

# Video Storyboard Template

Use this video to plan. For the storyboard below, it may be easier to print out and draw simple sketches and write notes. The "diagram" should be simple, like stick figures, that help you know what types of shots and angles you will take. Motion can be described in the video. Music and narration can be described in Audio.

Title of Video:	The Physics of Gecko Feet
Running Time (Planned):	1:30 seconds
Learning Objective:	Students will be able to
Materials Required:	Camera, gecko, small container for observation
Location(s) of Shooting:	Weaver house
Preparation Required:	Gather materials

## Storyboard

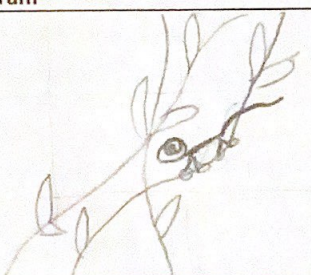



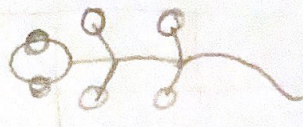

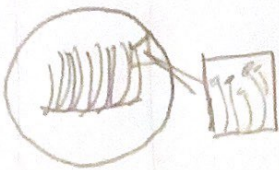



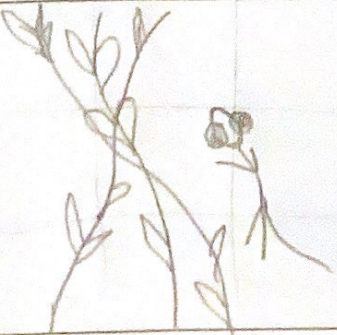
Video	Diagram	Audio
<p>Opens with title screen</p> <p>Transition (crossfade or dissolve) to longshot of gecko on leaves (eye level).</p> <p>Shot zooms in slowly.</p>		Intro music plays
<p><i>Long?</i> Mid-shot of gecko walking on wall.</p>		Geckos are one of only a few animals that can stick to almost any surface. They can walk on walls,
<p>Mid-shot of gecko walking on ceiling of tank (UC Berkeley Video-CC attribution licensed)</p>		ceilings,
<p><i>Long</i> Shot of gecko sticking to a glass surface (low angle)</p>		and even glass.  But how exactly are they able to do this?  The key lies in the structure of their feet.
<p>Long-shot of gecko feet on surface from below (Pixabay footage by Christian Bodhi)</p>		If we take a closer look we see that they are composed of 5 webbed toes.



Diagram of gecko foot structure, zoom in on lamellae		<p>The bottom of each toe is made up of modified scales that form thin plates called lamellae.</p> <p>Each lamellae is made up of tiny hair-like structures called setae.</p>
Diagram of gecko foot structure, zoom in on seta & spatulae		<p>If you were to magnify the structure of a single seta you would find that the top portion is composed of hundreds of microscopic bristles called spatulae.</p>
Shot of gecko on hand (high angle)		<p>These structures work by harnessing the power of physics on a microscopic level!</p>
Zoom in to close or extreme close up of gecko feet on surface		<p>Scientists have suggested that interactions between the molecules in the gecko's feet structures and the surface it's sticking to are at the root of this ability. Ongoing research into the role of Van der Waals interactions, contact electrification, and acid-base interactions, are helping to identify the exact nature of this intermolecular mystery.</p>
Close up shot of various types of tape, glue, and other adhesives		<p>Scientists hope that learning more about the gecko's fascinating abilities can help engineer new types of adhesives. Someday in the future you might use tape or glue that was inspired by these amazing creatures!</p>
<p>Mid-shot of gecko jumping.</p> <p>Shot transitions (crossfade or dissolve) into credits.</p>		<p>Outro music plays</p>

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