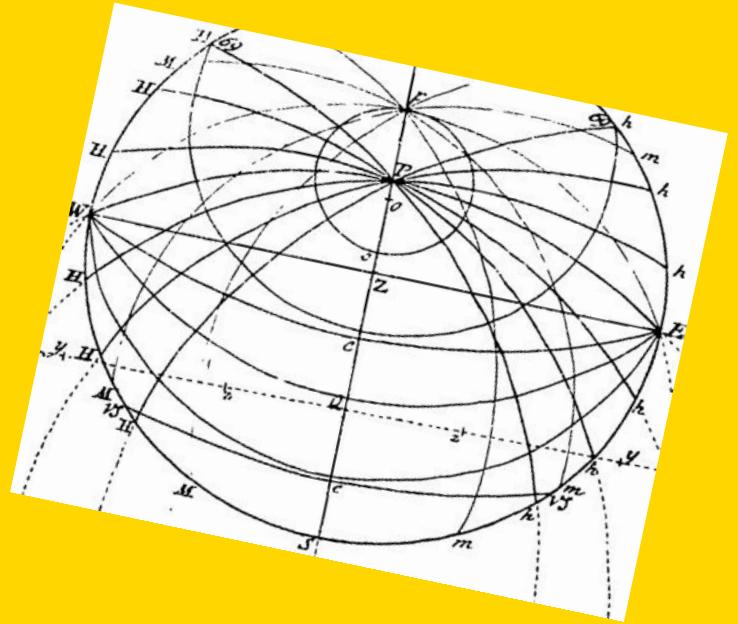# Lesson 2- Constructing Patterns
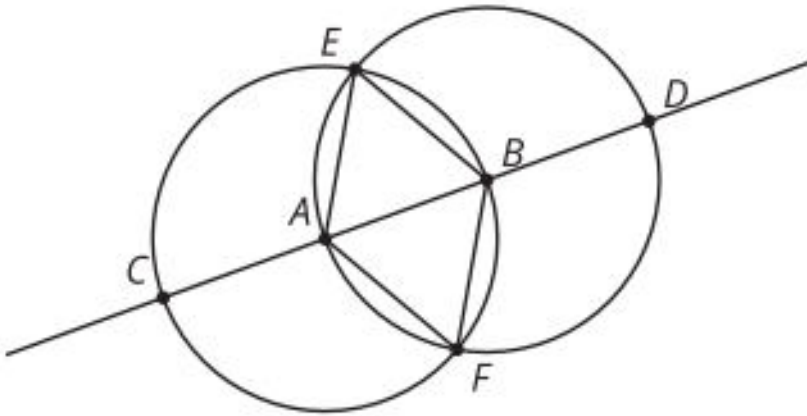
Learning Targets

- **I can follow instructions to create a construction.**

- **I can use precise mathematical language to describe a construction.**

2.1 Math Talk: Why Is That True?

Here are 2 circles with centers *A* and *B*.

Based on the diagram, explain how you know each statement is true

- The length of segment *EA* is equal to the length of segment *EB*.

- Triangle *ABF* is equilateral.

- *AB* = ⅓ *CD*

- *CB* = *DA*

Activity Synthesis:

Who can restate _____'s reasoning in a different way?

"Did anyone have the same strategy but would explain it differently?"

"Did anyone solve the problem in a different way?"

"Does anyone want to add on to _____ 's strategy?"

"Do you agree or disagree? Why?"

2.2 Make Your Own - Launch

2.2 Make Your Own

Use straightedge and compass moves to build your own pattern using the circle and radius as a place to start. As you make your pattern, record each move on a separate sheet of blank paper. Use precise vocabulary so someone can make a perfect copy without seeing the original. Include instructions about how to shade or color your pattern.
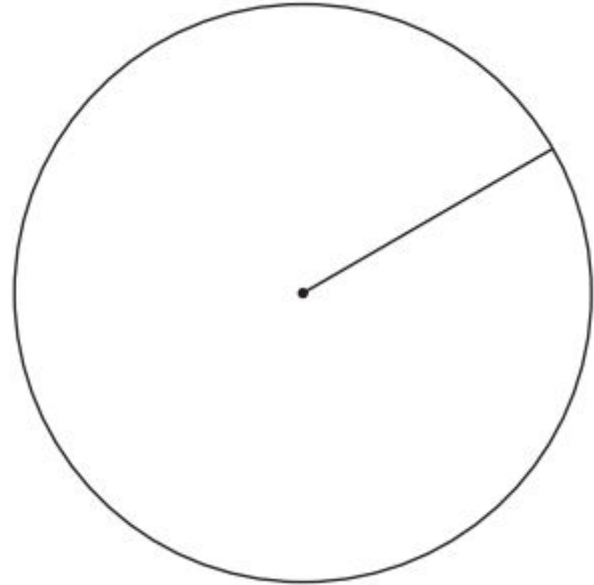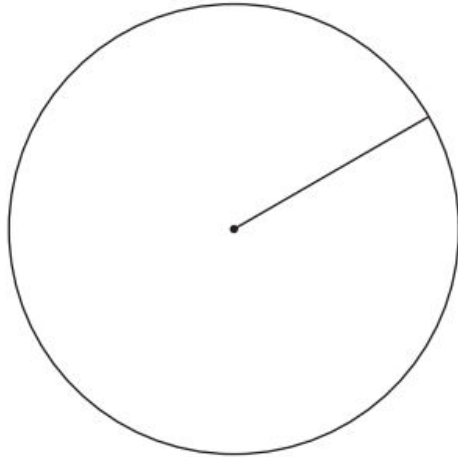
Activity Synthesis

Predict how well their pattern will be reproduced based on the instructions they gave.

2.3 Make Someone Else's

Trade your instructions and have your partner recreate your pattern.

Activity Synthesis

"What was one thing about the instructions that made them clear and easy to understand?"

"What was one thing about the instructions that could have been more precise?"

Lesson Synthesis:

- "What was difficult about following someone's instructions?"

- "What changes would you make about the way you wrote your instructions to describe figures in geometry?"

- "Were there any shapes or patterns that you were surprised could be made with straightedge and compass moves?"