

- Ruler and Compass Constructions:
 - Constructing regular polygons
 - Other constructions (midpoints, angle bisectors, perpendicular bisectors, etc.)
- Regular Polyhedra
- Stereographic Projection of the Sphere
- The Moulton Plane
- The Poincare Disc Model and Hyperbolic Tessellations
- Axioms and Models for 3-dimensional Geometries
- Classifying Frieze Patterns
- Transformational Geometry and Finite Symmetry Groups
- The Penrose Tiling
- Conic Sections in the Projective Plane
- Conic Sections in the Taxicab Plane
- Mobius Transformations