Instructional Flow – Unit 4 Congruence

4.1 Congruent Polygons
- polygon congruence
- corresponding parts of congruent polygons

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4.2 Triangle Congruence
- rigidity of triangles
- triangle congruence postulates
  - side-side-side (SSS)
  - side-angle-side (SAS)
  - angle-side-angle (ASA)

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4.3 Analyzing Triangle Congruence
- investigation of the validity of the angle-angle-angle (AAA), angle-angle-side (AAS), and side-side-angle (SSA) congruence conjectures
- the hypotenuse-leg (HL) congruence theorem

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4.4 Using Triangle Congruence
- CPCTC and its applications
- two-column, flowchart , and paragraph proofs

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4.5 Proving Quadrilateral Properties
- proofs of quadrilateral properties using congruent triangles
- geometry as a system of knowledge

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4.6 Conditions for Special Quadrilaterals
- necessary and sufficient conditions to define special quadrilaterals

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4.7 Compass and Straightedge Constructions
- justification of constructions

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4.8 Constructing Transformations
- construction of transformations with compass and straightedge
- preservation of congruency
- triangle inequality theorem

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11.3 Graph Theory
- *The Königsburg Bridge problem*
- *Euler paths and circuits*