

# Hand Modeling Outline

This is just an overview of topics covered for this demo. These things are also covered in depth in the project write-up and exercises.

## Subdivision Modeling

- What subdivision is
- Smooth preview
- Goal: Model such that the subdivided surface looks good
- More detail, more geometry; less detail, less geometry
- Topology
  - Why all quads?

## Starting on the Hand

- Opening files in Maya 2016
- Use yourself as reference!
- The starting geometry
- Bevel Edge
  - Options

## Index Finger

Subdivision workflow in action: broad shapes → finer detail

- Relative proportions
- Scaling in corners to round out the finger
- Back and forth process
  - Adding detail does not lock you into your previous edits
  - Be careful of “drift” though
- Finger nail
  - Control edge to sharpen
- Knuckles

## The Other Fingers

- Save work re-using the index finger
- Extract geometry
- The pivot and how to change it
- Duplicate
- Preparing topology for the fingers
- Finger positioning and orientation
  - Curve from top
  - Curve from front
- Resizing fingers
  - Move Tool: Object vs World
- Shaping the attach points
- Merging

- Hiding the fingers
- Combine
- Merging vertices: many options!
  - Merge Vertices To Center (recommended)
  - Merge Vertices
  - Target Weld
- Check to see if everything merged correctly

### **Knuckles**

- Multi-Cut Tool
- Extruding technique
- No good way to copy knuckle sculpting
  - Organic modeling

### **Thumb**

- Block in shape of hand body first, add one more loop
- Same general workflow as finger
- Nail faces away from palm

### **Back**

- Multi-cut Tool
- So much geometry!
  - “Sewing” edges together
  - Maintaining quads
- Sculpt Geometry Tool
- Soft Selection
- Form from all angles

### **Palm**

- Dropping in topology
- Beware of the flat-hand!
- Form from all angles

### **Wrist**

- Shape the cross section
- Delete n-gons

### **Final Touches**

- Revisit sculpting where needed
  - Remember: From all angles!
- Check if there are any proportional problems
  - Tip: Use soft select to fix
- Angle the thumb to a more natural position
- Webbing in-between the fingers
- Delete history
- Smooth and render, but don't turn your hand in smoothed!
- Hand topology
  - What is there works for a basic hand, but what could be added?