Arm Muscle Drawing Practice: Flexed vs Relaxed Anatomy Plate

Original tasks 1, 2 / complete keys

Task 1

Draw a relaxed arm outline 10 cm tall with a 10-degree elbow bend. Add a triceps oval 5 cm long and 1.5 cm wide on the back upper arm. Draw a flexed arm of the same length with a 90-degree elbow bend. Make the flexed triceps appear stretched and elongated along the back of the upper arm using a hypothetical 5.5 cm length and 1 cm width, and note in your key that the apparent elongation is a drawing convention, not a claim that the muscle lengthens. Label both triceps and state which appears longer.

Answer: The flexed triceps appears longer (5.5 cm) and narrower (1 cm) than the relaxed triceps (5 cm long, 1.5 cm wide). This apparent elongation is a drawing convention showing the stretched look of the triceps when the elbow flexes; it is not a claim that the muscle actually lengthens.

Reason: When the elbow flexes, the biceps shortens and bulges while the triceps is stretched and appears elongated along the back of the upper arm. Keeping arm length equal isolates the muscle change, and labeling the elongation as a convention avoids implying real lengthening.

Check: Measure both arm outlines to confirm 10 cm. Measure the triceps ovals and confirm the flexed one appears longer and narrower. Check that the key notes the elongation is a drawing convention. Check that labels point to the back upper arm.

Task 2

Create a plate with two arm outlines 14 cm tall. On the relaxed arm, draw a deltoid cap 3 cm wide and a biceps oval 4 cm long. On the flexed arm, keep the deltoid cap 3 cm wide but make the biceps 3 cm long and 2 cm wide. Label deltoid and biceps on both arms. Write one sentence explaining the biceps change.

Answer: The biceps changes from 4 cm long and narrow to 3 cm long and 2 cm wide, showing shortening and thickening during flexion. The deltoid cap remains 3 cm wide on both arms.

Reason: The deltoid is a shoulder muscle that does not shorten as dramatically as the biceps during elbow flexion. The biceps belly shortens and bulges.

Check: Verify both arms are 14 cm tall. Measure the deltoid caps to confirm they are both 3 cm wide. Measure the biceps ovals and check the flexed one is shorter and wider. Confirm labels are outside the outlines.

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Original tasks 3, 4 / complete keys

Task 3

Draw a forearm comparison: a relaxed forearm 8 cm long with two tapered muscle shapes, and a flexed forearm of the same length with the same two shapes but slightly shifted toward the elbow. Label 'forearm flexors' and 'forearm extensors' on both. Explain why the shapes shift rather than change length dramatically.

Answer: The forearm muscle shapes shift slightly toward the elbow in the flexed view because the wrist and elbow positions change, but the overall forearm length stays 8 cm. The labels remain on the same side of the forearm.

Reason: Forearm muscles cross the wrist and elbow; flexion changes their visible position more than their length in a simple drawing. Keeping forearm length equal supports comparison.

Check: Measure both forearm outlines to confirm 8 cm. Check that the two tapered shapes are present on each forearm and that labels point to the correct side. Confirm the explanation mentions position shift, not length change.

Task 4

Make a mini plate with one relaxed arm and one flexed arm, each 12 cm tall. Label deltoid, biceps, triceps, and forearm flexors. Use a dashed line between the two shoulders and between the two elbows to show scale. Add a title and a one-line convention key. Then write a self-check sentence confirming the flexed biceps is shorter than the relaxed biceps.

Answer: The plate shows two 12 cm arms with matching shoulder and elbow dashed lines. The flexed biceps is shorter than the relaxed biceps, and all four labels point to the correct muscle bellies. The title and convention key are present.

Reason: Dashed landmark lines make scale comparison explicit. Labeling four major groups keeps the plate clear. The self-check sentence verifies the key flexed-versus-relaxed change.

Check: Measure both arms to confirm 12 cm. Check that dashed lines connect corresponding landmarks. Verify four labels per arm and that the flexed biceps is visibly shorter. Confirm the title and convention key are written.

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Source rubric / reflection

- [ ] Two arm outlines are the same overall length and use the stated elbow-angle convention.
- [ ] Four to six major muscle groups are drawn per arm with clear, closed shapes.
- [ ] The flexed biceps is shorter and thicker than the relaxed biceps; the flexed triceps appears stretched and elongated along the back of the upper arm.
- [ ] Labels are outside the arm, spelled correctly, and connected by straight leader lines to muscle bellies.
- [ ] A convention key and title are present, and any measurements are labeled as hypothetical examples.
- [ ] Alternative rendering styles, such as hatching or stippling, are acceptable if boundaries remain clear.

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