Frozen Tundra Isometric Drawing: Terrain and Ice Features

Original tasks 1, 2, 3 / complete keys

Task 1

Draw a single terrain block three grid units wide and one unit tall on a 10 mm grid. Add one frost polygon on its top face and shade it with a right-light convention.

Answer: A block with three-unit top edges, one-unit vertical edges, one closed frost polygon on the top face, and denser shading on right-facing side faces.

Reason: The block tests equal vertical edges and correct top-face directions. The frost polygon tests a closed shape on the top face. The right-light convention tests consistent shading opposite to the worked example.

Check: Measure each vertical edge; all should be one unit. Compare top-face edges to the 30-degree guides. Confirm the frost polygon is closed and the denser shading is on right-facing faces.

Task 2

Draw two stacked terrain blocks: a lower block four units wide and two units tall, and an upper block two units wide and one unit tall offset by one unit. Add one ice wedge on the upper block.

Answer: A lower block with four-unit top edges and two-unit vertical edges, an upper block with two-unit top edges and one-unit vertical edges offset by one unit, and one ice wedge with a shallow vertical side on the upper block.

Reason: Stacking tests that each block keeps its own equal vertical edges. The offset tests placement on the grid. The wedge tests depth on a smaller top face.

Check: Check each block separately for equal vertical edges and correct top-face directions. Confirm the offset is one grid unit and the wedge has a visible shallow side.

Task 3

Draw three frost polygons on one terrain block's top face. Use a cross-hatch for ice areas and short dashes for snow areas, and write a key for both marks.

Answer: Three closed irregular polygons on the top face, cross-hatch inside ice regions, short dashes inside snow regions, and a written key naming both marks.

Reason: Multiple polygons test that closed shapes can share a surface without overlapping edges. The two marks test a defined convention that separates ice from snow.

Check: Confirm each polygon is closed and sits on the top face. Check that cross-hatch and dashes do not mix within one region and that the key names both marks.

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Original tasks 4 / complete keys

Task 4

Draw a scene with two terrain blocks and two ice wedges. State one light direction in a key and apply it to both blocks and both wedges.

Answer: Two terrain blocks with equal vertical edges within each block, two ice wedges with shallow vertical sides, and a key stating one light direction applied uniformly.

Reason: This task combines terrain, ice features, and shading consistency. The key makes the convention checkable rather than assumed.

Check: Trace vertical edges and compare top-face edges to the guides. Confirm both wedges have depth and that the stated light direction matches the shading on every block and wedge.

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Source rubric / reflection

- [ ] All vertical edges are vertical and equal in length within each block.
- [ ] All top-face edges are parallel to one of the two 30-degree guide directions.
- [ ] Terrain blocks are stacked or offset to suggest uneven ground.
- [ ] At least one ice wedge has a shallow vertical side showing depth.
- [ ] Frost polygons are closed shapes on the top face and follow grid directions where possible.
- [ ] One light direction is stated in the key and applied consistently.
- [ ] Line conventions (solid, dashed, hatch, dash) are defined and used consistently.
- [ ] The scene reads as a frozen tundra with distinguishable snow, ice, and ground areas.

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