

SPECIAL ED

GEOMETRY ANGLES



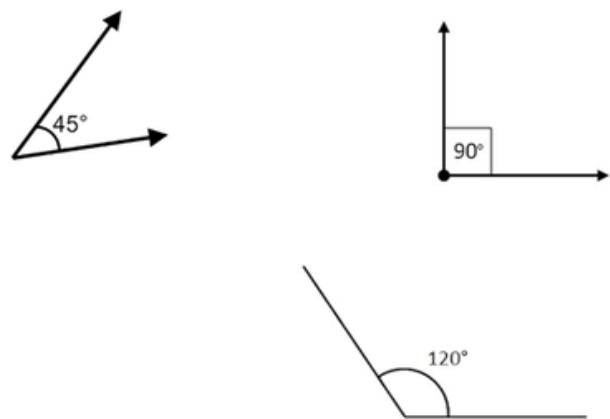
INCLUDES GOOGLE SLIDES

This unit was created with this guy in mind. He has autism and an intellectual disability. He is a non-reader, has a very short attention span, and has a few foundational math skills. With some support, he is able to do this unit and enjoys the challenge. He is my tester!!



Angles Unit

By
Christa Joy
Special Needs for Special Kids



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Also included in this resource as separate files:

- Lesson plans
- Links and directions to digital activities
- PowerPoint (this is the book in the lesson plan)
- Voice recorded PowerPoint
- Activities in black and white

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This unit contains 18 days of material that is in both printable and digital formats. I have included a detailed lesson plan to help you make the most of everything in this unit including how to add some group activities.

It comes in 2 separate files. One in color and one in black and white.

Geometry: Angles Lesson Plan

Preparation

- Print out a vocabulary board for each student to use throughout unit
 - Laminate or place in page protector
- Book
 - Print out, laminate, and bind
 - OR your students can listen to the pre-recorded version
- Vocabulary cards
 - Print out a set of cards onto cardstock and laminate
 - Make one set for each student and also one for the teacher to use in I Spy games

Preassessment (do day 1 before starting lesson)

- Choose the form of the assessment that best fits the learning level of your students
- Give the assessment to assess what your students may already know
- I cannot emphasize enough how important this step is. If you want to see growth, this preassessment is so im

Teaching Tips

1. **Color Coding:** this is a really easy activity. Outline or color in an em the corresponding picture symbols task.
 - a. For more info, read more h <https://specialneedsforspecia differentiation/>
 - b. I also have a blog post on d <https://specialneedsforspecia 3-ways-easily-and-effectively>
2. **Make your own copies of the activi** yesterday. For that reason:
 - a. I often complete the activity that I could use year after ys
 - b. My copies were also helpful more support or as a way fc work.

Day 3

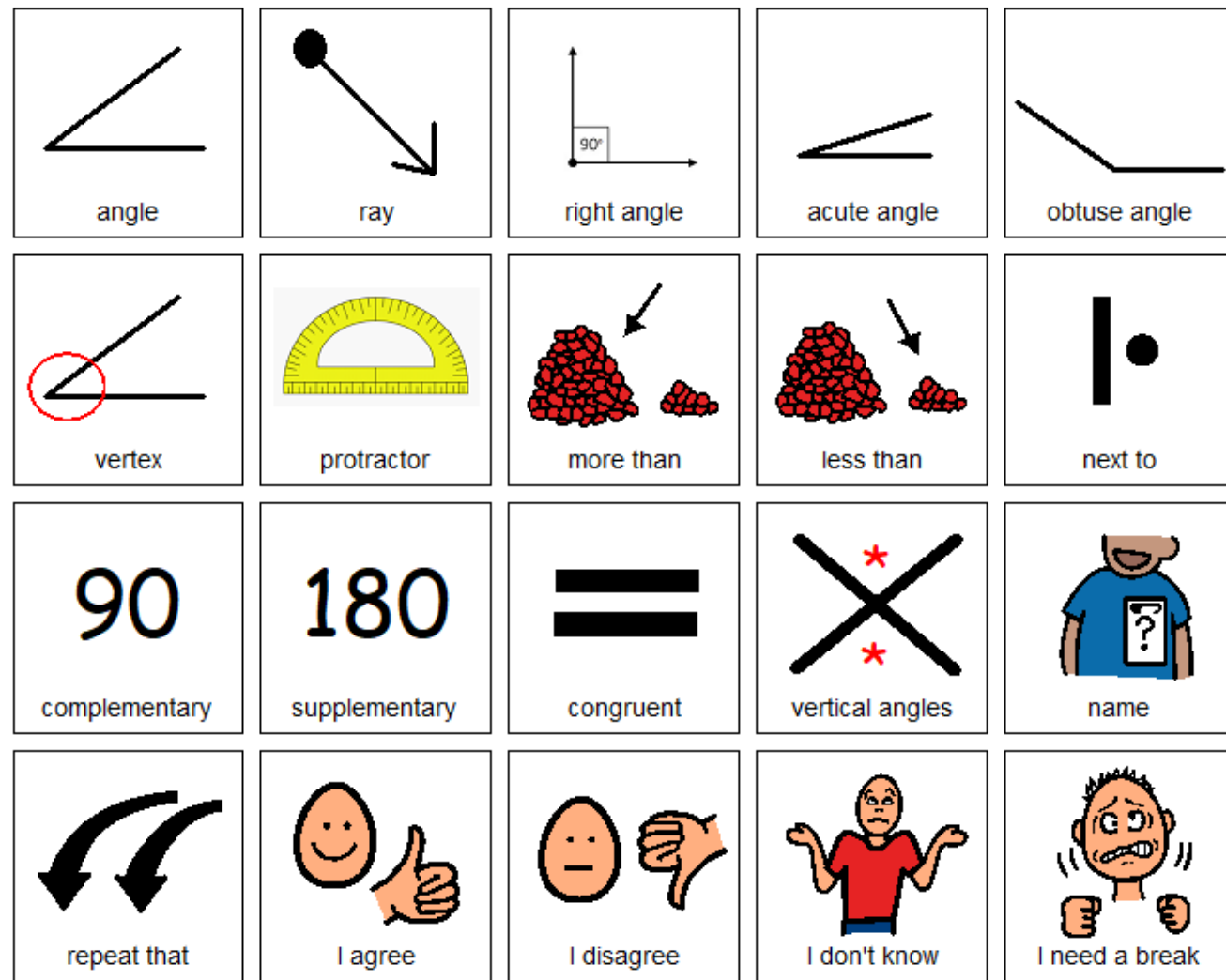
Activity	Notes	Materials
Read or listen to a recording of the book: (10 minutes)	<ul style="list-style-type: none"> • Read through the story, asking lots of questions • Continue to make connections between book and vocabulary board 	<ul style="list-style-type: none"> • Book • Vocabulary board
Vocabulary cards I Spy Game (10 minutes)	<ul style="list-style-type: none"> • I play this game see description on day 2 • Today, try to give clues about the card your student needs to find <ul style="list-style-type: none"> ◦ Read definition ◦ Show real photo that relates to card from book ◦ Describe the picture • Discuss relevant points on the card <ul style="list-style-type: none"> ◦ You can also play this game in this manner having them find the symbol on their vocabulary board 	<ul style="list-style-type: none"> • Vocabulary cards (student set and teacher set) • Vocabulary board
Angle Activity (10 minutes)	<ul style="list-style-type: none"> • Students make the angle circles they will use for future activities 	<ul style="list-style-type: none"> • Directions • 2 paper plates • Markers • scissors
Sorting activity review (5 minutes)	<ul style="list-style-type: none"> • Review the worksheet completed yesterday 	<ul style="list-style-type: none"> • Worksheets completed yesterday
Angles in the environment worksheet (10 minutes)	<ul style="list-style-type: none"> • Do the one of the worksheets • Add color coding if needed • Students complete the worksheet • Make connections to the book as necessary • <i>To extend this activity, have students outline the angle they see in the picture</i> 	<ul style="list-style-type: none"> • Worksheet
Sharing (10 minutes)	<ul style="list-style-type: none"> • Each student shares their finished worksheet with the group using the communication method of their choice 	<ul style="list-style-type: none"> • Completed worksheets • Communication devices

Quick Look

Day	Activity	Day	Activity	Day	Activity
1	<ul style="list-style-type: none"> • Book • Vocab cards activity • Scavenger hunt • Circle map 	7	<ul style="list-style-type: none"> • Book • Vocab cards activity • Angle activity • Naming Angles 	13	<ul style="list-style-type: none"> • Book • Vocab cards cut and paste • Angle activity
2	<ul style="list-style-type: none"> • Book • Vocab cards activity • Scavenger hunt • Sorting activity 	8	<ul style="list-style-type: none"> • Book • Vocab cards activity • Angle activity • Naming angles 	14	<ul style="list-style-type: none"> • Book • Vocab cards cut and paste • Angle activity
3	<ul style="list-style-type: none"> • Book • Vocab cards activity • Angle activity • Angles in the 	9	<ul style="list-style-type: none"> • Book • Vocab cards activity • Angle activity • Naming 	15	<ul style="list-style-type: none"> • Book • Vocab cards cut and paste • Close worksheet
				16	<ul style="list-style-type: none"> • Book • Vocab cards activity • Close worksheet
				17	<ul style="list-style-type: none"> • Book • Vocab cards activity • Close worksheet
				18	<ul style="list-style-type: none"> • Assessment • Vocabulary Sudoku

The lesson plans contain:

- Overall tips for teaching students with significant needs
- A quick look at what you will do each day
- Detailed instructions on how that day's lesson should run



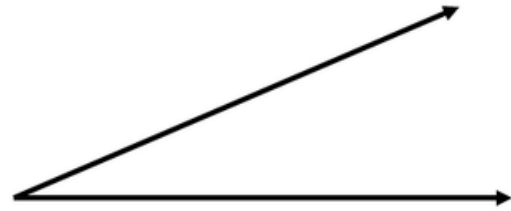
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This unit comes with a vocabulary board.

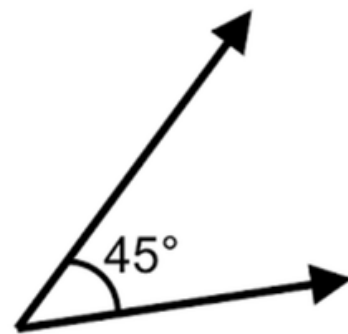
Vocabulary boards are great for ALL students to assist with participation and engagement in group discussions.

Tips on how to use in the unit!!

An **angle** is next, and it is made of 2 rays that share the same starting point.



Some angles are smaller than a right angle, and they are called **acute angles**.



There is a 47-page book about angles that students will use to complete the activities.

- pdf version
- voice-recorded PPT
- mp4 movie format

Hands on activities for angles

1. Make your own angle creator

- Need
 - 2 paper plates
 - Markers
 - Scissors
- Color each plate a different color
- Cut from the outer circumference to the center of each circle
- Slide the circles together where you cut them
- Manipulate to make different sized angles

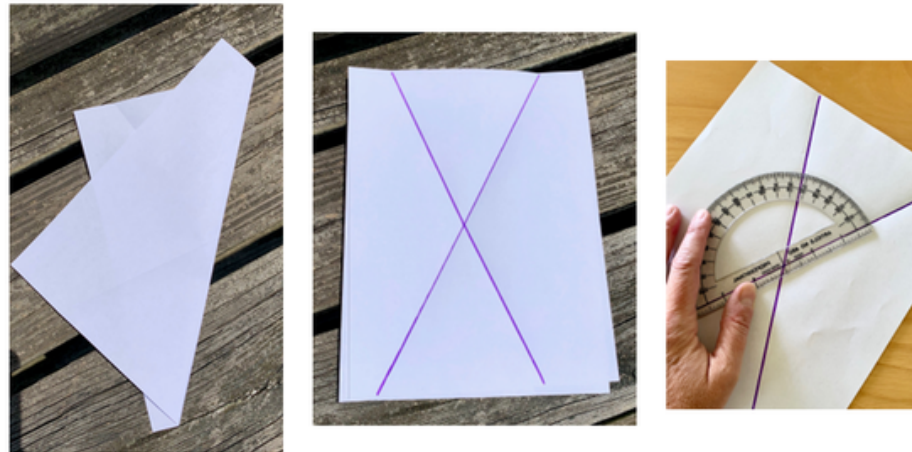


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Hands on activities for angles

2. Folding paper and measuring angles

- Need
 - Piece of paper
 - Markers
 - Protractor
- Fold a piece of paper in random ways
- Outline the folds with marker (optional)
- Have students measure the angles formed using a protractor



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There are two
hands-on
activities.

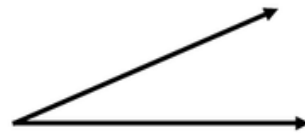
ray

A line that starts at a given point and goes off in ONE direction without stopping.



angle

2 rays that share the same starting point.



acute angle

An angle that measures less than 90°.



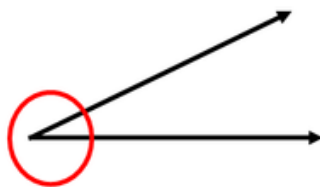
obtuse angle

An angle that measures anywhere between 91° and 180°.



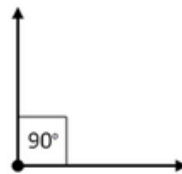
vertex

The point where the two rays meet in an angle.



right angle

The angle formed when 2 perpendicular lines cross and perfectly square or 90°.



Straight angle

An angle that measures 180°. It is also a straight line.

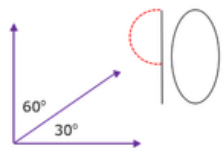


adjacent

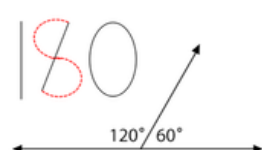
Any 2 angles that share a common side and vertex.



complementary



supplementary



Two angles that are next to each other (adjacent) and their sum is 90°.

Two angles that share the same starting point.

The angle formed when two lines cross.

Two angles that cross.

congruent



vertical



Two angles that have the same measurement.

An angle that measures less than 90°.

Two angles that are next to one another and share the same vertex.

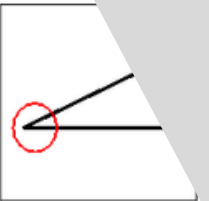
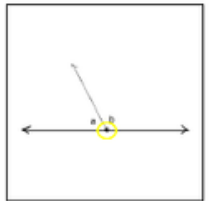
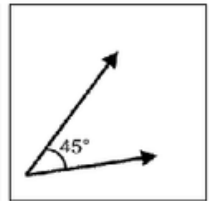
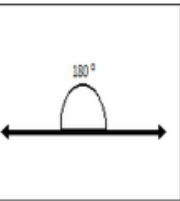
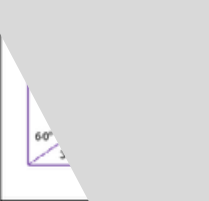
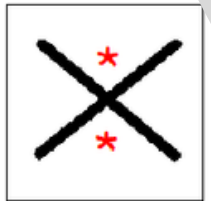
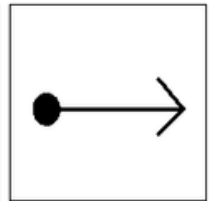
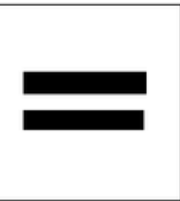
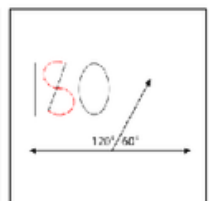
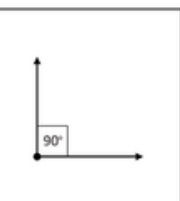
Two angles next to each other (adjacent) that when you add them together they = 180°.

An angle that measures less than 90°.

A line that goes off in one direction without stopping.

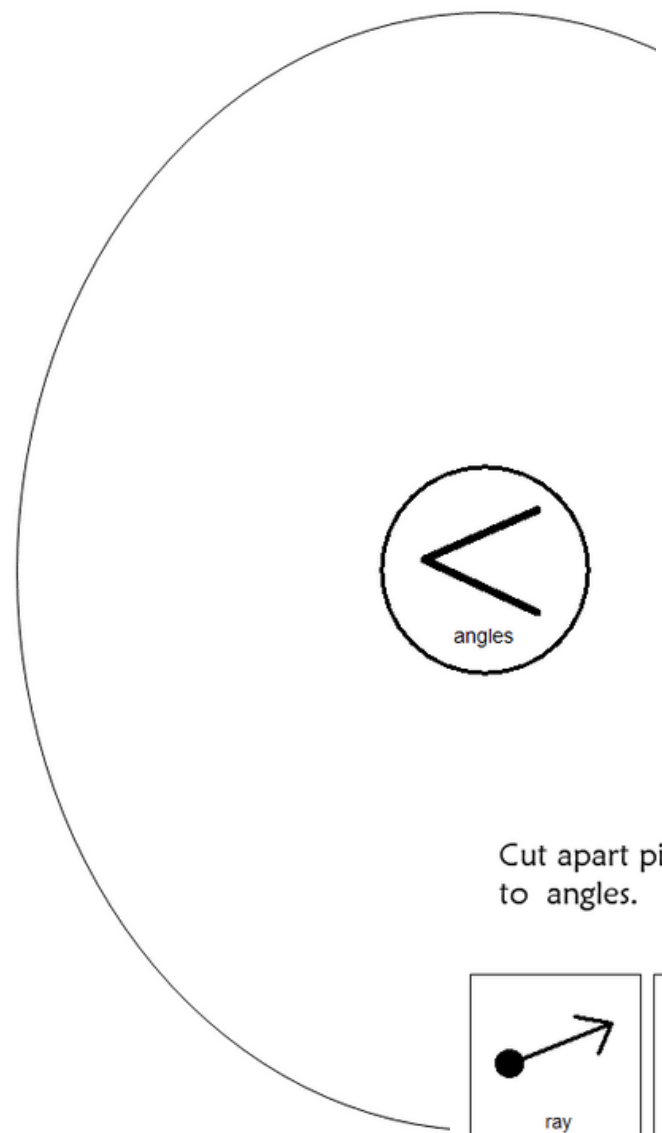
An angle that measures anywhere between 91° and 180°.

Two angles next to each other (adjacent) that when you add them together they = 180°.



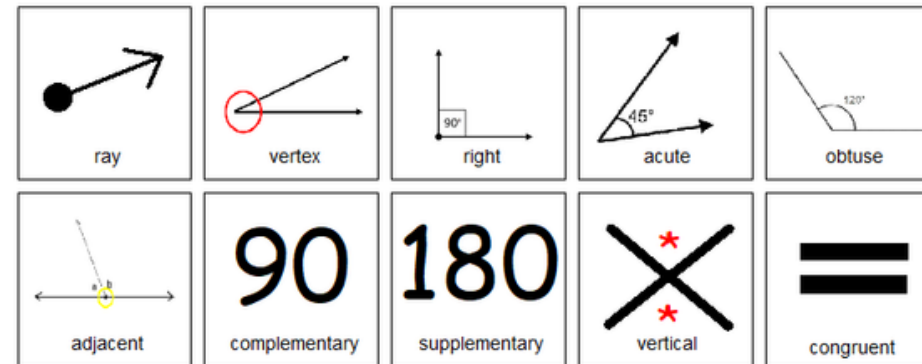
There are 12 vocabulary cards that come in color and black and white.

- Included are suggestions for group activities to do with these each day.
- There is also a cut-and-paste activity.

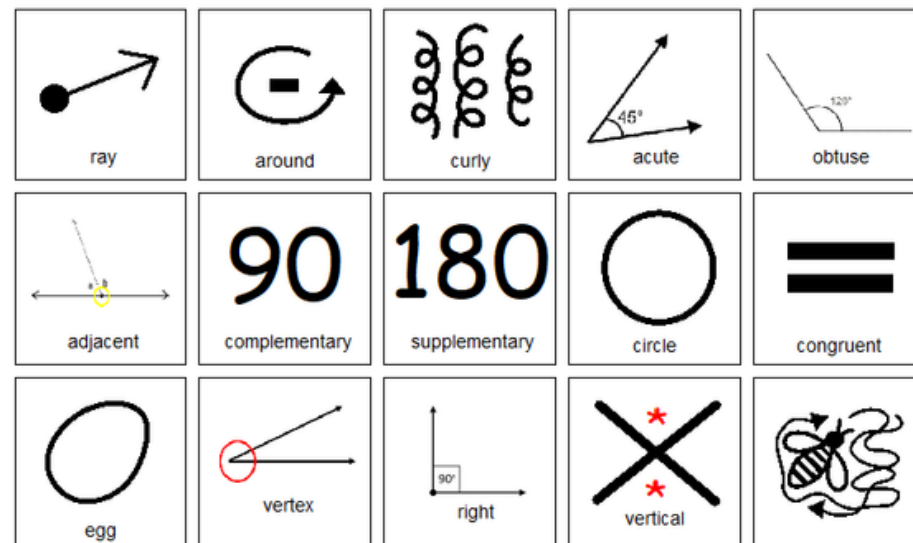


Errorless version

Cut apart pictures and place in circle map about angles.



Cut apart pictures and place in circle map **ONLY IF** they relate to angles.

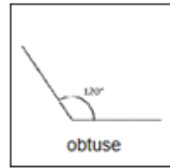
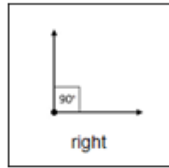
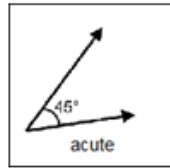


There is a circle map on angles, reviewing facts from the book.

Circle maps are a great way for students to see the concept at a glance.

There are 2 versions:







- One is errorless
- One has wrong answers mixed in students will have to set aside.



$= 90^\circ$	$< 90^\circ$ less than	$> 90^\circ$ more than	 boomerang	$+$
		35°		 square angle
120°				

There is a sorting activity looking at examples of acute, right, and obtuse angles. Suggestions for differentiation are included.







Look at the photo in each example, and determine if what type of angle you MAINLY see. Circle the correct answer.

	
<input type="checkbox"/> acute angle <input type="checkbox"/> right angle <input type="checkbox"/> obtuse angle	<input type="checkbox"/> acute angle <input type="checkbox"/> right angle <input type="checkbox"/> obtuse angle
	
<input type="checkbox"/> acute angle <input type="checkbox"/> right angle <input type="checkbox"/> obtuse angle	<input type="checkbox"/> acute angle <input type="checkbox"/> right angle <input type="checkbox"/> obtuse angle
	
<input type="checkbox"/> acute angle <input type="checkbox"/> right angle <input type="checkbox"/> obtuse angle	<input type="checkbox"/> acute angle <input type="checkbox"/> right angle <input type="checkbox"/> obtuse angle

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Identify types of angles

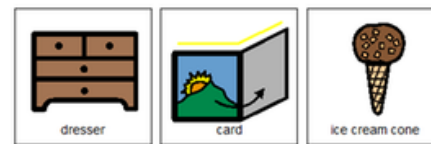
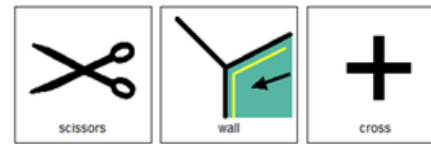
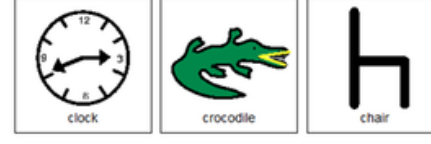
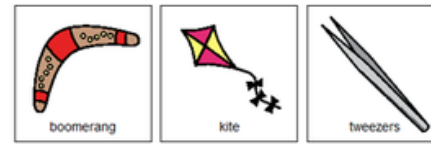
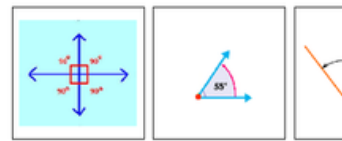
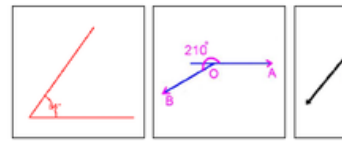
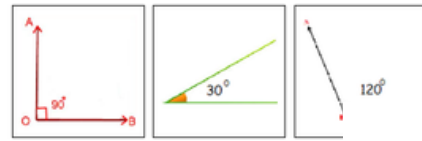
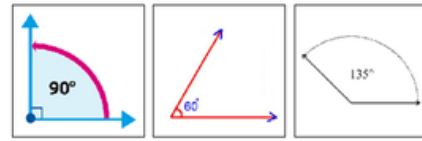
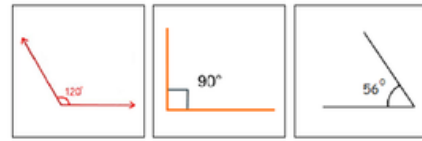
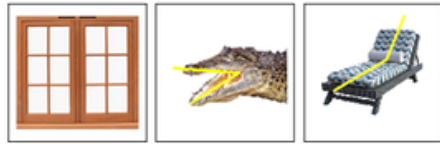
Look at the photo in each example, and determine if what type of angle you MAINLY see. Circle the correct answer.

	
<input type="checkbox"/> acute angle <input type="checkbox"/> right angle <input type="checkbox"/> obtuse angle	<input type="checkbox"/> acute angle <input type="checkbox"/> right angle <input type="checkbox"/> obtuse angle
	
<input type="checkbox"/> acute angle <input type="checkbox"/> right angle <input type="checkbox"/> obtuse angle	<input type="checkbox"/> acute angle <input type="checkbox"/> right angle <input type="checkbox"/> obtuse angle
	
<input type="checkbox"/> acute angle <input type="checkbox"/> right angle <input type="checkbox"/> obtuse angle	<input type="checkbox"/> acute angle <input type="checkbox"/> right angle <input type="checkbox"/> obtuse angle

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Students will identify acute, right, and obtuse angles in the environment. Suggestions for extension activities for this are included.

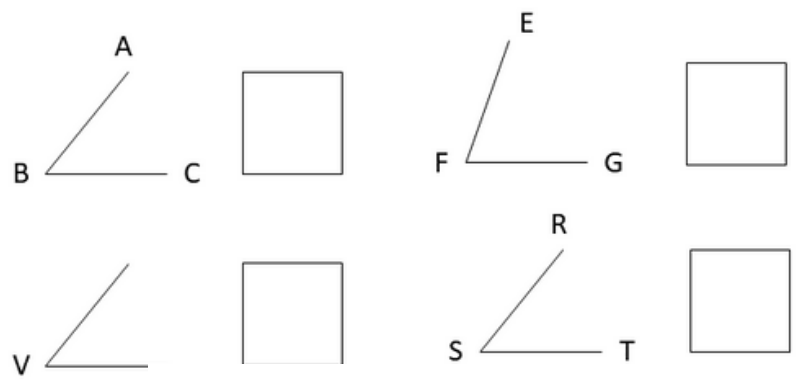
Place the angles in order from SMALLEST to LARGEST.



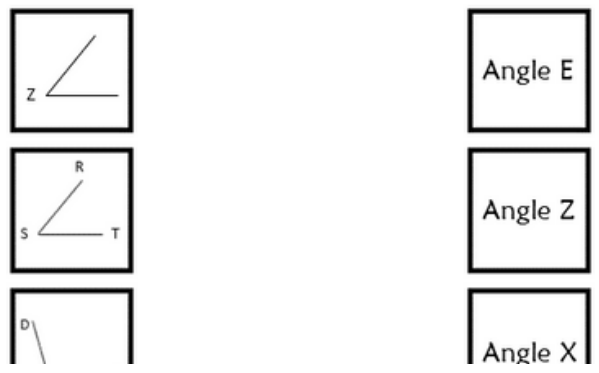
Ordering angles

There are 4 worksheets where students will order angles by size from smallest to largest. Includes angles, photos and pictures symbols.

In each angle below, identify the vertex.

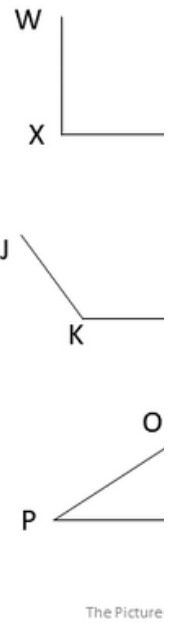


Draw a line from the angle to the correct name.

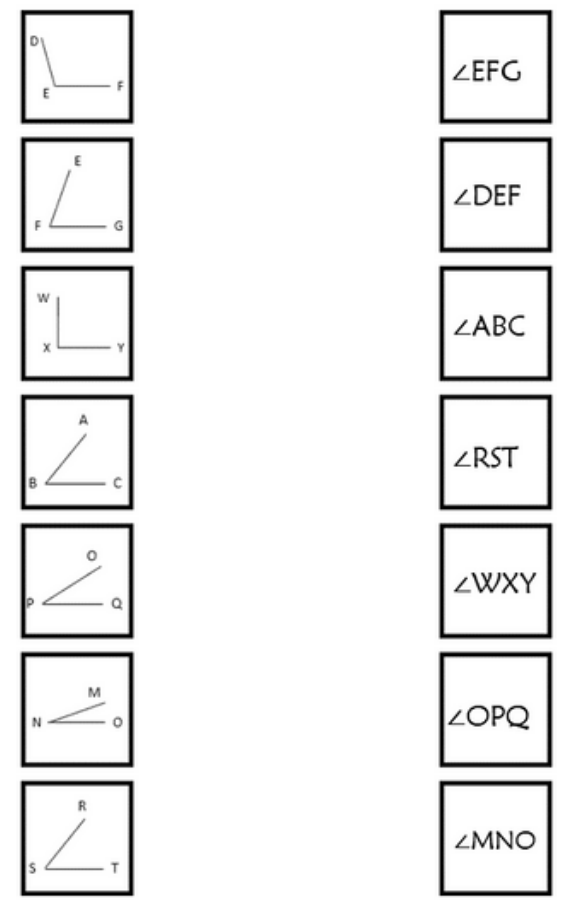


Naming angles

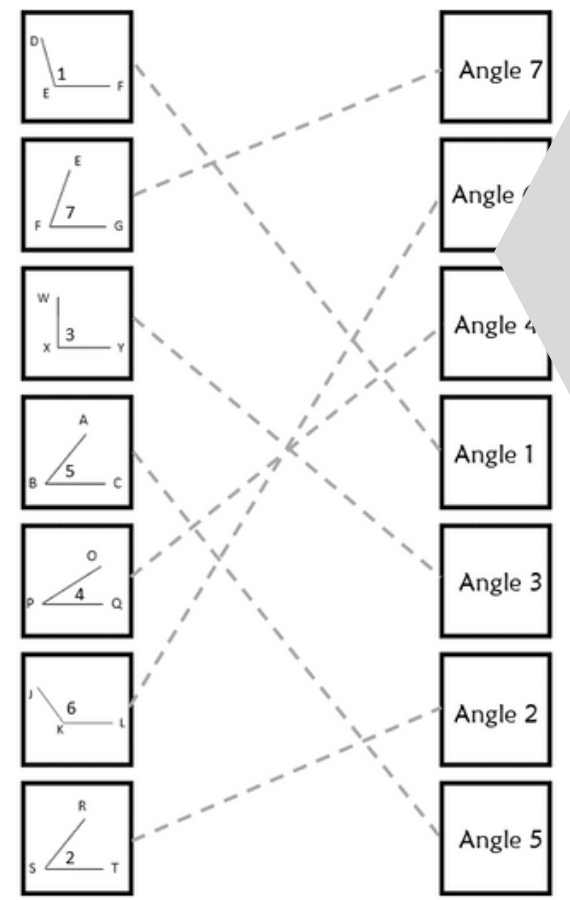
There are 4 worksheets where students will name angles using different methods. There are 2 versions and there are differentiated versions included.



Draw a line from the angle to the correct name.

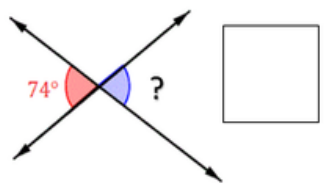
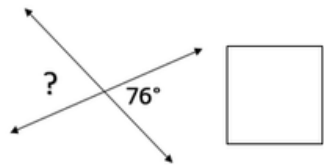
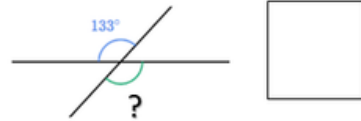
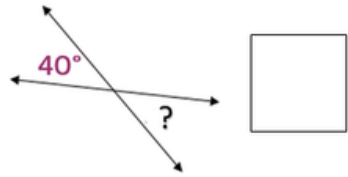


Draw a line from the angle to the correct name.



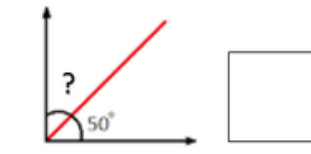
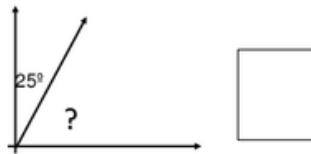
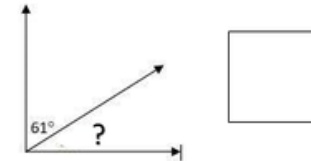
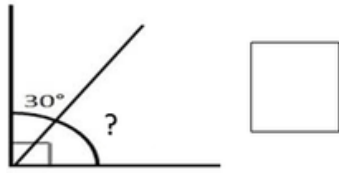
Find the missing vertical angle using the rule below.

Rule: vertical angles are congruent or =



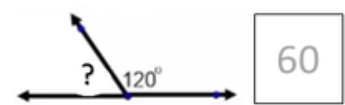
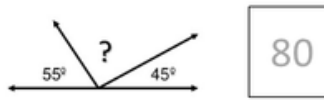
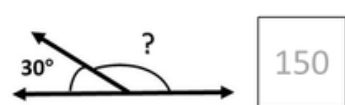
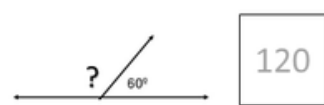
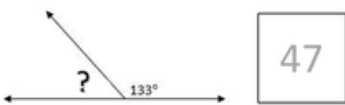
Find the missing angle using the rule below.

Rule: complementary angles total 90



Find the missing angle using the rule below.

















Rule: supplementary angles total 180



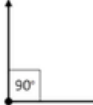
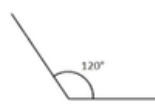
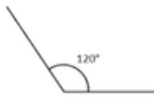

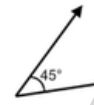

Find missing angles

Given a rule, students will find the missing angle. There are differentiated versions with the correct answer in gray.

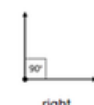


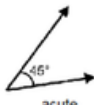

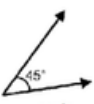




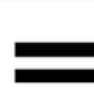

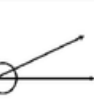
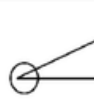



Angles

		 congruent	 Vertex		
 vertex			 acute		
 obtuse	 congruent		 vertical		
 vertical	 acute	 vertex			 right
 right	 obtuse	 vertical			
 congruent			 acute		

Angles

		 right	 Obtuse
 obtuse		 congruent	 acute
		 obtuse	

Place the following images in the empty squares on the previous page, completing the sudoku puzzle.

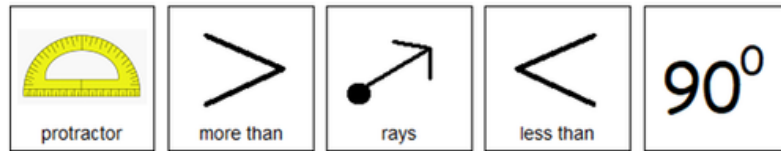
 right	 right	 right	 acute	 acute
 acute	 obtuse	 obtuse	 obtuse	 obtuse
 congruent	 congruent	 vertex	 vertex	 vertical
 vertical	 vertical			

There is a Sudoku puzzle in this unit as well. This is a great way to work with the new vocabulary!!

There are 2 versions plus answer keys.

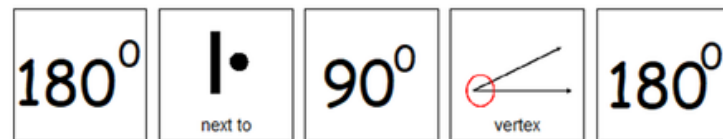
Angles

1. An angle is made up of 2 .
2. You measure an angle using a .
3. A right angle measures exactly .
4. An acute angle measures than 90° .
5. An obtuse angle measures than 90° .



Angles

6. A straight angle measures exactly .
7. Adjacent angles are angles that are to each
8. Adjacent angles share the same .
9. The sum of complementary angles is .
10. The sum of supplementary angles is .



Quiz

Close worksheets are a great informal assessment. This unit has 3 worksheets that review facts from the book.

Answer key included.

Version 1

1. Circle all the acute angles:



2. This tool is used to measure angles:



3. An angle is named using the:



4. Circle all the obtuse angles.



5. Adjacent angles are:

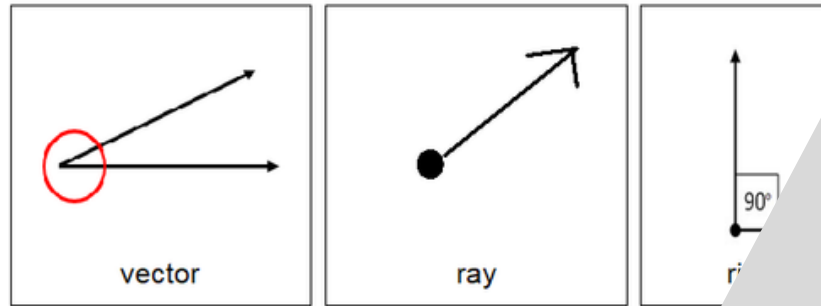


Christa Joy, SpE
The Picture Communication Symbols ©
Worldwide. Used with permission.

Version 2

Print onto cardstock or mount on index cards. Cut pictures
apart and show student answer choices for each question.

Q 3



vector

ray

Version 3

1. Circle all the acute angles:



2. This tool is used to measure angles:

- A. Ruler
- B. Protractor
- C. scale

3. An angle is named using the:

- A. Vertex
- B. Ray
- C. Right angle

4. Circle all the obtuse angles.



5. Adjacent angles are:

- A. Opposite each other
- B. Next to each other
- C. Beneath each other

Christa Joy, Special Needs for Special Kids
The Picture Communication Symbols ©1981-2019 by Tobii Dynavox. All Rights Reserved
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Assessment

FINALLY the assessment!! There are 3 versions.

- 10 questions with 3 picture choices for each question
- cut out the answer choices and glue them on index cards
- traditional multiple choice

Answer key included.

Digital Activities

Watch the movie on angles.

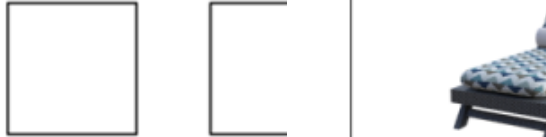
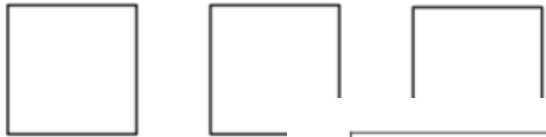
Obtuse angles measure anywhere between 91° and 180° . Here are some examples you might see of obtuse angles.



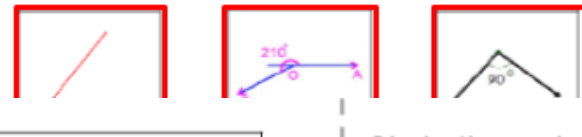
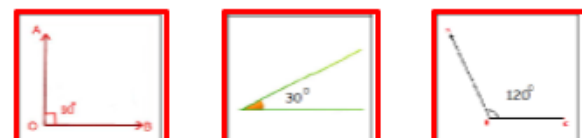
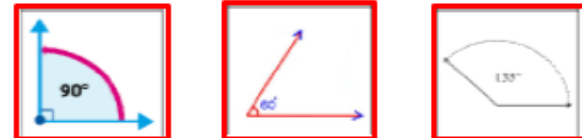
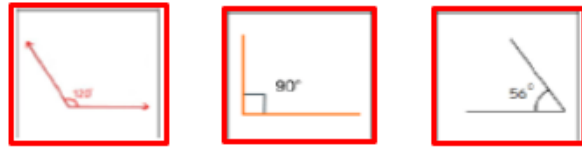
This unit also has digital activities. There is a movie version of the book students can listen to read aloud.

small













big



Place the 3 angles in order from smallest to largest.



Circle the main type of angle you see in each picture.







	
	
	
	
	
	



The digital activities have students mainly click and drag their answers. There is some typing involved in the set without differentiation.


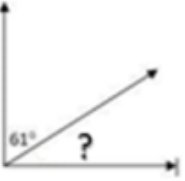

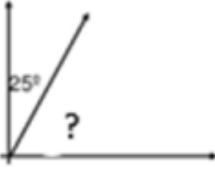
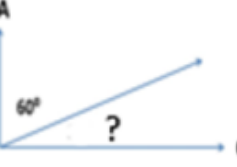



Sort the pictures into the correct column depending on the angle it describes. If you are not sure place it on one of the middle lines.

$= 90^\circ$	$< 90^\circ$ less than	$> 90^\circ$ more than	 boomerang
+			35°
	 square angle	120°	

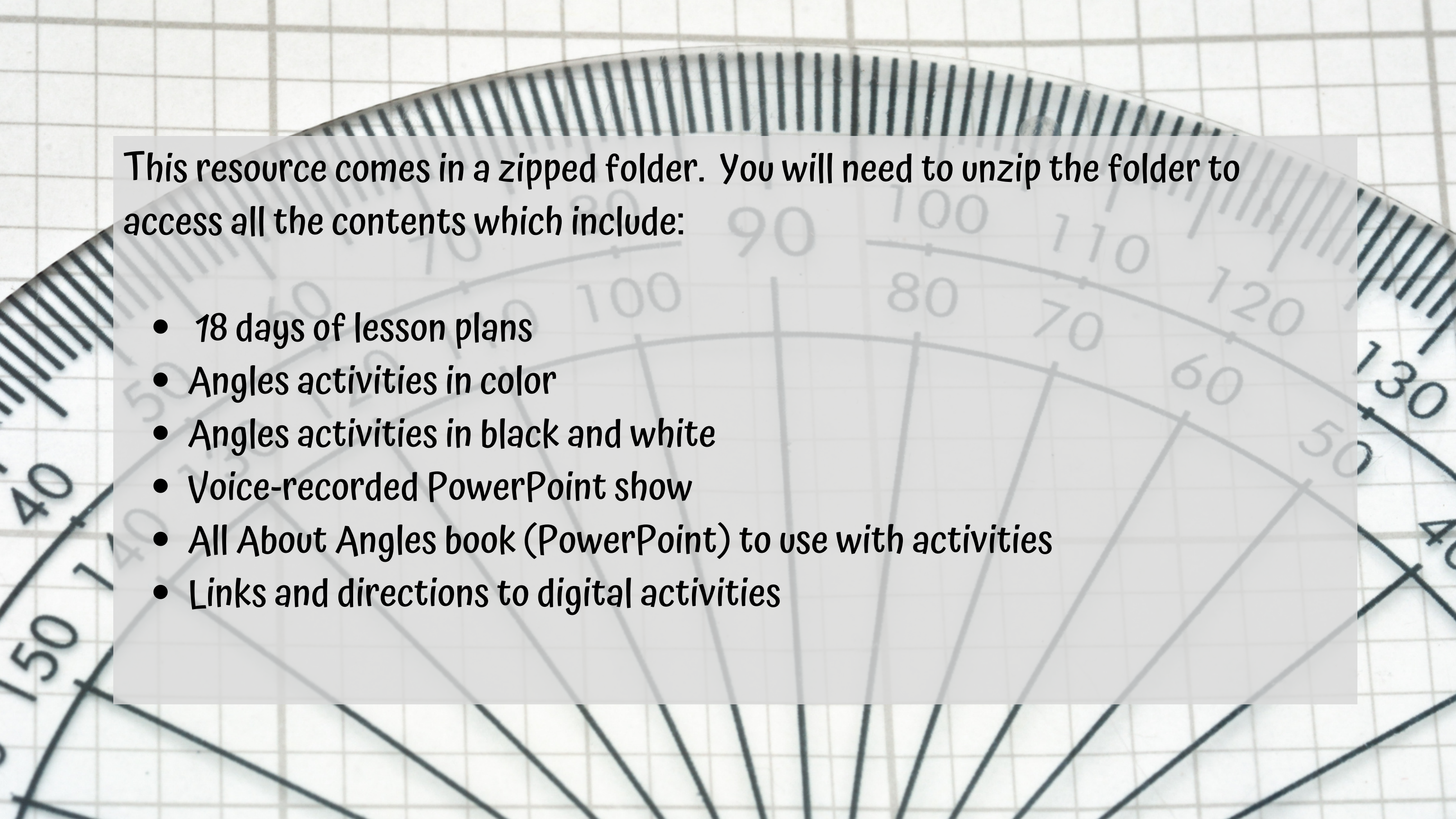
Rule: complementary angles total 90

Find the missing angle using the rule.

	<input type="text" value="60"/>		<input type="text" value="29"/>
	<input type="text" value="45"/>		<input type="text" value="65"/>
	<input type="text" value="30"/>		<input type="text" value="40"/>

<input type="text" value="60"/>	<input type="text" value="45"/>
<input type="text" value="30"/>	<input type="text" value="29"/>
<input type="text" value="65"/>	<input type="text" value="40"/>

The second set of slides is differentiated using color. There is no typing in this set of slides.



This resource comes in a zipped folder. You will need to unzip the folder to access all the contents which include:

- **18 days of lesson plans**
- **Angles activities in color**
- **Angles activities in black and white**
- **Voice-recorded PowerPoint show**
- **All About Angles book (PowerPoint) to use with activities**
- **Links and directions to digital activities**

Save money by getting this unit as part of the
Geometry Bundle

Geometry Bundle

