

Classifying & Identifying Angles

Supports Bridges Grade 4, Unit 5, Module 1, [Session 2](#) & [Session 3](#)

Overview

This Tech-Enhanced Activity is based on learning in Sessions 2 and 3. The work supports students' understanding of different angle measures.

Preview this content with a short [video](#).

	Students will:	Asynchronous Assets	Synchronous Assets
Part 1	Sort angles into three groups based on angle measure, describe or name the three groups, and look for angles in the real world.	Exploring Angles [Slides]	
Part 2	Review proper angle names and then classify and determine interior angles of pattern blocks.	Pattern Block Angles [Slides]	
Part 3	Review and reflect on sample student work about interior angles of pattern blocks, compose angles from multiple pattern blocks, and estimate real-world angle measures.	Identifying Angle Measures [Slides]	

Some tech skills your students will need:

- Upload an image to a Google Slide
- Drag and drop elements
- Type in text boxes

Content notes:

1. Part 1 of this TEA aligns roughly with steps 1–5 of Session 2 and the Which Angle Doesn't Belong Student Book page, although the TEA switches the focus to which angles *do* belong together in the first slide, "Grouping angles." Unlike Session 2, formal angle names are not given until Part 2 of the TEA. The final four slides are loosely based on step 9 of Session 2, which encourages students to form angles with their bodies.
2. Part 2 of this TEA aligns with the end of Session 2 and the beginning of Session 3, drawing from the Pattern Block Angles Student Book page and matching the instruction from steps 8–11 of Session 2. The slides starting with "Another type of angle" and continuing to the end of Part 2 are aligned with the Measuring Pattern Block Angles Student Book page and steps 1–5 in Session 3.
3. Part 3 of this TEA begins by reviewing work similar to the Measuring Pattern Block Angles Student Book page as described in step 5 of Session 3. The "Making more angles" slides are loosely based on a Challenge suggestion after step 4 in Session 3, and the "Making estimates" slides that finish Part 3 are new content. This TEA does not cover steps 6 through the end of Session 3 or content related to angles on a clock face.

Part 1: Exploring Angles

Students sort angles into three groups based on angle measure, describe or name the three groups, and look for angles in the real world.

You will need your copy of:

Google Slides: Exploring Angles (asynchronous learning)

- English: [preview](#) | [copy](#)
- Spanish: [preview](#) | [copy](#)

1. Distribute the Google Slides to students via Google Classroom, email, or another preferred method and **make a copy for each student**. This activity helps students start to think about different angle measures as they head into Part 2 of this activity.
2. Students self-pace through the slides to group and assign names to different angles.
3. Students explore their own environment to find real-life examples of angles.
4. Prior to Part 2, review student responses on the “Naming angles” slide, taking note of the different informal angle names or descriptions students use. Student responses from this slide can be used to customize the “Assigning proper names” slide in Part 2.
5. Review images and angle names/descriptions on the last slide for evidence of students’ understanding of different angle types.

Part 2: Pattern Block Angles

Students review proper angle names and then classify and determine interior angles of pattern blocks.

You will need your copy of:

Google Slides: Pattern Block Angles (asynchronous or synchronous learning)

- English: [preview](#) | [copy](#)
 - Spanish: [preview](#) | [copy](#)
1. Preview the Google Slides. If desired, replace the sample angle names and descriptions on the “Naming angles” slide with your own students’ work. See teacher notes in the slides, and then remove the notes to teachers from all slides.
 2. Distribute the Google Slides to students via Google Classroom, email, or another preferred method and **make a copy for each student**.
 3. Choose your delivery method:

If delivering asynchronously	If delivering synchronously
<ul style="list-style-type: none">• Students self-pace through the slides.• Students connect informal terminology with mathematical terms.• Students examine, sort, and label angle measures of pattern blocks.• Students use the MLC Pattern Shapes app to deepen their understanding and find exact interior angle measurements.	<ul style="list-style-type: none">• Start a Zoom or Google Meet session.• Open the slides and share your screen. Students do not yet need to open their copy.• Use the first three slides to review formal names for angle measures and the definition of <i>degrees</i>.• Have students open their copy of the slides.• Beginning with the “Exploring angles in pattern blocks” slides, invite students to use the pattern block shapes to explore, sort, and label interior angles on that slide and the two slides that follow. You may wish to pause and review each slide or allow students to work through all three slides before reviewing their work together.• Use the two “Another type of angle?” slides to review the definition of a <i>straight angle</i>.• Have students use the MLC Pattern Shapes app to explore the angle measures of pattern blocks and record their work.

4. Prior to Part 3, review student work from the last 5 slides of Part 2, where students found the exact interior angle measures of pattern blocks. Their work can be used to customize Part 3 of this activity. Consider choosing 2–3 samples that feature different pattern blocks.

Part 3: Identifying Angle Measures

Students review and reflect on sample student work about interior angles of pattern blocks, compose angles from multiple pattern blocks, and estimate real-world angle measures.

You will need your copy of:

Google Slides: Identifying Angle Measures (asynchronous or synchronous learning)

- English: [preview](#) | [copy](#)
 - Spanish: [preview](#) | [copy](#)
1. Preview the Google Slides. If desired, replace the sample student work with your own students' work. See the teacher note in the slide deck for details. Then remove the note before distributing.
 2. Distribute the slides to students via Google Classroom, email, or another preferred method and **make a copy for each student**.
 3. Choose your delivery method:

If delivering asynchronously	If delivering synchronously
<ul style="list-style-type: none">• Students self-pace through the slides.• Students examine the work of other students to review strategies for finding the interior angles of pattern blocks.• Students use the angle tool in the MLC Pattern Shapes app to explore angles created by combining pattern blocks.• Students estimate real-world angles and submit their responses.	<ul style="list-style-type: none">• Start a Zoom or Google Meet session.• Open the slideshow and share your screen. Students do not yet need to open their copy.• Facilitate a discussion of the sample student work.<ul style="list-style-type: none">○ Focus on how the sample students determined angle measures, and facilitate connections to your students' own work.○ Annotate the slides with summarized student input.• Have students open their copy of the slides.• Invite them to work alone, or in breakout rooms of 2–3, on the “Labeling angle measures” slide. As a group, have students share their thinking and any questions about angle measures.• Review the instructions on the “Making more angles” slide and invite students to combine shapes to create specified angles.<ul style="list-style-type: none">○ If possible, allow students to work in pairs or small groups in breakout rooms to compare their slides.

	<ul style="list-style-type: none">● Preview the last three slides and invite students to complete the angle estimates on their own.
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