Draw Alligator Scute Texture: Edge-to-Edge Armored Plates

Original tasks 1, 2 / complete keys

Task 1

A hide panel has a 2 by 2 grid of cells, each 3 cm wide and 3 cm tall. Light comes from the upper right. Describe where the bevel shading and seam shadows go on the four plates.

Answer: Bevel shading goes on the lower left side of each plate. Seam shadows go in the gaps on the lower plate, fading toward the back.

Reason: Light from the upper right leaves the lower left in shade, so the bevel band sits there. The seam shadow falls on the lower plate because the raised plate blocks light from above.

Check: Confirm all four plates have bevel shading on the lower left and seam shadows only in the gaps, not on the raised plates.

Task 2

A tail section has a 1 by 4 grid of cells. The cell widths are 1.5 cm, 1.2 cm, 1.0 cm, and 0.8 cm from base to tip, and every cell is 1.5 cm tall. Describe how to draw the plates so they appear to shrink toward the tip while keeping the ridge lines consistent.

Answer: Draw one rounded rectangle inside each cell, leaving a thin even gap, so the plates are 1.5 cm, 1.2 cm, 1.0 cm, and 0.8 cm wide from base to tip. Keep one ridge line per plate parallel to the tail axis, and keep the bevel and seam-shadow logic the same on every plate.

Reason: The decreasing cell widths already make smaller plates toward the tip, which reads as shrinking. Filling each cell with a plate of matching width preserves the edge-to-edge seam, and consistent ridge direction keeps the hide reading as one surface.

Check: Measure the four plate widths and confirm they decrease from 1.5 cm to 0.8 cm toward the tip; check that every plate has one ridge line in the same direction and a thin gap on all sides.

Draw Alligator Scute Texture: Edge-to-Edge Armored Plates

Original tasks 3, 4 / complete keys

Task 3

A back panel has a 3 by 1 grid of cells, each 2.5 cm wide and 2.5 cm tall. Light comes from directly above. Describe the bevel shading and seam shadows, and explain why the seam shadow is thin.

Answer: Bevel shading goes on the lower side of each plate. Seam shadows sit in the gaps on the lower plate. The seam shadow is thin because the gap is narrow and the plates sit edge to edge.

Reason: Light from above shades the lower bevel. The narrow gap limits how wide the cast shadow can be, so it stays a thin line.

Check: Check that bevel shading is on the lower side of all three plates and that seam shadows stay inside the narrow gaps.

Task 4

A hide panel has a 2 by 3 grid of cells, each 2 cm wide and 2 cm tall. A classmate drew overlapping plates like fish scales. Describe two changes to fix the drawing using the ridge-bevel-shadow convention.

Answer: First, redraw each plate as a rounded rectangle inside its own cell with a thin gap, removing the overlap. Second, move the seam shadow into the gap on the lower plate and add a narrow bevel band on the side away from the light.

Reason: The convention requires edge-to-edge plates with a seam, not stacked scales. Moving the shadow into the gap and adding a bevel restores the raised-plate look.

Check: Confirm no plate crosses into a neighboring cell, every gap has one seam shadow, and every plate has a bevel band on the correct side.

Draw Alligator Scute Texture: Edge-to-Edge Armored Plates

Source rubric / reflection

- [ ] Plates sit edge to edge with a visible narrow seam and do not overlap.
- [ ] Each plate has a ridge line consistent in direction across the panel.
- [ ] Bevel shading appears on the side away from the chosen light direction.
- [ ] Seam shadows sit in the gaps on the lower plate only.
- [ ] Cell size changes from back to tail so plates appear to shrink.
- [ ] Valid alternatives such as a different light direction or cross-ridge are accepted if the ridge-bevel-shadow logic stays consistent.

Reflection: What did you check, what did you change, and what will you try next?