Paper Folding Constructions

Orthocenter
Incenter
Circumcenter
Centroid
Altitudes - Orthocenter

Copy this triangle.
Fold segment AB onto itself from point C to find the altitude from C to side AB. Crease.

Unfold
Repeat from each of the other vertices and its opposite side.
Copy this triangle.

Fold side AB onto side CB to bisect angle B. Crease.
Unfold.

Fold line

Fold side AC onto side BC to bisect angle C. Crease.
Unfold.

Fold AC onto AB to bisect angle A. Crease.
Unfold.

To inscribe a circle drop a perpendicular from the incenter to one of the sides by folding from the incenter to the chosen side.
Unfold.

With your compass draw a circle with the incenter as center and the radius from the incenter to point P as radius.
Perpendicular Bisectors - Circumcenter

Copy this triangle.

Fold the line segment AB onto itself so that points A and B coincide. Crease.
Unfold. The foot of the fold line is the midpoint of AB and the fold line is perpendicular to AB.

Fold CB onto itself matching points B and C to find the perpendicular bisector of CB.
Unfold.

To find the perpendicular bisector of AC fold side AC onto itself so that A and C coincide.
Unfold.

To circumscribe a circle around triangle ABC use the circumcenter as the center of the circle and the distance from this point to any vertex as the radius.
Medians - Centroid

Copy the triangle.

To find the medians you need to find the midpoints of each side. You may proceed as you did when finding the perpendicular bisectors of each side. If is not necessary to make the entire fold each time. Just pinch at the foot of the perpendiculars.
Connect the midpoints to the opposite vertex to find the medians.

The centroid is the balance point of the triangle.