



Practice Your Scales! 3-D Lesson Plan Template

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Lesson Title:	Practice Your Scales!	
Lesson Topic:	Adaptations in fish	
Context		
Grade Level, Course	<i>Grades 3-4</i>	
Anticipated timeline	<i>1 – 1.5 hours</i>	
Learning Goals and Assessments		
Anchoring Phenomenon or Problem	<i>Write a brief paragraph describing the “phenomenon” or problem that will be the central focus of your lesson.</i>	
Performance Expectation	Successful learners will... <ul style="list-style-type: none"> ● 3-LS4-2 Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. 	How will you assess this objective? <ul style="list-style-type: none"> ● Students draw or photograph fish scales and describe similarities and differences.
Standards alignment	Practices 4. Analyzing & Interpreting Data 6. Constructing Explanations & Designing Solutions 7. Engaging in Argument from Evidence	Disciplinary Core Ideas LS4.B: Natural Selection LS4.C: Adaptation
		Crosscutting Concepts 1. Patterns 3. Scale, Proportion & Quantity 6. Structure & Function

Daily Activity Details		
Lesson Activities	<p><i>Teacher instructions</i></p> <p>Look at examples of fish in aquarium, from a pond, or from a store, and notice the scales. What shape are they? Do you see any designs?</p> <p>Let's collect a few scales from a few different kinds of fish, and look at them up close.</p> <p>Use the handout to organize observations, with notes and drawings to help record what you see.</p> <p>Then talk about the patterns you see.</p> <p>Questions to discuss: Are the scales from different species different or the same? Do you see rings on the fish? What do you think they can tell us? What do the scales do to help a fish survive?</p>	<p><i>List materials, supplies, equipment needed</i></p> <p>Magnifying glass</p> <p>Microscope (in lab, or use a clip-on microscope for a cell phone.</p> <p>Fish scales (from more than one species if possible)</p> <p>OR</p> <p>Images from the CT website of different scales.</p>
	<p><i>Student Handouts – list here, attach files to lesson plan</i></p> <p>Practice Your Scales student handout</p>	<p><i>List student products for assessment</i></p> <p>Learner's notes and drawings or photos of fish scales, and notes from discussion.</p>

References:

*List all resources used in the production of this plan.
Include references for any textbook sections your students will use.*

Microscopes for Cell Phones:

https://groindoor.com/active-eye-universal-phone-microscope-60x-w-clamp/?scid=schplp581&sc_intid=581&msclkid=f80cf34949b617f4776b90283ce88e84&utm_source=bing&utm_medium=cpc&utm_campaign=QT%20-%20Remnant&utm_term=4587093799583824&utm_content=Ad%20group%20%231

<https://www.teknistore.com/en/camera-lenses-and-accessories/12721-generic-30x-zoom-led-magnifier-clip-on-mobile-phone-microscope-micro-lens-for-apple-iphone-samsung-4891272104093.html>

*** Use the Appendices on the following pages to attach any additional files you use with this lesson, including links to online materials, presentations (PowerPoint, Prezi, etc), and references to any hard copy handouts you use.*

APPENDIX

Handouts and Assessments

Insert any handouts you create for this lesson/unit. If activities are from another copyrighted source, include just a URL or bibliographic reference to the materials.