="3">☒ Focus on the Standards
☐ Coherence within and across grade levels
☒ Rigor (Balance of conceptual understanding, procedural skill & fluency, and application of skills)</td></tr>
<tr><td>Academic Vocabulary (Tier II & Tier III)
TEACHER PROVIDES SIMPLE EXPLANATION</td><td colspan="2">KEY WORDS ESSENTIAL TO UNDERSTANDING
Angle
Acute angle
Obtuse angle
Right angle</td><td>WORDS WORTH KNOWING</td></tr>
</table>

	STUDENTS FIGURE OUT THE MEANING		

Pre-teaching Considerations	Student desks should be arranged in collaborative groups of four for the entire unit. Student should be able to work successfully in collaborative groups. Review posted norms.

Lesson Delivery

Instructional Methods	**Check method(s) used in the lesson:** ☒ **Modeling** ☒ **Guided Practice** ☒ **Collaboration** ☒ **Independent Practice** ☐ **Guided Inquiry** ☒ **Reflection**
Lesson Opening	**Prior Knowledge, Context, and Motivation:** Students should be familiar with terms and meanings of right angles, obtuse angles, and acute angles.

Lesson Continuum

Body of the Lesson: Activities/ Questioning/ Tasks/ Strategies/ Technology/ Engagement

Lesson Overview
Teacher Directions

Review homework

- Review Big Idea and Essential Questions.
- Review daily Content and Language Objective
- Review Collaborative Conservation Frames

Math Warm-Up
Math Talk: In teacher mode of ST Math, project on smart board or screen.

- Content>Test Drive Games>4th grade >Optional Objectives>Lines and Angles> Parallel or Perpendicular

Choose students or groups to come to the computer/smart board, and identify the correct lines. They should also justify their answer. Be sure to complete the 3rd level where the students have to visualize where the lines will meet.

Activity 1:

- Have students work in collaborative groups of four for this activity.
- Pass out Shapes Handout and a circle cutout to each group of four.
- Teacher will ask the students how their piece of the circle relates to measuring angles. Let students discuss for 1-2 minutes then share out to the whole class.
- If necessary tell students:
  - a right angle is 90°
  - an obtuse angle is greater than 90°

Differentiated Instruction:

English Learners:

This angle is a(n) _____ angle because _____.

These lines are _____ because _____.

These lines are not _____ because _____.

A _____ measures _____ degrees.

Students Who Need Additional Support:

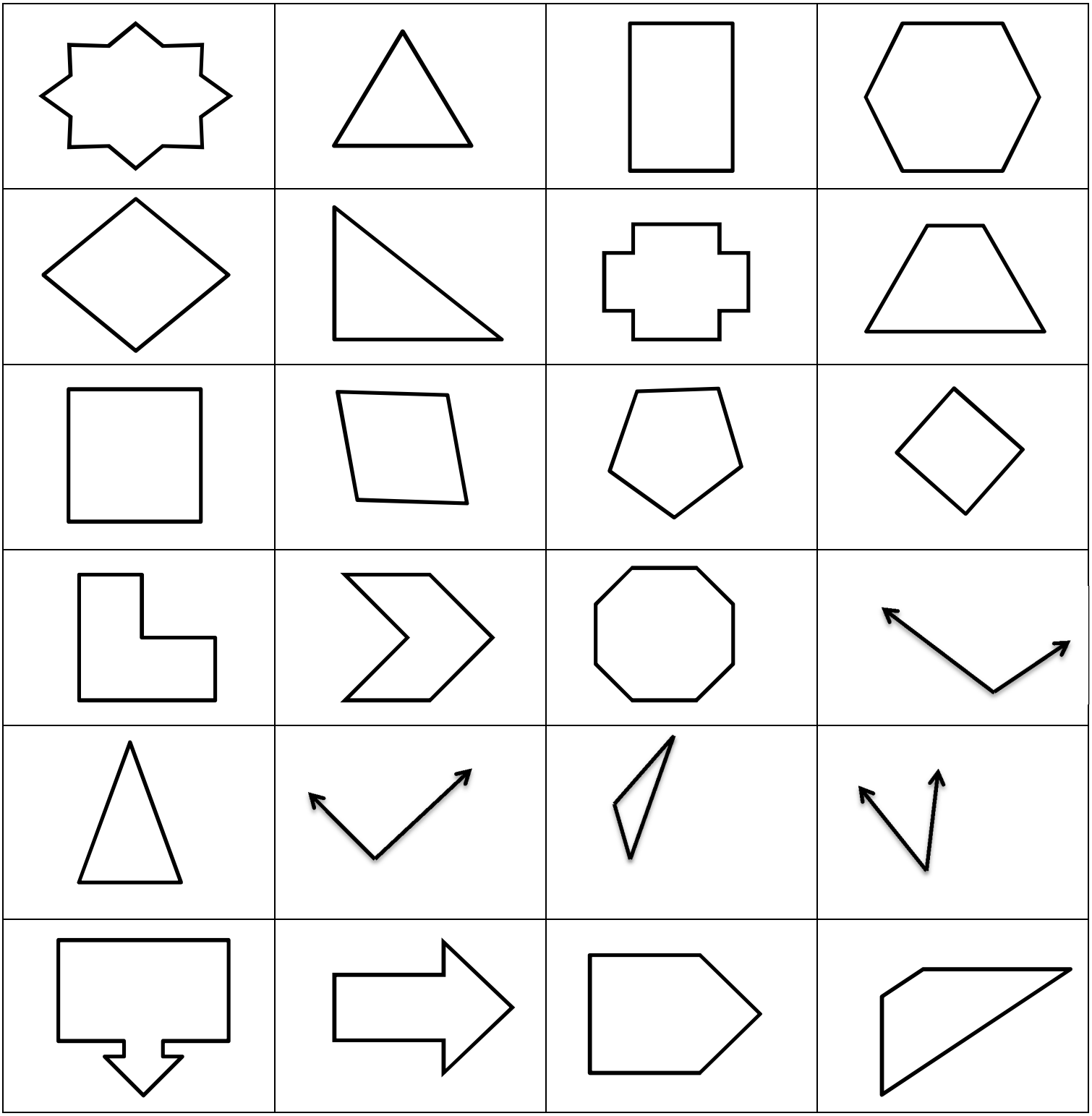
See Appendix

Accelerated Learners:
Students can walk around school to find examples of acute, right, and obtuse angles. If technology resources are available, students can take pictures

	○ an acute angle is smaller than 90° • Add new terms to your word bank: angle, acute, obtuse, right • Students will each take ¼ of the circle cutout to use as a guide to a right angle. Pass out the handout ñShapesò. Students will determine if the angles are right by placing their piece of the circle cutout on each angle of all shapes. Teacher may need to show examples and ask the students what angle it is and what makes it that type of angle. ○ Color right angles red ○ Color acute angles blue (The angle is smaller than a right angle.) ○ Color obtuse angles yellow (The angle is bigger than a right angle.) Activity 2: • Teacher will begin a collaborative discussion using the following questions: ○ If you put all of the cutout pieces back together, what shape is formed? (Students should put the circle back together) ○ How many right angles are in the entire shape? ○ What is the sum of all four of your right angles when put together? (You may need to remind them of the 90° measurement) ○ Where in real life do we talk about the 360°? Closure: As a class, review the answers to Shapes handout. Have students write and answer Essential Question in their math notebook. ñHow can you use a right angle to classify all angles?ò Review Content and Language Objectives Pass out homework ï Angles Homework handout	of their angles, otherwise they may sketch their results.
Lesson Reflection		
Teacher Reflection Evidenced by Student Learning/ Outcomes		

Shapes

Name_____



Directions: If the angle is a right angle, color it red.

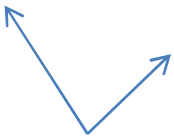
If the angle is an acute angle, color it blue.

If the angle is an obtuse angle, color it yellow.

Name;_____ Date:_____ Homework

Angles Homework

Classify the angles as acute, obtuse, or right. Explain your reasoning.

1. 

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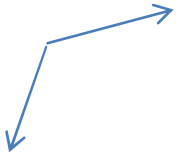
2. 

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3. 

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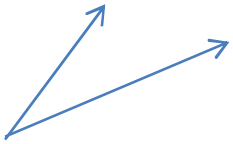
4. 

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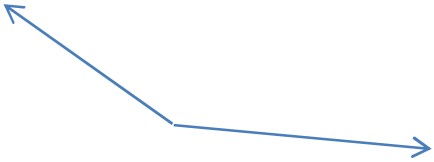
5. 

_____

_____

6. 

_____

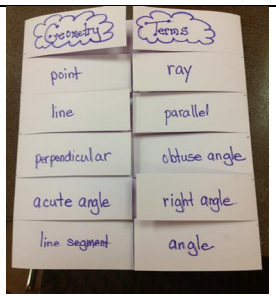
_____

Circle True or False for the following statements.

An obtuse angle is smaller than a right angle.	**True False**
An acute angle is smaller than a right angle.	**True False**
An obtuse angle has only 1 line and 1 point.	**True False**
A right angle can be measured with the corner of a _____	

Unit: **Lesson: 4**	**Grade Level/Course:** 4	**Duration:** 60 minutes **Date:**
Common Core and Content Standards	**4 G 1** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	
Materials/ Resources/ Lesson Preparation	• Post todayôs Content and Language Objectives • Collaborative Conversation Sentence Frames • Post sentence frames • 1 piece of construction paper per student • tape or glue • math journals • scissors • Homework handout • ST Math **Technology:** **video 1** http://app.discoveryeducation.com/player/?assetGuid=da3df462-05df-4949-98e7-dc4430035cbb&fromMyDe=0&isPrinterFriendly=0&provider=&isLessonFromHealth=0&productcode=US&isAssigned=false&includeHeader=YES&homeworkGuid=	
Objectives	**Content:** Students will be able to identify the basic geometric figures.	**Language:** Students will be able to explain the definitions of basic geometric terms.
Depth of Knowledge Level	☐ **Level 1: Recall** ☒ **Level 2: Skill/Concept** ☒ **Level 3: Strategic Thinking** ☒ **Level 4: Extended Thinking**	
Standards for Mathematical Practice	☒ **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 use of structure.** ☒ **8. Look for and express regularity in repeated reasoning.**	
Common Core Instructional Shifts in Mathematics	☒ **Focus on the Standards** ☒ **Coherence within and across grade levels** ☒ **Rigor (Balance of conceptual understanding, procedural skill & fluency, and application of skills)**	
Academic Vocabulary (Tier II & Tier III) **TEACHER PROVIDES SIMPLE EXPLANATION**	**KEY WORDS ESSENTIAL TO UNDERSTANDING**	**WORDS WORTH KNOWING**

	STUDENTS FIGURE OUT THE MEANING	Line, line segment, ray, point, end point, angle, perpendicular, parallel, acute, obtuse, right	
Pre-teaching Considerations		Student desks should be arranged in collaborative groups of four for the entire unit. Student should be able to work successfully in collaborative groups. Review posted norms.	
Lesson Delivery			
Instructional Methods		**Check method(s) used in the lesson:** ☒ **Modeling** ☐ **Guided Practice** ☒ **Collaboration** ☐ **Independent Practice** ☒ **Guided Inquiry** ☐ **Reflection**	
Lesson Opening		**Prior Knowledge, Context, and Motivation:** Students should be familiar with basic geometric terms and definitions.	
Lesson Continuum **Body of the Lesson:** Activities/ Questioning/ Tasks/ Strategies/ Technology/ Engagement		**Lesson Overview** • Review Big Idea and Essential Questions. • Review daily Content and Language Objective • Review Collaborative Conservation Frames **Teacher Directions** **Math Warm-up:** Math Talk: In order to reinforce the standards taught in lesson 2, in teacher mode of ST Math, project • Content>Test Drive Games>4th grade >Optional Objectives>Lines and Angles> Which Angle> Level 1 Choose students or groups to come to the computer/smart board, and identify the correct lines. They should also justify their answer. Be sure to complete the 1st level where the students can match the shape with its name. Activity 1 • Review Big Idea and Essential Questions. Once you have introduced them please display them throughout the entire unit. • Introduce daily Content and Language Objective • Play the 2 minute video to review the Geometric Terms. http://app.discoveryeducation.com/player/?assetGuid=da3df462-05df-4949-98e7-dc4430035cbb&fromMyDe=0&isPrinterFriendly=0&provider=&isLessonFromHealth=0&productcode=US&isAssigned=false&includeHeader=YES&homeworkGuid= Activity 2 • Students will work with a partner for this activity. • Review class word bank. • Pass out a piece of construction paper, scissors, and glue to each student. • Instruct the students in how to create their foldable and label the front with the Geometric math terms. (see picture) Step 1	**Differentiated Instruction:** **English Learners:** **Sentence Frames:** A _____ is a _____ because _____. **Students Who Need Additional Support:** See Appendix **Accelerated Learners:** Students can find real life models of the vocabulary terms in the classroom. Results can be recorded in their math journal and shared with the class.



- Tell students that with their partner, they must discuss the terms and then match the correct definition to the correct geometric term. Once the teacher has checked their results, the students will glue to correct definition under the corresponding term. They can then draw a picture on the open flap.
- Teacher should be moving around the room to monitor the studentsô collaborative conversations and foldables.
- If time permits, students can share their foldables with the class.

Review Big Idea and Essential Questions

Pass out homework page and explain

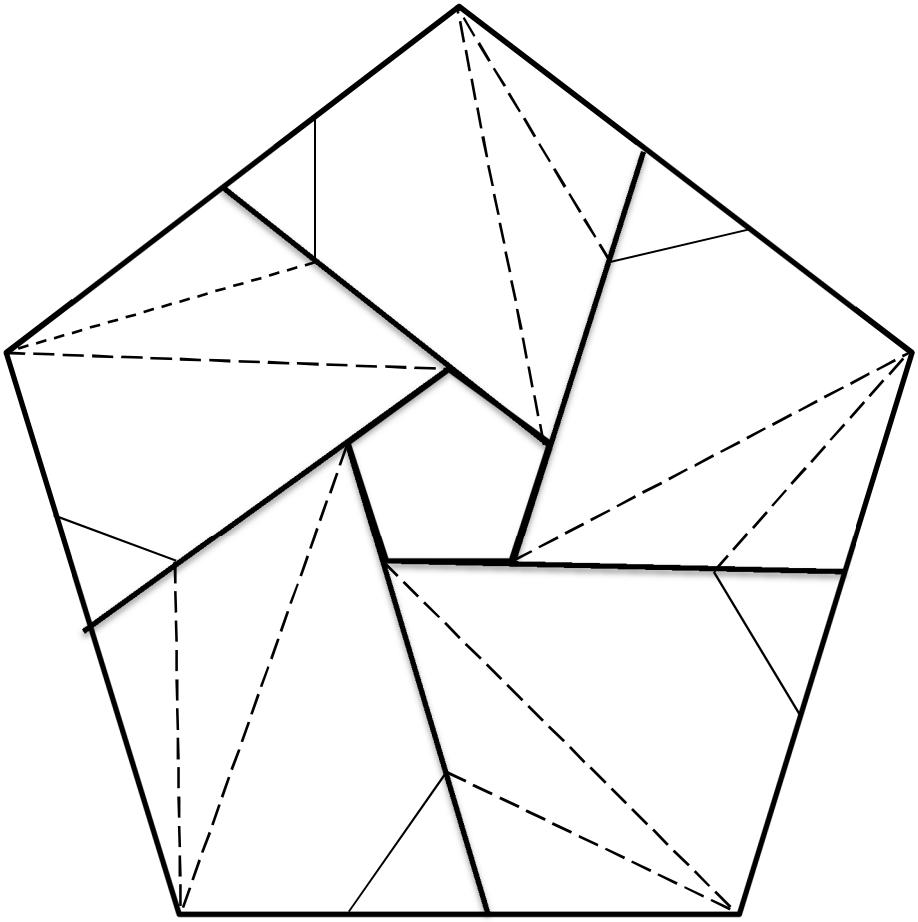
.

Lesson Reflection	
Teacher Reflection Evidenced by Student Learning/ Outcomes	

A continuous straight path that goes on without end in opposite directions.	**An exact location in space represented by a dot.**	**Part of line with two endpoints.**
Part of a line that starts at an endpoint and goes on forever in one direction.	**An angle that measures 90°.**	**An angle that measures greater than 90°.**
An angle that measures less than 90°.	**Two rays that share a common endpoint.**	**Lines that intersect to form right angles.**
Lines that are the same distance apart at all points and do not intersect.		

Name:_____ **Date:**_____

Homework



Directions: Use the figure above to answer the following questions.

1. Color the **acute** angles red. How many acute angles are in the figure? _____
2. Color all the **right** angles blue. How many right angles are in the figure? _____
3. Color the **obtuse** angles yellow. How many obtuse angles are in the figure? _____
4. How many **parallel lines** are in the figure? _____
5. How many **perpendicular lines** are in the figure? _____
6. How many triangles do you see? _____

SAUSD Common Core Lesson Planner Math Teacher:

<table>
<tr><td>Unit:
Lesson: 5</td><td colspan="2">Grade Level/Course:

4</td><td>Duration: 60 minutes
Date:</td></tr>
<tr><td>Common Core and Content Standards</td><td colspan="3">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.</td></tr>
<tr><td>Materials/ Resources/ Lesson Preparation</td><td colspan="3">• Post Big Idea and Essential Questions
• Post Content and Language Objectives daily
• Collaborative Conversation Sentence Frames
• Greedy Triangle video
• Note taking guide
• Greedy Triangle homework handout</td></tr>
<tr><td>Objectives</td><td colspan="2">Content:
Students will learn that all shapes can change or be modified. Students will look for specific patterns.</td><td>Language:
Students will explain how a shape can change when a side is added to a figure.</td></tr>
<tr><td>Depth of Knowledge Level</td><td colspan="3">☒ Level 1: Recall ☒ Level 2: Skill/Concept
☒ Level 3: Strategic Thinking ☒ Level 4: Extended Thinking</td></tr>
<tr><td>Standards for Mathematical Practice</td><td colspan="3">☐ 1. Make sense of problems and persevere in solving them.
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<tr><td rowspan="3">Academic Vocabulary (Tier II & Tier III)</td><td>TEACHER PROVIDES SIMPLE EXPLANATION</td><td>KEY WORDS ESSENTIAL TO UNDERSTANDING</td><td>WORDS WORTH KNOWING</td></tr>
<tr><td></td><td>Presence
Absence</td><td></td></tr>
<tr><td>STUDENTS FIGURE OUT THE MEANING</td><td></td><td></td></tr>
</table>

Pre-teaching Considerations	Student desks should be arranged in collaborative groups of four for the entire unit. Student should be able to work successfully in collaborative groups. Review posted norms.

Lesson Delivery

Instructional Methods	**Check method(s) used in the lesson:** ☐ **Modeling** ☒ **Guided Practice** ☒ **Collaboration** ☒ **Independent Practice** ☒ **Guided Inquiry** ☒ **Reflection**
Lesson Opening	**Prior Knowledge, Context, and Motivation:** Students should have background knowledge of geometric two-dimensional shapes. Students should also realize that shapes can change. They should be able to see patterns from shape to shape.

Lesson Continuum

Body of the Lesson: Activities/ Questioning/ Tasks/ Strategies/ Technology/ Engagement

Lesson Overview

Teacher Directions

Review homework

- Review Big Idea and Essential Questions.
- Review daily Content and Language Objective
- Review Collaborative Conservation Frames

Activity

- Today the class will be doing a close read of a video. They will be watching the video 2 times. The first time the students should just focus and watch the video. The second time, they will complete a note taking guide. Begin todayôs lesson of how shapes change and are made up of various geometric parts by playing the video of *The Greedy Triangle* to introduce concepts. After the first viewing, have a brief discussion of the story.
  - What shapes did you see?
  - What do you notice when a side is added to a shape?
  - What patterns did you find?
- For the second viewing of the video, give students the note taking guide. As the video plays, you may want to pause it to allow the students time to fill in their charts. After the video, the students will work in their collaborative groups to complete the chart. The information for heptagon ï decagon is inferred, but not clearly stated. However the students should be able to fill in the chart using the pattern. When everyone has finished, go over the note taking guide and correct any misconceptions. You may want to have students share their sample drawing on the document camera.
- Review daily Content and Language Objectives.

Homework

- The Greedy Triangle Homework handout. The students will look at shapes and identify number of sides, number of angles, and

Differentiated Instruction:

English Learners:

I saw _____ and _____.

The _____ changed when _____.

I saw a _____ pattern.

This pattern changed when _____.

Students Who Need Additional Support:

See Appendix

Accelerated Learners:

Ask students their ideas about why a shape with many sides and many angles (a dodecagon) would roll more than a shape with fewer sides and angles (a triangle).

	presence/absence of parallel and perpendicular lines.	
Lesson Reflection		
Teacher Reflection Evidenced by Student Learning/ Outcomes		

The Greedy Triangle
Notetaking Guide

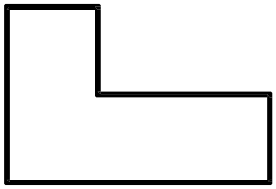
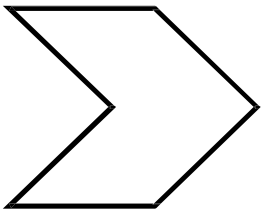
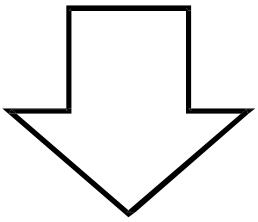
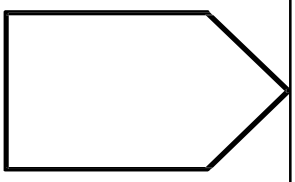
Name

Shape Name	number of sides	number of angles			Sample Drawing
		right	acute	obtuse	

The Greedy Triangle
Homework

Name _____

Directions: Look at each shape, count the number of sides, the number of each type of angle, and if there are parallel or perpendicular sides. Trace parallel sides red. Trace perpendicular lines in blue.

Shape	number of sides	number of angles			Lines	
		right	acute	obtuse	Parallel	Perpendicular
Sample 	4	0	2	2	yes	no
						
						
						
						
						

SAUSD Common Core Lesson Planner Math Teacher:

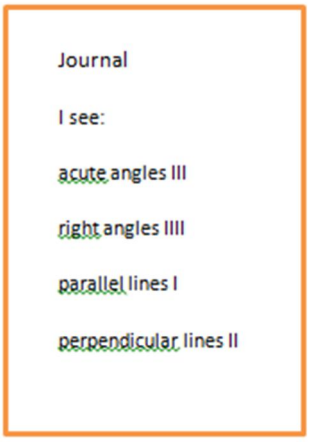
Unit: **Lesson: 6**	**Grade Level/Course:** 4	**Duration:** 60 minutes **Date:**
Common Core and Content Standards	**4 G 1** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. **4.G.2** Classify two-dimensional 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.	
Materials/ Resources/ Lesson Preparation	• Post Big Idea and Essential Questions • Post Content and Language Objectives daily • Collaborative Conversation Sentence Frames • Stir sticks per student: o 5- whole stir sticks o 5- 2 ½ inch stir sticks o 5 ï 3 ½ò inch stir sticks • Mini Marshmallows ï 20 per student • baggies • math journals	
Objectives	**Content:** Students will be able to recognize the geometric components that make up shapes.	**Language:** Students will be able to name the geometric components of different shapes and describe the shape using an ñif____, then ____ ñstatement.
Depth of Knowledge Level	☒ **Level 1: Recall** ☒ **Level 2: Skill/Concept** ☒ **Level 3: Strategic Thinking** ☒ **Level 4: Extended Thinking**	
Standards for Mathematical Practice	☒ **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 use of structure.** ☒ **8. Look for and express regularity in repeated reasoning.**	
Common Core Instructional Shifts in Mathematics	☒ **Focus on the Standards** ☒ **Coherence within and across grade levels** ☒ **Rigor (Balance of conceptual understanding, procedural skill & fluency, and application of skills)**	

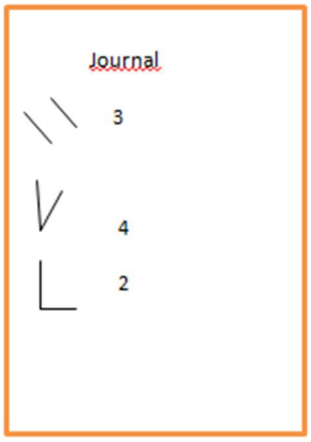
Academic Vocabulary (Tier II & Tier III)	TEACHER PROVIDES SIMPLE EXPLANATION	**KEY WORDS ESSENTIAL TO UNDERSTANDING** Vertices Equilateral Isosceles Scalene	**WORDS WORTH KNOWING**
	STUDENTS FIGURE OUT THE MEANING		
Pre-teaching Considerations		Student desks should be arranged in collaborative groups of four for the entire unit. Student should be able to work successfully in collaborative groups. Review posted norms. You may want to cover desks with a paper towel or piece of paper. Figures need to be constructed and left on a flat surface or they may fall apart.	

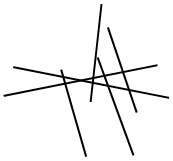
Lesson Delivery

Instructional Methods	**Check method(s) used in the lesson:** ☒ **Modeling** ☒ **Guided Practice** ☒ **Collaboration** ☐ **Independent Practice** ☒ **Guided Inquiry** ☒ **Reflection**	
Lesson Opening	**Prior Knowledge, Context, and Motivation:** Students should be able to recognize and name the geometric components in isolation.	
Body of the Lesson: Activities/ Questioning/ Tasks/ Strategies/ Technology/ Engagement	**Lesson Overview** **Teacher Directions** • Review Big Idea and Essential Questions. • Review daily Content and Language Objective • Review Collaborative Conservation Frames Review homework **Math Warm-up – "Pick Up Sticks Game"** • Review homework • Pass out stir sticks • First students will drop the smaller 2 ½ inch stir sticks onto their desk and look for different angles and lines. In their math journal they will record their results. **Sample**	**Differentiated Instruction:** **English Learners:** I saw _____ and _____ when _____ was removed. The marshmallow represents _____. The sticks represent _____. If _____, then_____. **Students Who Need Additional Support:**

Lesson Continuum







*If necessary, teacher may have to model this game.

- Repeat with other sizes of stir sticks and then with all sizes together.
- Discuss as a class:
  - What differences did you notice when using the shorter sticks vs. all the sticks together?
  - Did you notice any patterns?

Activity 1

- Pass out 20 marshmallows to each student.
- Ask the students what they think the sticks represent and what do the marshmallows represent? (Sticks ï lines, rays, line segments. Marshmallows ï points)
- Ask each student to make a shape using 3 sticks and 3 marshmallows. Open up a discussion of the parts of the triangle. Introduce ñifé thené If our shape has three lines and three angles, then it is a triangle. (It consists of three line segments, three points, and three angles).
- In the studentsô math journal, sketch the triangle and label the components. (line segments, points, and angles)
- Remove one line segment and have pairs discuss the parts making up the figure. It now has two line segments and three points. It has one angle.
- Draw and name the type of angle in the math journal.
- Remove the two points at the open end. Now describe the shape. It has two rays, one angle, and one point.

Activity 2

- Ask each student to make a new shape. They should use 4 sticks and 4 marshmallows. Open up a discussion of the parts of the quadrilateral. (It consists of four line segments, four points, and four angles.) If it has four line segments and four angles, then it is a quadrilateral.
- In the studentsô math journal, sketch the shape and label the components. (line segments, points, and angles)
- Remove two line segments and three points from the shape. Again discuss the parts making up the figure. It now has two rays and one point. It has one angle.
- Draw and name the type of angle in the math journal.

Activity 3

- Have the students create at least two new shapes and record the

See Appendix

Accelerated Learners:

Pair students together and have them create five new shapes by combining resources.

	shape in their journal. Then have them label the geometric components that make up the shape. Have them write an if _____, then _____ statement to go with each of their shapes. Closure • Review Content and Language Objectives • In math journals, have the students write and answer the essential question • What geometric components make up figures? Homework • Hand out	
Lesson Reflection		
Teacher Reflection Evidenced by Student Learning/ Outcomes		

Name_____ CCSS 4th Grade Lesson 6 Homework

Directions: Decide if each statement is true or false. Justify your answer with a complete sentence. Draw a picture of each underlined word.

1. A line has two end points. T F Your Drawing

_____

_____

_____

2. A line segment has one endpoint and extends without end in one direction. T F

_____

_____

_____

3. A point represents a location in space. T F

_____

_____

_____

4. Parallel lines will always intersect and meet to form right angles. T F

_____

_____

5. Perpendicular lines are lines that are always the same distance apart and will never meet. T F

Your Drawing

_____

_____

_____

6. An angle is formed by two rays with a common endpoint. T F

_____

_____

_____

7. A ray is a closed figure made up of three or more line segments. T F

_____

_____

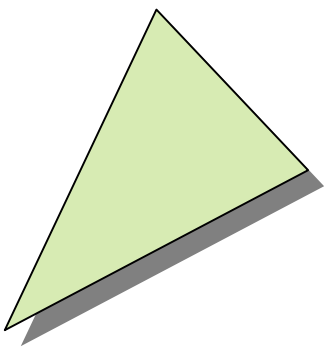
_____

8. Perpendicular lines form an obtuse angle. T F

_____

_____

_____



SAUSD Common Core Lesson Planner Math Teacher:

Unit: Geometry Lesson: 7 Performance Task	**Grade Level/Course:** 4	**Duration:** 120 minutes **Date:**
Common Core and Content Standards	**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.	
Materials/ Resources/ Lesson Preparation	• Post Big Idea and Essential Questions • Post Content and Language Objectives daily • Collaborative Conversation Sentence Frames • 12ò x 18ò piece of white construction paper per student. • Geometry Map Project instruction handout • rulers • pencil • colored pencils or crayons	
Objectives	**Content:** Students will recall and use geometric components and figures in order to complete a map project.	**Language:** Students will write two sets of directions for their map.
Depth of Knowledge Level	☒ **Level 1: Recall** ☒ **Level 2: Skill/Concept** ☒ **Level 3: Strategic Thinking** ☒ **Level 4: Extended Thinking**	
Standards for Mathematical Practice	☒ **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 use of structure.** ☒ **8. Look for and express regularity in repeated reasoning.**	
Common Core Instructional Shifts in Mathematics	☒ **Focus on the Standards** ☒ **Coherence within and across grade levels** ☒ **Rigor (Balance of conceptual understanding, procedural skill & fluency, and application of skills)**	

Academic Vocabulary (Tier II & Tier III)	TEACHER PROVIDES SIMPLE EXPLANATION	**KEY WORDS ESSENTIAL TO UNDERSTANDING**	**WORDS WORTH KNOWING**
		Compass Rose	
	STUDENTS FIGURE OUT THE MEANING		
Pre-teaching Considerations		Student desks should be arranged in collaborative groups of four for the entire unit. Students should be able to work successfully in collaborative groups. Review posted norms.	

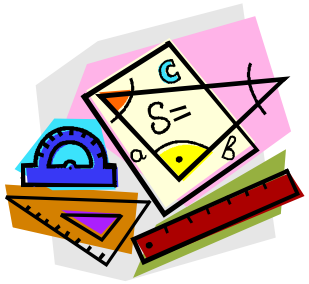
Lesson Delivery

Instructional Methods	**Check method(s) used in the lesson:** ☐ **Modeling** ☐ **Guided Practice** ☒ **Collaboration** ☒ **Independent Practice** ☐ **Guided Inquiry** ☒ **Reflection**	
Lesson Opening	**Prior Knowledge, Context, and Motivation:** Students should know the basic geometric figures and components.	
Body of the Lesson: Activities/ Questioning/ Tasks/ Strategies/ Technology/ Engagement	**Lesson Overview** Review homework **Teacher Directions** • Pass out construction paper and rulers. Make sure the students have pencils, and crayons or colored pencils. • Explain to the students that they will be drawing a town that must contain all of the components listed on the Geometric Map Project sheet. • Remind students that a compass rose should be included on their map. Assist students if necessary. • Once the maps are completed, students need to write two sets of directions from one location to another on the map. Students will share their maps and directions with their collaborative group. • If time permits, teacher may have students share with whole class. Homework Have the students take the map home and give directions to a parent from one location to another.	**Differentiated Instruction:** **English Learners:** **Students Who Need Additional Support:** **See Appendix** **Accelerated Learners:** Have students write four or more sets of directions.

Lesson Continuum

Lesson Reflection		
Teacher Reflection Evidenced by Student Learning/ Outcomes		

Geometry Performance Task



Your task is to design a map that includes several different kinds of lines, angles, and triangles. Your map can be of a town, your neighborhood, or an imaginary place. It must however include the following:

- Two sets of streets that are parallel.
- Two sets of streets that are perpendicular.
- One street that intersects another street to form an obtuse angle.
- One street that is a line segment.
- One street that is a line.
- One street that is a ray.
- An ice cream parlor made of a four sided shape.
- A pool that must include an acute angle.
- A pizza place with more than five sides.
- A flag pole on a point.
- Your map must also include a compass rose.

Remember to label your map with street and business names.

Once your map is completed, you are to write out two sets of directions from one place to another. Each set of directions must have one of these terms: parallel, intersecting, or perpendicular. These directions should be able to get your teacher and classmates from one place to another without getting lost!

Be prepared to share your map with the class!

Geometry Performance Task Rubric _____ 2 sets of streets that are parallel **(2 points)** 2 sets of streets that are perpendicular **(2 points)** 1 street that intersects another street to form an obtuse angle **(1 point)** 1 street that is a line segment **(1 point)** 1 street that is a line **(1 point)** One street that is a ray **(1 point)** An ice cream parlor made of a 4 sided shape **(2 points)** _____A pool that must include an acute angle **(2 points)** A pizza place with more than 5 sides **(2 points)** _____ A flag pole on a point. **(1 point)** Compass Rose **(1 point)** _____ 2 sets of directions to go from one place to another using the words parallel, intersecting, or perpendicular **(4 points)**	**Geometry Performance Task Rubric** _____ 2 sets of streets that are parallel **(2 points)** 2 sets of streets that are perpendicular **(2 points)** 1 street that intersects another street to form an obtuse angle **(1 point)** 1 street that is a line segment **(1 point)** 1 street that is a line **(1 point)** One street that is a ray **(1 point)** An ice cream parlor made of a 4 sided shape **(2 points)** _____A pool that must include an acute angle **(2 points)** A pizza place with more than 5 sides **(2 points)** _____ A flag pole on a point. **(1 point)** Compass Rose **(1 point)** _____ 2 sets of directions to go from one place to another using the words parallel, intersecting, or perpendicular **(4 points)**
TOTAL:_____ /20 (18-20 points= **5**; 15-17 points= **4**; 12-14 points=**3**; 9-11 points=**2**; 0-8 points=**1**)	**TOTAL**:_____ /20 (18-20 points= **5**; 15-17 points= **4**; 12-14 points=**3**; 9-11 points=**2**; 0-8 points=**1**)

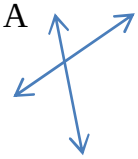
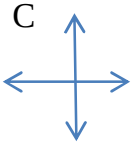
Directions: Answer each question. Some questions may have more than one correct answer.

Post-Assessment

1. Which of these is a line segment?

A  B  C 

2. Which lines below are parallel?

A  B  C 

3. Which polygon has two sets of parallel lines?

A  B  C 

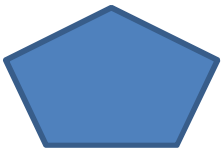
4. How many acute angles are in this polygon?

A 5

B 4

C 3

D 2



5. Draw an obtuse angle:

6. Which shapes have an obtuse angle?

A  B 

C  D 

7. Which of these polygons has only right angles?

A triangle
B rectangle
C square

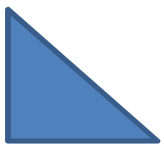
8. Which of these polygons has NO right angles?

A right triangle
B rectangle
C acute triangle

9. Which shapes have TWO sets of parallel lines?

A triangle
B rectangle
C trapezoid
D parallelogram

10. Alex is teaching Nicolas about triangles. He says the triangle below is an acute triangle. Is he right or wrong? Explain how you know?



Teacher Mode

Teacher Mode allows you to access tools for controlling the game animation (visual feedback). In Teacher Mode you can pause and replay the action frame by frame. Controlling the visual feedback is an excellent strategy to help students when they are stuck on a particular game or to get students to articulate strategies and analyze the models they are using to solve puzzles. You can access Teacher Mode from any puzzle.

1

To enter Teacher Mode triple-click in the lower right hand corner of the screen.

2

If asked, enter your username and password, then click the Log In button.

GREEN means student solved puzzle correctly.

RED means student got the puzzle wrong.

GRAY means puzzle has not been played yet.

Allows replay of student's actions

Allows unlimited replay of a puzzle

When in Teacher Mode, use the controls to replay and pause the animation so students can analyze visual feedback.

Progress bar: Indicates the current playback position within the animation.

Fast forward/Step forward: When held down, fast-forwards animation. When pressed and released, advances frame-by-frame.

Rewind/Step back: When held down, rewinds animation. When pressed and released, rewinds frame-by-frame.

Play/Pause: Toggles between play and pause. When paused, click and hold for additional playback options.

Tip: Begin by asking students to explain what is happening in the puzzles by paying close attention to the visual feedback. Get students to articulate why they got a puzzle correct or incorrect. Focus on the visual models in the game and use the Think Before You Click Protocol and Facilitating Students Questions. Practice using Teacher Mode when test-driving games in order to become fluent in controlling the visual feedback! This can be a great instructional tool to illustrate important mathematical concepts as ST Math games are integrated into classroom lessons.

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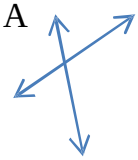
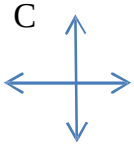
Post-Assessment

1. Which of these is a line segment?

(A)  B  C 

2. Which lines below are parallel?

A  (B)  C 

3. Which polygon has two sets of parallel lines?

(A)  B  C 

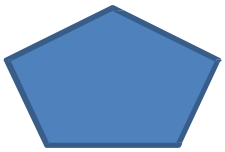
4. How many acute angles are in this polygon?

A 5

B 4

C 3

(D) 2



5. Draw an obtuse angle:

6. Which shapes have obtuse angles?

A  (B) 

C  (D) 

7. Which of these polygons has only right angles?

A triangle

(B) rectangle

(C) square

8. Which of these polygons has NO right angles?

A right triangle

B rectangle

(C) acute triangle

9. Which shapes have TWO sets of parallel lines?

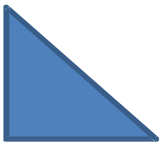
A triangle

(B) rectangle

C trapezoid

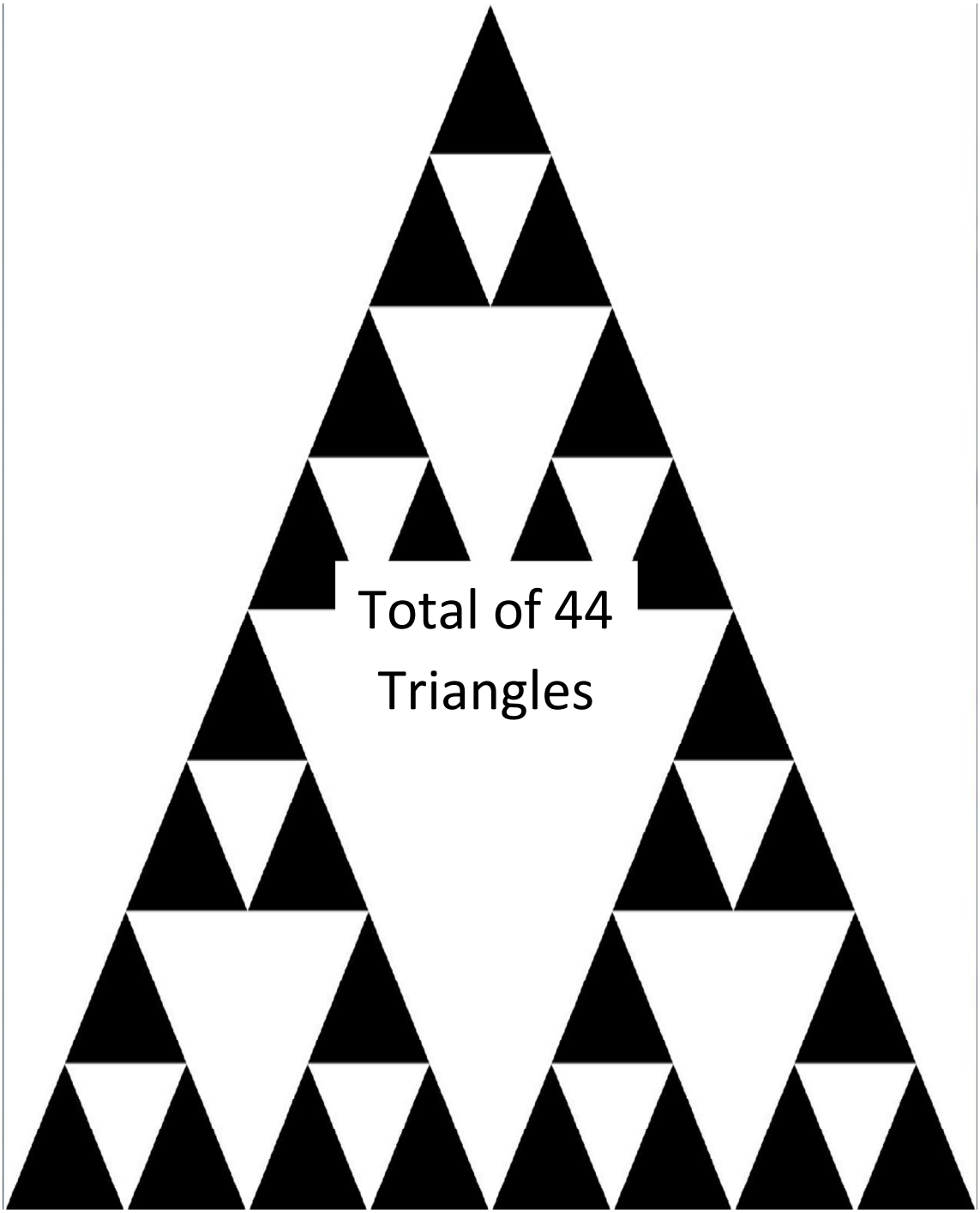
(D) parallelogram

10. Alex is teaching Nicolas about triangles. He says the triangle below is an acute triangle. Is he right or wrong? Explain how you know?



The triangle is a right triangle because it has a right angle.

Sierpinski Triangle Answer Key



Answer Key

Name_____

Directions: Decide if each statement is true or false. Justify your answer with a complete sentence. Draw a picture of each underlined word.

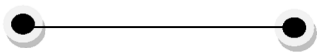
1. A line has two endpoints. T F

Your Drawing

A line does not have two endpoints. A line is drawn between two points and continues without end in both directions.

2. A line segment has one endpoint and extends without end in one direction.

T F

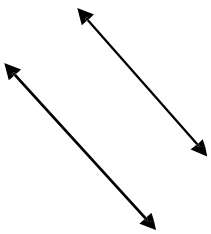


A line segment has 2 endpoints and does not go on without end in in any direction.

3. A point represents a location in space. T F

4. Parallel lines will always intersect and meet to form right angles.

T F



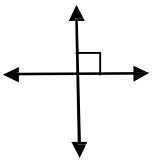
Parallel lines are lines that will never intersect and are always the same distance apart.

5. Perpendicular lines are lines that are always

the same distance apart and will never meet. T F

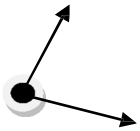
Your Drawing

Perpendicular lines are lines that intersect and meet to form right angles.



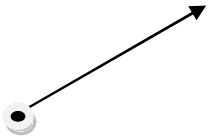
6. An angle is formed by two rays with a

common endpoint. T F



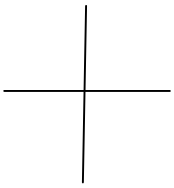
7. A ray is a closed figure made up of three

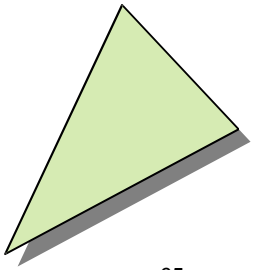
or more line segments. T F



8. Perpendicular lines form an obtuse angle. T F

Perpendicular lines form right or 90° angles.





Name:_____ Date:_____ Homework

Angles Homework Answer Key

Classify the angles as acute, obtuse, or right. Explain your reasoning.

1. 

This angle is acute because it is smaller than a right angle.

2. 

This angle is obtuse because it is bigger than a right angle.

3. 

This angle is a right angle because it is exactly the same as the corner of the index card.

4. 

This angle is acute because it is smaller than a right angle.

5. 

This angle is obtuse because it is bigger than a right angle.

6. 

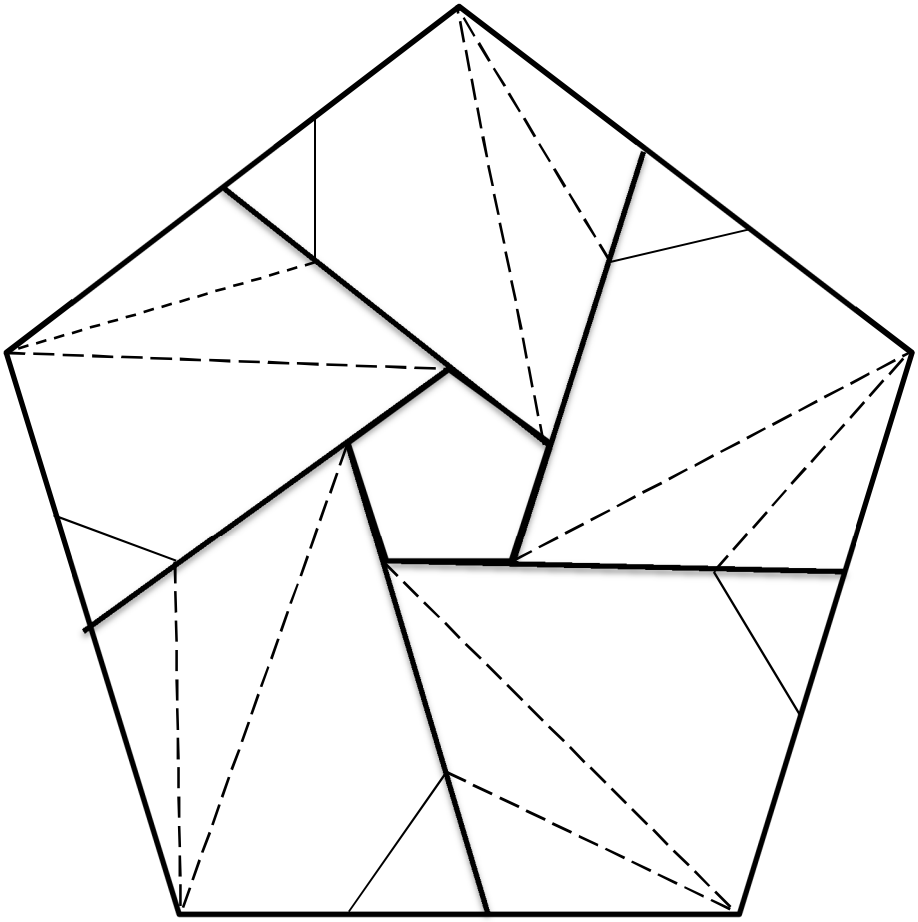
This angle is a right angle because it is exactly the same as the corner of the index card.

Circle True or False for the following statements.

An obtuse angle is smaller than a right angle.	True (False)
An acute angle is smaller than a right angle.	(True) False
An obtuse angle has only 1 line and 1 vertex.	True (False)
A right angle can be measured with the corner of a page.	(True) False

Name:_____ **Date:**_____

Homework



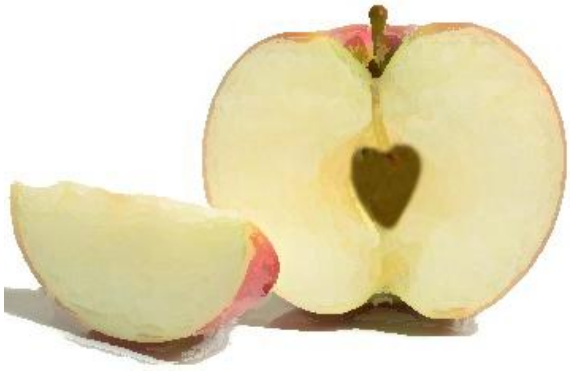
Directions: Use the figure above to answer the following questions.

1. Color the **acute** angles red. How many acute angles are in the figure? ___45_____
2. Color all the **right** angles blue. How many right angles are in the figure? _____0_____
3. Color the **obtuse** angles yellow. How many obtuse angles are in the figure? ____25_____
4. How many **parallel lines** are in the figure? _____10_____
5. How many **perpendicular lines** are in the figure? ____0_____
6. How many triangles do you see? _____25+_____

The Greedy Triangle
Notetaking Guide

Name

Shape Name	number of sides	number of angles			Sample Drawing
		right	acute	obtuse	
Triangle	3	0	3	0	Answers may vary depending on how students draw the shape.
Quadrilateral	4	4	0	0	Answers may vary depending on how students draw the shape.
Pentagon	5	2	0	3	Answers may vary depending on how students draw the shape.
Hexagon	6	0	0	6	Answers may vary depending on how students draw the shape.
Heptagon	7	0	0	7	Answers may vary depending on how students draw the shape.
Octagon	8	0	0	8	Answers may vary depending on how students draw the shape.
Nonagon	9	0	0	9	Answers may vary depending on how students draw the shape.
Decagon	10	0	0	10	Answers may vary depending on how students draw the shape.



Getting to the Core

Special Education

Appendix

Special Education Development of Appendices

Getting to the Core

CCSS Application to Students with Disabilities

Students with Disabilities-students eligible under the Individuals with Disabilities Act (IDEA) must be challenged to excel within the general curriculum and be prepared for success in their post school lives, including college and/or careers.

In order for students to meet high academic standards and to fully demonstrate their conceptual and procedural knowledge and skills in mathematics, reading, writing, speaking, and listening (English language arts), their instruction must incorporate supports and accommodations.
-Orange County Department of Education, 2012

The Santa Ana Unified School District, in the foundation that ALL students will be college and career ready, is creating a compilation of resources including scaffolds, strategies, accommodations, and modifications. These supports will ensure that students with disabilities, a majority of whom are English learners, will have the access and support necessary to be college and career ready.

Superior Standards | **Supportive School Climate** | **Successful Students**

Lesson Preparing the Learner A

Teacher Talk

This lesson is designed to helping the teacher understand where students are with collaborative conversations. The teacher will know if students require additional instruction in positive collaborative conversation

- ✓ Additional visuals for student use (to clarify, to disagree, to add on, and to cite evidence) are provided

To Clarify

- Will you explain that again?
- I have a question about what you said about _____.
- Could you give an example of what you mean by _____?

To Build On

- You made a good point when you said _____.
- I see what you're saying. I agree because _____.
- My idea builds on _____'s idea. I think _____.

To Disagree

- Another way to look at it is _____.
- I do agree with what you said about _____, but I think _____.
- I have a different answer. I wrote down that _____.

To Cite Evidence

- When I read _____ on page _____, I thought that _____.
- I think the text supports my thinking on page _____, paragraph _____, by stating that _____.
- Another example of _____ is on page _____, paragraph, where the author states_____.

To Build On

- You made a good point when you said _____.

- I see what you're saying. I agree because _____.

- My idea builds on _____'s idea. I think _____.

To Clarify

- Will you explain that again?

- I have a question about what you said about _____.

- Could you give an example of what you mean by _____?

To Disagree

- Another way to look at it is _____.

- I do agree with what you said about _____, but I think _____.

- I have a different answer. I wrote down that _____.

Evidence

- When I read _____ on page _____, I thought that _____.

- I think the text supports my thinking on page _____, paragraph _____, by stating that _____.

- Another example of _____ is on page _____, paragraph, where the author states_____.

Lesson 1

Teacher Talk

Students will be sorting shapes and justifying their answers. Your students may benefit from some to the accommodations and modifications below:

- Based on your students' fine motor skills, you may want to precut the "geometric shapes handout" and place them in a baggie, before you handout the materials.

- Instead of having the students do the "T-Chart and sort", you may want to create a tree map with your students and sort the figures using the "common geometric property."

- For the homework, it suggested that you complete this homework together (whole group), before passing it out for the students to do at home independently.

OR

- Start the homework with your students (doing questions that might be more difficult) and then have them complete the rest of the homework assignment independently at home.

Lesson 2

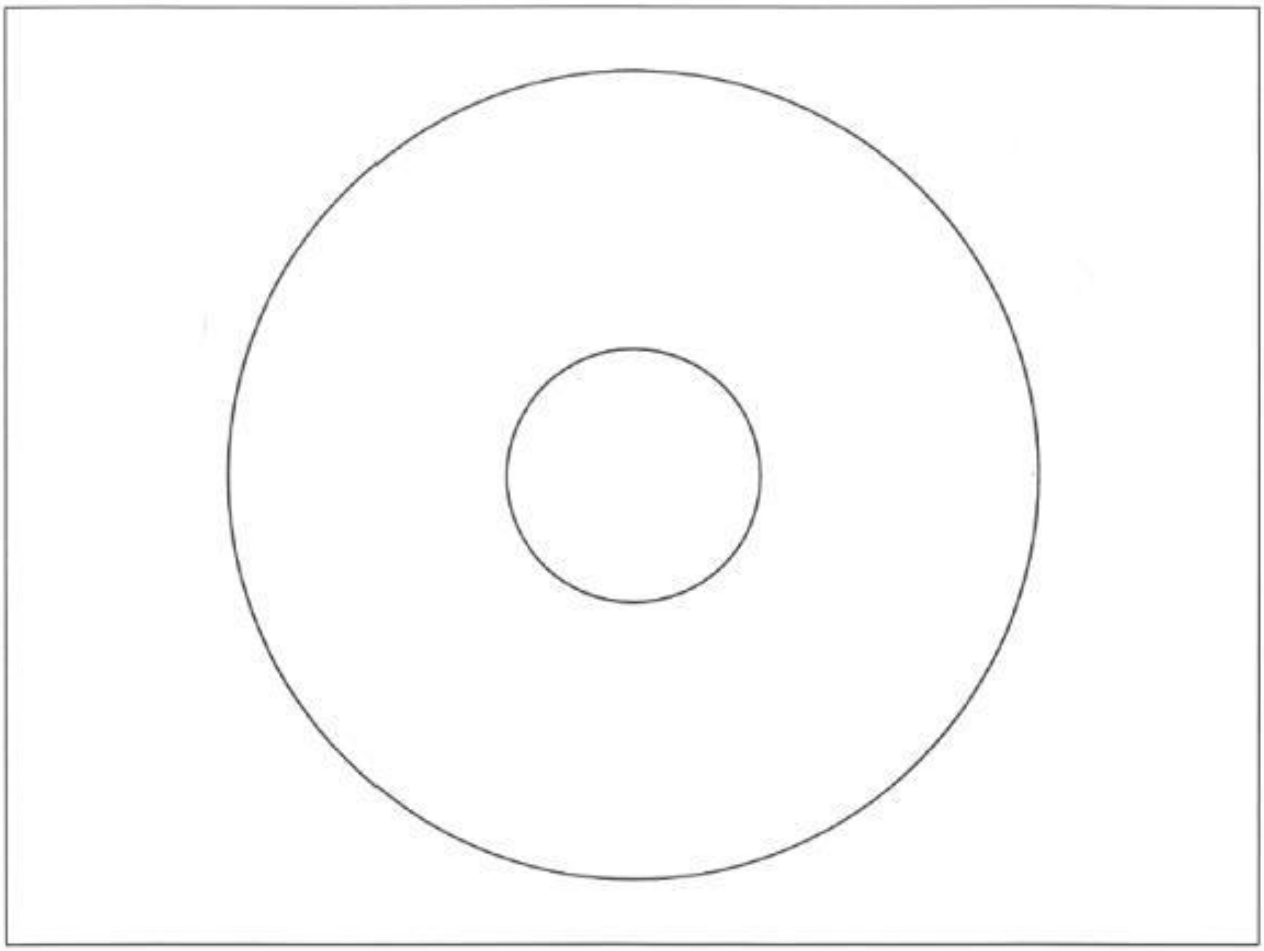
Teacher Talk

Students will be sorting figures by their lines. Students will have to know the definitions of parallel and perpendicular lines.

Some students may benefit from the individual circle maps that help to define the different lines.

The teacher may use the following supports:

- ✓ circle maps of each type of line



Math Book

Both lines measure exactly 180°

Lines that are in the same plane and do not intersect

Parallel Lines

The same distance apart at all points

Railroad tracks

Life Experiences

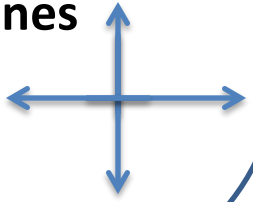
Math Book

Contains 4 angles that measure exactly 90°

Creates 4 perfect corners

Lines that intersect to form right angles

Perpendicular Lines



An intersection or 4 way stop on a highway

Life Experiences

Lesson 3

Teacher Talk

Students will be learning about the different angles: right, obtuse, acute. They will be able to describe the properties of the angles.

Students may benefit from the following supports:

- ✓ circle maps of each type of angle
- ✓ sort organizer to provide guidance for students who might need it

  - Some students may benefit from "I do, we do, you do" when sorting the angles. It is important to choose an angle from each of the 4 categories on the sort to ensure student understanding of angle properties.

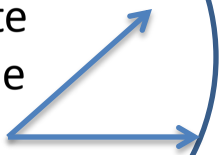
Math Book

An angle with a measure less than that of a right angle or 90°

When a door is partially open it creates an acute angle

Smaller than a right angle

Acute Angle



Will be covered by an index card

Life Experiences

Unit manipulative

Math Book

An angle with a measure greater than that of a right angle or 90° and less than straight line or 180°

Larger than a right angle

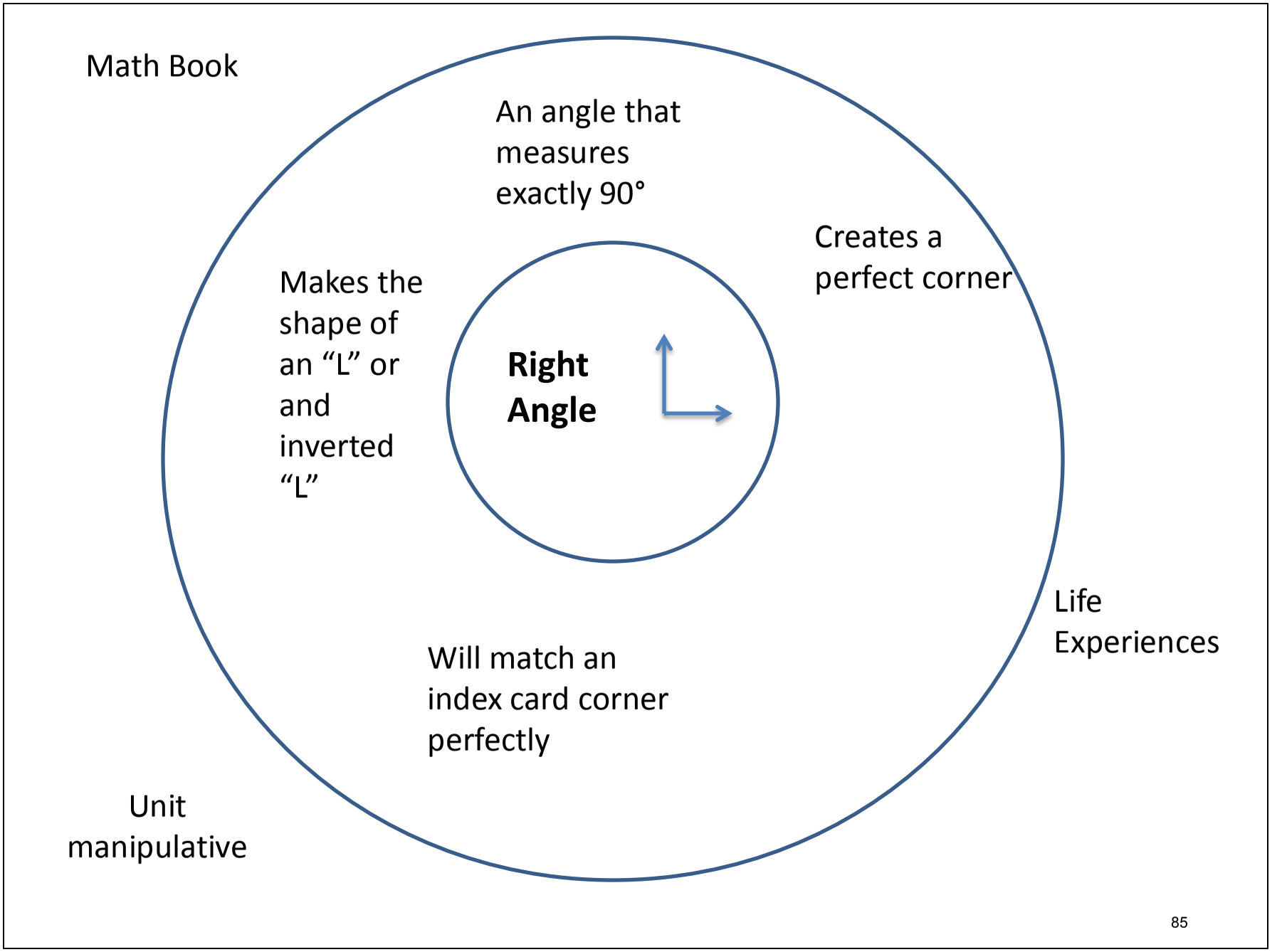
Obtuse Angle

When a door is pushed all the way open it creates an obtuse angle

Will stick out beyond an index card

Life Experiences

Unit manipulative


Math Book
An angle that measures exactly 90°
Creates a perfect corner
Makes the shape of an "L" or and inverted "L"
Right Angle
Life Experiences
Will match an index card corner perfectly
Unit manipulative

Sort Organizer

Right Angle Shape	Acute Angle Shape	Obtuse Angle Shape	More than 1 Geometric Property

Lesson 4

Teacher Talk

Students will define basic geometric terms. The lesson includes effective strategies and materials that benefit all students. These supports are in form of video, peer collaboration, and the use of visual resources. Please rotate around groups to ensure that students receive immediate corrective feedback and additional support, as needed.

Lesson 5

Teacher Talk

Students will learn that shapes can change or be modified. Some students may benefit from the following accommodations or modifications to the lesson:

- ✓ Students will have the opportunity to have an unencumbered watch of *The Greedy Triangle* video. Do not pause, stop, or interject during this first unencumbered watch.
- ✓ During the second watch teachers may want to implement an "I do, we do, you do" note taking process with the Note-taking Guide as a whole group or in a small group format.

Lesson 6

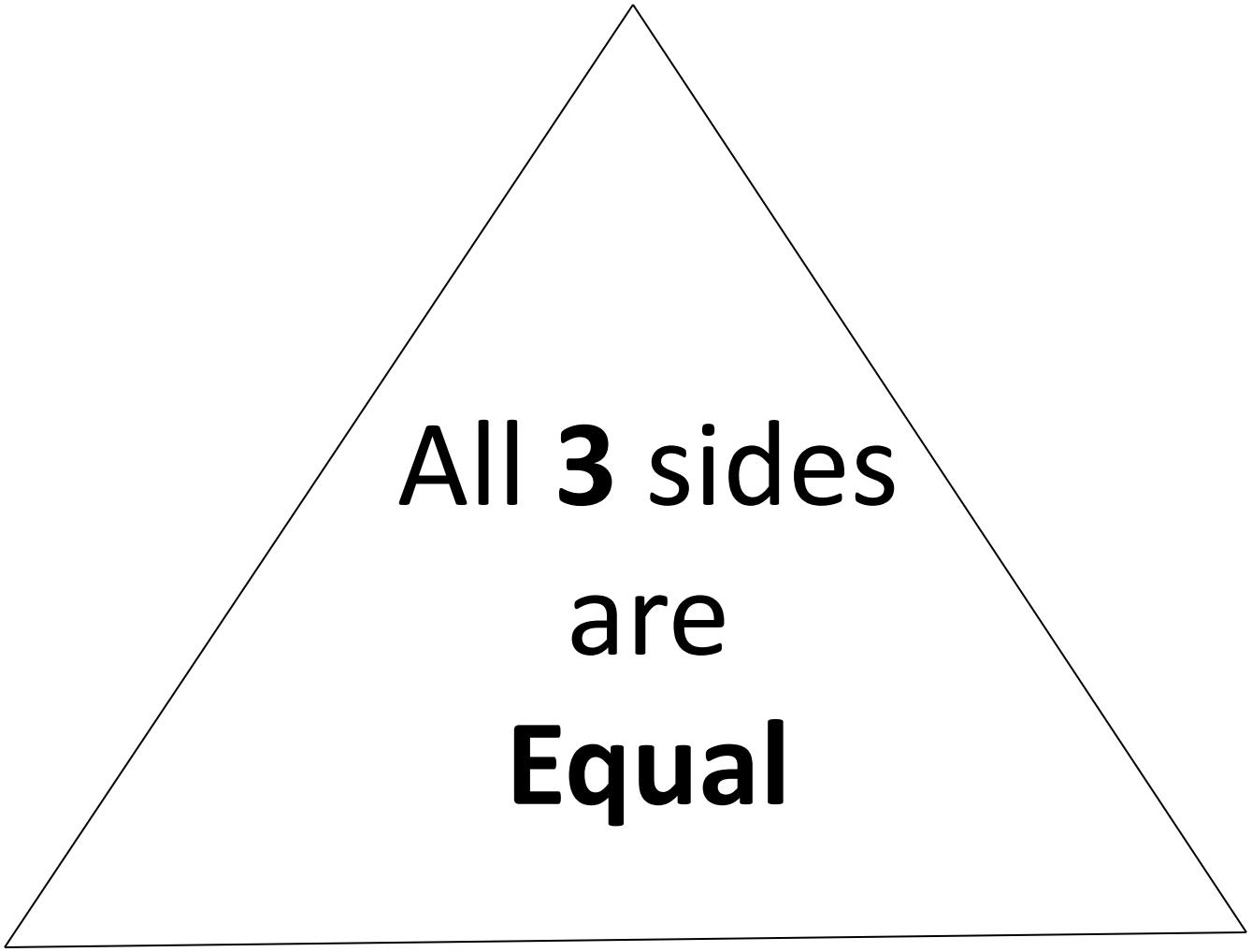
Teacher Talk

Students will be asked to identify what makes up geometric shapes, along with creating different types of geometric shapes. Your students may benefit from the following accommodations and modifications:

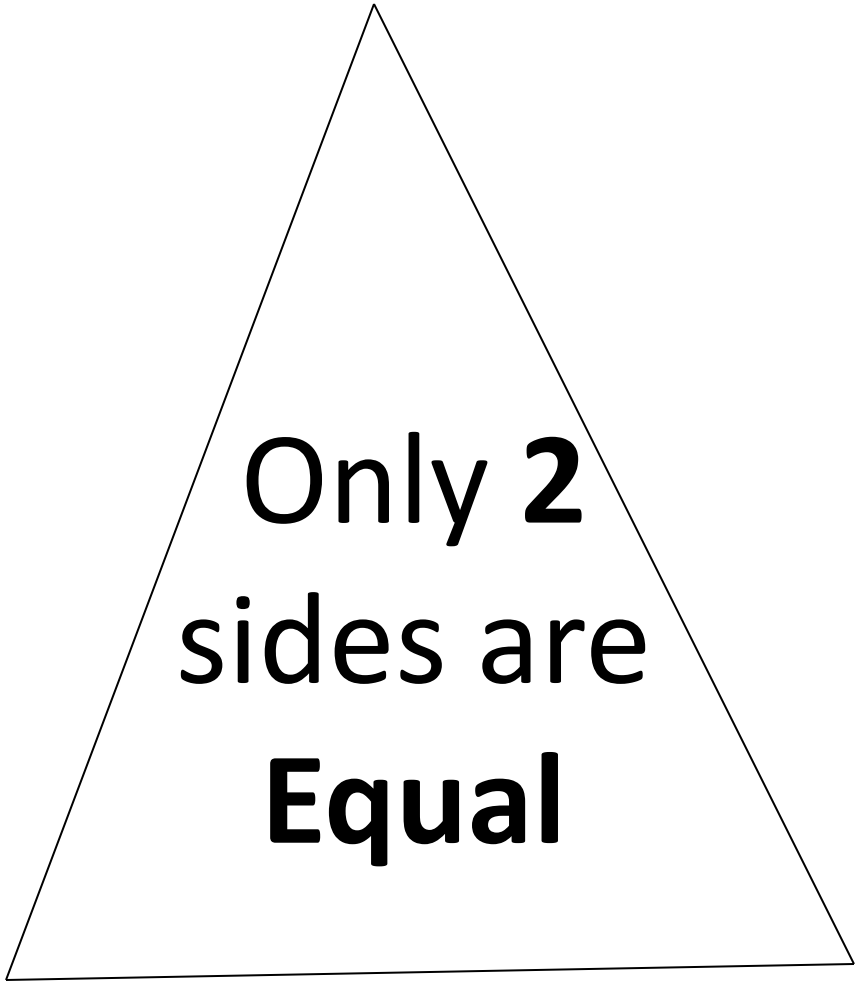
- Before playing the "Pick Up Sticks Game" your students may benefit practicing finding angles in a small or whole group format. You may practice using the "Premade Pick Up Sticks Pictorial".
    - ✓ Pass one page and some crayons to each group. Allow them to use the crayons to color the different angles or lines they see.
    - ✓ Then have them record their answers in their journal.

- For activities 1-3, your students may benefit from a visual for each triangle that they are creating to support their task completion.

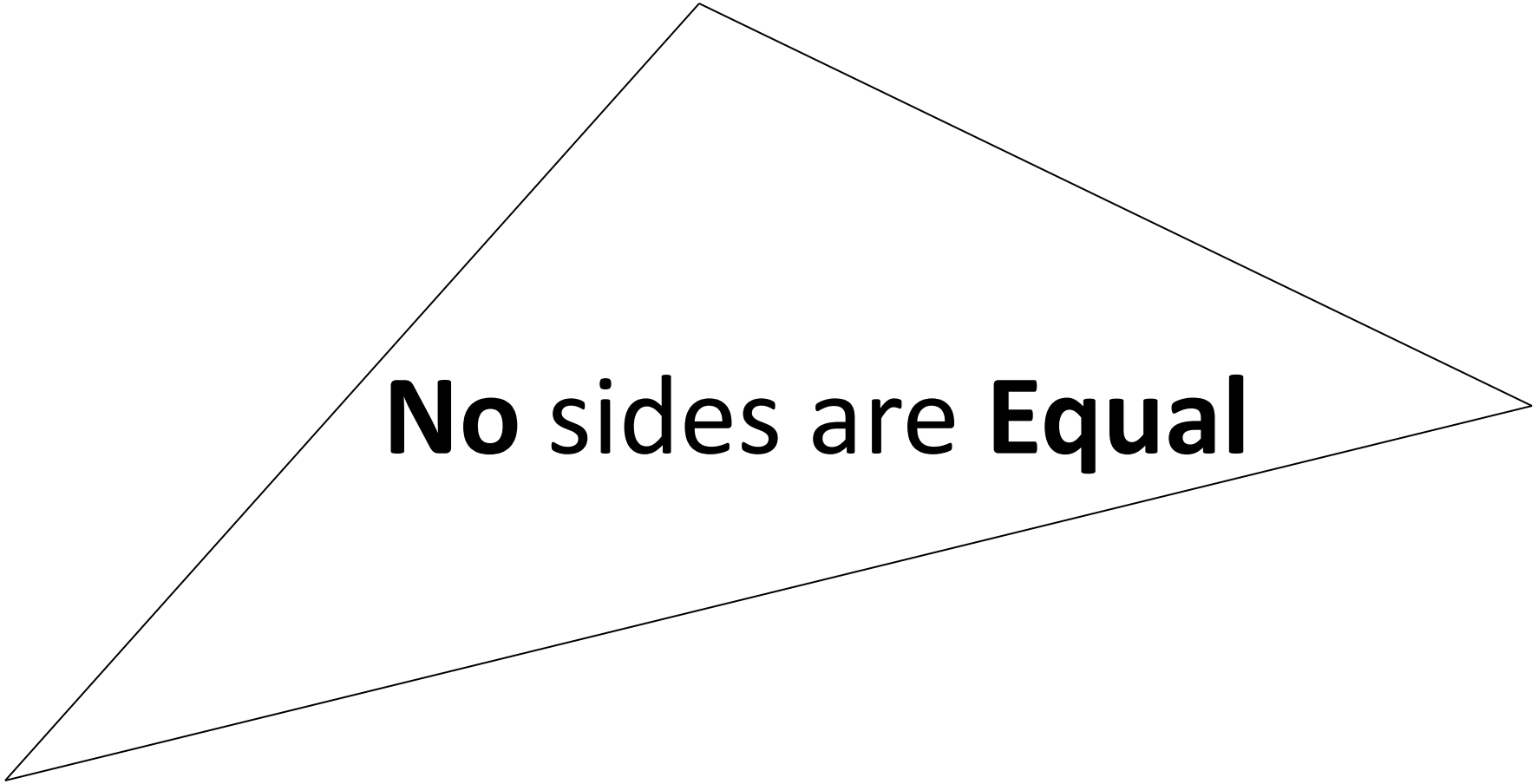
Equilateral Triangle



Isosceles Triangle



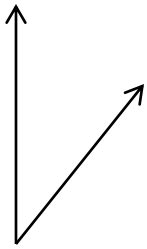
Scalene Triangle



Name _____

Lesson 6 Homework

Name the type of angle below (right, obtuse, & acute):



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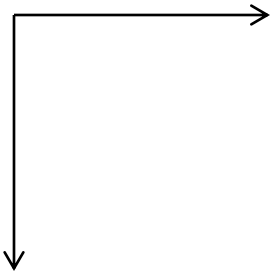

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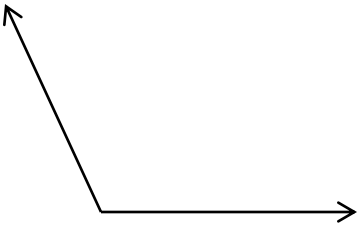
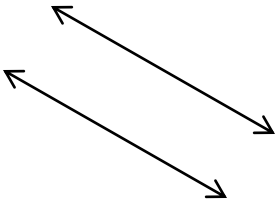
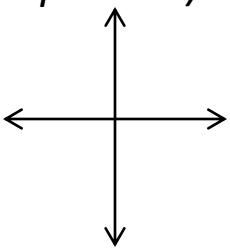


_____

Name the type of lines (perpendicular, or parallel) below:

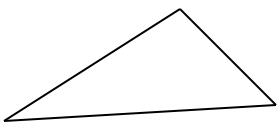


_____



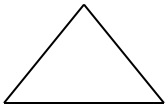
_____

Look at the triangle and answer the questions below:



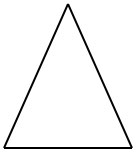
_____

How many sides are equal?



_____

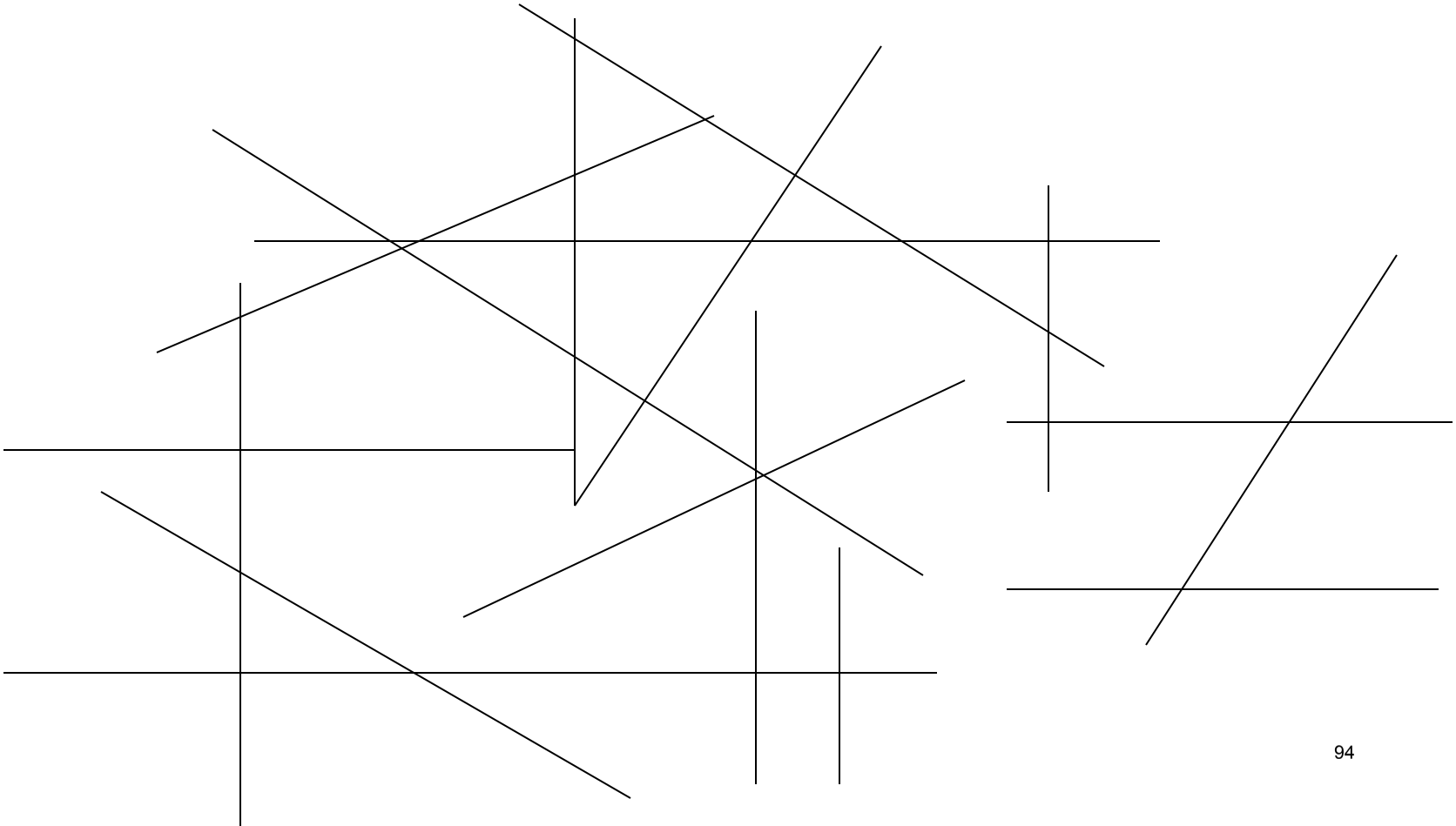
How many sides are equal?



_____

How many sides are equal?

How many acute angles, right angles, parallel lines, and perpendicular lines does your group see?



Lesson 7

Teacher Talk

Students are asked to individually create a map that has all the lines, angles and geometric shapes that have been learned throughout the unit. Your students may benefit from the following accommodations and modifications:

- Depending on your students' levels, rather than having the students create a map, you have the option to modify their test by giving them a Premade Map and then have them answer questions where they have to label the angles, lines, and geometric shapes.

- Before you give your students the Premade Map and questions, as a whole group, use the "Practice Map" to find the following:

  - ✓ parallel, perpendicular, and intersecting lines

  - ✓ line segments, lines, and rays

  - ✓ acute, obtuse, and right angles.

Map Assessment

Harbor Blvd

Katella Ave

Ball Road

5 Freeway

Tram

Daisy's Dip-n-Dots Ice Cream

Pluto's Pizza Palace

Disney Way

N

W

E

S

Park Way

Mickey, Mini Mouse, Goofy, and Donald Duck Parking Lot

Name _____

*What are two streets that are parallel? _____

*What are two streets that are perpendicular? _____

*Name one street that intersects another street to form an obtuse angle.
_____

*Name one street that is a line segment. _____

*Name one street that is a line. _____

*Name one street that is a ray. _____

*What is the name of the four sided shape ice cream parlor? _____

*What is the name of name of the shape with acute angles? _____

*What is the name of the pizza place that has more than 5 sides?
_____

*What directions does the compass rose have on the map? _____


North Linwood Ave
East 6th St
Eastside Ave
North McClay St
North Wright St
Palm St
East 1st St
5
103C
Elk Ln
Santa Ana Zoo
at Prentice Park


Obtuse Angle
Ray
Acute Angle
Line Segment
Line
Perpendicular Lines
Parallel Lines
North Linwood Ave
East 6th St
Eastside Ave
North McClay St
North Wright St
Palm St
East 1st St
Elk Ln
5
103C
Santa Ana Zoo at Prentice Park

Group Member Names _____

***What are two streets that are parallel? _____**

***What are two streets that are perpendicular? _____**

***Name one street that intersects another street to form an obtuse angle.**

_____

***Name one street that is a line segment. _____**

***Name one street that is a line. _____**

***Name one street that is a ray. _____**

***What is the name of the four sided shape ice cream parlor? _____**

***What is the name of name of the shape with acute angles? _____**

***What is the name of the pizza place that has more than 5 sides?**

_____

***What directions does the compass rose have on the map? _____**