

Mini-Map for M.EE.8.G.5 Subject: Mathematics Geometry (G) Grade: 8

# Learning Outcome

DLM Essential Element	Grade-Level Standard
<b>M.EE.8.G.5</b> Compare any angle to a right angle, and describe	M.8.G.5 Use informal arguments to establish facts about the
the angle as greater than, less than, or congruent to a right	angle sum and exterior angle of triangles, about the angles
angle.	created when parallel lines are cut by a transversal, and the
	angle-angle criterion for similarity of triangles.

## Linkage Level Descriptions

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
Recognize attributes or	Recognize an angle as a	Recognize angles that	Compare the measure	Explain that
characteristics of an	figure formed by two	are either acute,	of an angle to the	complementary angles
object, such as color,	rays sharing one	obtuse, or right.	measure of a right	are pairs of angles with
orientation, length,	endpoint.		angle, and	measures that add up
width, and weight.			communicate whether	to 90 degrees (e.g., a
			the measure of the	40-degree angle and 50-
			angle is greater than,	degree angle).
			less than, or congruent	
			to the measure of the	
			right angle.	

## Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

How is the Initial Precursor related to the Target? In order to recognize angles, students begin by learning to notice what is new. The educator draws the students' attention to new objects or stimuli, labels them (e.g., "this is a circle, and it does not have any sides," "this is a rectangle, and it has four sides") and the student observes, feels, or otherwise interacts with the shapes.

#### How is the Distal Precursor related to the Target?

At this level, educators are providing students with specific vocabulary (line, line segment, point, and ray) that are used to form an angle. These are all denoted by certain characteristics (a line has arrows on both ends; a line segment includes both endpoints; a point is a dot on a graph, a line, line segment, or a number line; a ray is a line that has a well-defined starting point). Educators should take care to use the names "line," "line segment," "point," and "ray" while defining and describing the angles. While students do not need to say the names, they do need to learn their meaning. Educators should teach these attributes within the context of working with angles.

### **Instructional Resources**

Released Testlets

See the Guide to Practice Activities and Released Testlets.

**Using Untested (UN) Nodes** 

See the document Using Mini-Maps to Plan Instruction.

### Link to Text-Only Map

M.EE.8.G.5 Compare any angle to a right angle, and describe the angle as greater than, less than, or congruent to a right angle.

