Draw a Swimming Shark with Water-Motion Cues

Original tasks 1, 2 / complete keys

Task 1

Draw a shark swimming right to left. Use a 4 mm x-height (hypothetical). Place the dorsal fin at the midpoint, angle it backward, and add three wake lines behind the tail spaced 4 mm apart. Describe where the water line crosses the shark.

Answer: The body axis curves gently from right snout to left tail base. The dorsal fin sits at the midpoint with its tip angled backward by about 4 mm horizontally. Three wake lines behind the tail are spaced 4 mm apart, creating two gaps and spanning 8 mm between first and last. The water line crosses the dorsal fin tip by about 2 mm.

Reason: The axis sets direction, the midpoint anchors the dorsal fin, and the wake spacing uses the chosen unit. The water line crossing the fin tip shows surface proximity without submerging the body.

Check: Measure wake line spacing with a ruler; confirm three lines span 8 mm. Check that the dorsal fin tip crosses the water line and that wake lines curve in the same direction as the fin angle.

Task 2

Draw a shark swimming fully below the water line. Use a 6 mm x-height (hypothetical). Place the dorsal fin at the midpoint, add four wake lines behind the tail spaced 6 mm apart, and add two surface ripple lines above the shark. Describe the motion read.

Answer: The body axis curves gently from left snout to right tail base. The dorsal fin sits at the midpoint with its tip angled backward by about 6 mm horizontally. Four wake lines behind the tail are spaced 6 mm apart, creating three gaps and spanning 18 mm between first and last. Two surface ripple lines sit above the shark at the water line. The motion read is consistent left-to-right travel.

Reason: A fully submerged shark is a valid alternative. The wake lines and fin angle still establish direction, while surface ripples show the water line without requiring the fin to break it.

Check: Measure wake line spacing; confirm four lines span 18 mm. Check that surface ripples are above the shark and that wake lines are parallel to the body axis.

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Original tasks 3, 4 / complete keys

Task 3

Draw a shark swimming left to right with a 3 mm x-height (hypothetical). Place the dorsal fin at the midpoint, angle it backward, and add five wake lines behind the tail spaced 3 mm apart. Add one short surface ripple line at the water line near the dorsal fin. Describe the total span of the wake lines.

Answer: The body axis curves gently from left snout to right tail base. The dorsal fin sits at the midpoint with its tip angled backward by about 3 mm horizontally. Five wake lines behind the tail are spaced 3 mm apart, creating four gaps and spanning 12 mm between first and last. One short surface ripple line sits at the water line near the dorsal fin. The motion read is consistent left-to-right travel.

Reason: Five wake lines at 3 mm spacing give a total span of 12 mm, which is checkable arithmetic. The single ripple line keeps the surface cue minimal and consistent with the fin tip.

Check: Measure wake line spacing; confirm five lines span 12 mm. Check that the ripple line is at the water line and that the dorsal fin tip crosses the water line.

Task 4

Draw a shark swimming right to left with a 5 mm x-height (hypothetical). Place the dorsal fin at the midpoint, angle it backward, and add three wake lines behind the tail spaced 5 mm apart. Add two surface ripple lines at the water line near the dorsal fin. Describe one valid alternative that still reads as motion.

Answer: The body axis curves gently from right snout to left tail base. The dorsal fin sits at the midpoint with its tip angled backward by about 5 mm horizontally. Three wake lines behind the tail are spaced 5 mm apart, creating two gaps and spanning 10 mm between first and last. Two surface ripple lines sit at the water line near the dorsal fin. A valid alternative is to draw the shark fully below the water line with the same wake lines and fin angle, keeping the motion read consistent.

Reason: The rubric allows valid alternatives when motion cues agree. Submerging the shark changes the water line relationship but preserves direction through fin angle and wake lines.

Check: Measure wake line spacing; confirm three lines span 10 mm. Check that the alternative keeps wake lines parallel to the body axis and fin angle consistent with right-to-left travel.

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Source rubric / reflection

- [ ] Body axis is a gentle curve, not a deep S-shape.
- [ ] Dorsal fin base sits at the midpoint of the axis.
- [ ] Pectoral fins are below the axis and angled outward.
- [ ] Tail fin aligns with the axis direction.
- [ ] Water line crosses the dorsal fin tip, not the body.
- [ ] Wake lines are parallel to the body axis and consistent in direction.
- [ ] Spacing cues use a consistent unit, such as x-height.
- [ ] Valid alternatives are accepted if motion cues agree.

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