STRETCHLEARN · WORKBOOK

3D Typography — Workbook

This workbook turns the course into a repeatable pipeline you can run for any 3D type project. You will prepare clean vector outlines, extrude and bevel real letters, build PBR materials and studio lighting, create the inflated and sculpted looks, and composite a finished word into a real photograph. Work through the sheets and templates on one actual word so you finish with both a skill and a delivered hero image.

From Vector Type to Clean 3D Geometry

Pick your tool, prepare the type as a clean closed-path outline, and convert it to render-ready mesh with no pinches.

Exercise: Pick Your Tool and Justify It

Compare Blender, Cinema 4D, and Photoshop 3D against your own situation, then commit to one for the whole course. Write the reasoning so the choice is deliberate.

• Do you need one still image this week, or a skill you will reuse on many projects? Which tool fits?

• Do you already own Adobe or work in After Effects, and does that change the decision toward Photoshop or Cinema 4D?

• Which tool will you use for this course, and what is the single biggest reason?

Worksheet: Vector Prep Sheet

Set or draw your word, then record the cleanup steps as you complete them so the outline is genuinely render-ready before import.

Word / phrase to build

Font or custom lettering used

Converted to outlines? (Y/N)

Anchor points simplified? (Y/N)

Overlaps united with Pathfinder? (Y/N)

Open paths or stray points remaining? (count)

Exported as SVG? (Y/N)

Checklist: Geometry Readiness Pass

[ ] Type imported and scaled up, then scale applied (reads 1.000)
[ ] Extruded and converted to a real mesh
[ ] Voxel Remesh applied if subdivision or sculpting is planned
[ ] Normals recalculated so no face is inside-out
[ ] Checked under Matcap with Cavity for pinches on curves (S, O, R, e, a)
[ ] No visible seam on the inside of counters
[ ] Numbered backup of the editable vector file saved

Depth, Bevels, and Letterform Construction

Dial in extrude depth and bevel, then build the inflated balloon look and a sculpted display variant from reference.

Worksheet: Extrude and Bevel Recipe Sheet

Record the depth and edge values you used relative to cap height. Compare a sharp-edge and a beveled version under the same light before committing.

Cap height (m)

Extrude depth (m)

Extrude as percent of cap height (%)

Bevel depth (m)

Bevel segments / resolution

Harden Normals or Weighted Normal on? (Y/N)

Thin strokes still showing a flat face? (Y/N)

Exercise: Inflate a Letter Three Ways

Take one capital letter and inflate it with Cloth Pressure, then with the sculpt Inflate brush, then (if in Cinema 4D) with Rounding plus Subdivision. Compare which gives the most believable balloon for your letter.

• Which Pressure value gave a believable puff without bursting (try 4, 8, 20)?

• Did the silhouette stay readable after inflating, or did counters close up?

• Which method gave you the most control, and which was fastest?

Exercise: Sculpt to the Readability Edge

Sculpt a display variant (melting, twisted, or liquid) using Grab, Snake Hook, and Smooth. Save a numbered file at each big stage so you can return to the most readable version.

• At thumbnail size (about 150 px wide), can a stranger still read the word?

• Which saved version read best, and was it earlier or later than where you stopped?

• Did reflections (chrome plus HDRI) sell the sculpt more than the geometry did?

Checklist: Form and Trend Check

[ ] Extrude depth roughly 15 to 30 percent of cap height
[ ] Bevel clearly rounded but not eating thin strokes
[ ] Bevel segments high enough that the edge is smooth, not faceted
[ ] Inflated version holds its letter silhouette
[ ] Sculpted version still passes the thumbnail readability test
[ ] Numbered iterative saves kept for sculpted work

Materials and Studio Lighting for Letterforms

Build accurate PBR materials, light with HDRI plus a three-point rig, and add the texture detail that reads as real.

Worksheet: Material Build Sheet

For each material on your type, record the core PBR values. Set Metallic to a clean 0 or 1, then tune Roughness to taste.

Material name (e.g. front face, bevel, sides)

Surface target (plastic / chrome / gold / glass / balloon)

Base Color (RGB or hex)

Metallic (0 or 1)

Roughness (0.0-1.0)

Transmission / IOR (for glass)

Roughness or Normal map added? (Y/N)

Worksheet: Three-Point Lighting Plan

Record the role, position, size, and power of each light plus the HDRI strength. Toggle each light alone to confirm its contribution before balancing.

HDRI used (source and name)

HDRI strength

Key light position and angle

Key light power (W) and size (m)

Fill light power (W)

Fill as fraction of Key (e.g. 1/3)

Rim light position and power (W)

Exercise: Roughness Calibration Study

On your most reflective material, set Metallic to 1 and sweep Roughness from 0 to 0.5. Find the value where the metal looks real rather than impossibly perfect.

• What roughness made chrome believable (near 0.04) versus fake (0.0)?

• Did adding a subtle roughness or fingerprint map improve realism? By how much?

• Which material did you save to reuse on the next project?

Checklist: Material and Light Quality Pass

[ ] Every material Metallic set to exactly 0 or 1
[ ] Roughness tuned deliberately, most surfaces between 0.1 and 0.5
[ ] HDRI loaded so reflective materials have something to reflect
[ ] Key clearly off to one side so the extrusion reads (not flat from camera)
[ ] Front bevels show a highlight tracing each letter
[ ] Soft contact shadow grounds the type
[ ] Denoiser on; samples around 128 to 256
[ ] Texture scale checked against letter height (no smearing)

Compositing 3D Type into Photography

Render with passes and a matched camera, align light and perspective to a photo, then composite and deliver a seamless hero.

Worksheet: Background Match Sheet

Read your background photo and record what your 3D camera and lights must match. Pull focal length and any data from the photo's EXIF.

Background photo file

Photo focal length from EXIF (mm)

Apparent camera height / eye level

Camera tilt (level / looking down / up)

Main light direction in photo

Light colour (warm / cool / neutral)

Shadow character (hard sun / soft overcast)

Exercise: Light and Perspective Alignment

Set your 3D camera focal length, height, and tilt to match the photo, then place your Key light where the real light source is. Render a test and overlay it on the photo.

• Do the type's perspective lines sit on the same ground plane as the photo?

• Does the cast shadow point the same direction and have the same hardness as real shadows?

• When the composite feels off, is it the shadow (direction, blur, darkness)? What fixed it?

Worksheet: Render Output Log

Record the exact render settings for your delivery so you can reproduce or re-grade later.

Resolution (px on long side)

Transparent film / alpha on? (Y/N)

Passes enabled (Combined / Shadow Catcher / Z / Cryptomatte)

Samples

Denoiser used

File format (PNG 16-bit / EXR)

Approx render time

Checklist: Composite Delivery Spec

[ ] Background, Multiply shadow pass, then type stacked in order
[ ] Shadow softened with opacity and blur to match real shadows
[ ] Type edges feathered so they share the photo's focus
[ ] Unifying colour grade (Curves or LUT) across all layers
[ ] Matching grain added over the type
[ ] No visible seam between photo and 3D
[ ] Exported to destination spec (print CMYK 300 dpi / web sRGB at platform size)
[ ] Layered master (PSD/AEP) saved with passes intact

Your Action Plan

1. Install your chosen tool (Blender, Cinema 4D, or Photoshop) and create a single text object.
2. Set or draw your word, convert to outlines, simplify anchor points, unite overlaps, and export an SVG.
3. Import the SVG, scale it up, apply the scale, extrude, and convert to a clean mesh (Voxel Remesh if subdividing).
4. Set extrude depth to 15-30 percent of cap height and add a smooth multi-segment bevel.
5. Build the chosen look: clean extrusion, inflated balloon via Cloth Pressure, or a sculpted display variant.
6. Build PBR materials, setting Metallic to 0 or 1 and tuning Roughness, then add a roughness or normal map.
7. Load a studio HDRI and add a key, fill, and rim area-light rig; enable the denoiser.
8. Set the render camera to match your background photo's focal length, height, and tilt.
9. Place the Key light where the real light source is, add a shadow catcher, and render with passes at 4000 px or more.
10. Composite in Photoshop or After Effects: layer the shadow on Multiply, feather edges, colour-

grade, match grain, and export to spec plus a layered master.