Proving the Triangle Congruence Theorems
Sentence Frames for Proofs

Transformations:

- Translate _______ from _______ to _______.
- Rotate _______ using _______ as the center by angle _______.
- Rotate _______ using _______ as the center so that _______ coincides with _______.
- Reflect _______ across _______.
- Reflect _______ across the perpendicular bisector of _______.
- Segments _______ and _______ are the same length so they are congruent. Therefore, there is a rigid motion that takes _______ to _______. Apply that rigid motion to _______.

Justifications:

- We know the image of _______ is congruent to _______ because rigid motions preserve measure.
- Points _______ and _______ coincide after translating because we defined our translation that way!
- Since points _______ and _______ are the same distance along the same ray from _______ they have to be in the same place.
- Rays _______ and _______ coincide after rotating because we defined our rotation that way!
- The image of _______ must be on ray _______ since both _______ and _______ are on the same side of _______ and make the same angle with it at _______.
- Points _______ and _______ coincide because they are both at the intersection of the same lines, and 2 distinct lines can only intersect in 1 place.
- _______ is the perpendicular bisector of the segment connecting _______ and _______, because the perpendicular bisector is determined by 2 points that are both equidistant from the endpoints of a segment.

Conclusion statement:

- We have shown that a rigid motion takes _______ to _______, _______ to _______, and _______ to _______, therefore triangle _______ is congruent to triangle _______.