

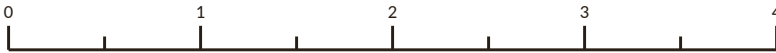


Life-Size Tooth Chart

Every tooth below is printed at its real size.

Name _____

Date _____



inches — this bar must measure exactly 4".
If it does not, reprint at 100% / "Actual size".



Measure and record

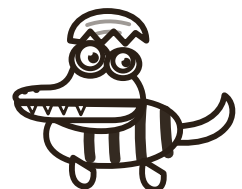
Tooth	My measurement (mm)	Bigger or smaller than my own tooth?
Hatchling		
Young alligator		
Adult		
Large adult		

Try this

1. Measure each tooth to the nearest millimetre and record it in the table.
2. The hatchling is about 8 in long and the large adult about 12 ft. Roughly how many times longer is the adult?
3. Now compare the teeth. Does the tooth grow by the same factor as the body? What might explain the difference?
4. A tooth is replaced when a new one pushes it out. Predict what a jaw X-ray of an adult would show underneath each working tooth.

Worth knowing

- American alligators are polyphyodont: each tooth socket replaces its tooth again and again for the whole of the animal's life.
- Because teeth are replaced continuously, one alligator may grow through thousands of teeth across a long life.
- A crocodilian tooth is a simple cone with no chewing surface. Force is used for holding and crushing, and food is torn by spinning the whole body - the death roll - rather than by the teeth themselves.



Life-Size Tooth Chart - teacher notes

Printed at 100% the four teeth measure about 2.5 mm, 8 mm, 16 mm and 25 mm of exposed crown. Check the ruler bar on the student page before the lesson - print dialogs default to shrink-to-fit, which silently rescales every measurement on the sheet.

Question 2: the body grows roughly 18 times longer from hatchling to large adult, while the tooth grows about 10 times. Teeth do not scale with the body - a useful way in to allometry. Accept any reasoning that notices the two figures differ and offers a mechanism.

Question 4: an X-ray shows replacement teeth stacked inside the jaw beneath each functional tooth, which is what makes continuous replacement possible.

Figures are approximate. Tooth size varies with the individual animal, its position in the jaw and wear, so treat these as representative rather than exact.