



**Meet a Scientist - Dr. Travis Hagey, Assistant Professor at Mississippi  
University for Women  
Reflection sheet**

Watch [Travis' talk](#) prior to completing this activity.

**NGSS:**

**MS-LS2:**

**MS-LS3:**

**HS-LS2:**

**HS-LS3:**

**Scientific Terminology:**

**Evolutionary biology:** the subfield of biology that studies the evolutionary processes (natural selection, common descent, speciation) that produced the diversity of life on Earth

**Adhesive:** a substance used for sticking objects or materials together

**Lamella:** a thin plate-like structure, often one amongst many

**Keratin:** a fibrous protein forming the main structural constituent of hair, feathers, hoofs, claws, horns, etc.

**Convergent evolution:** the process whereby organisms not closely related (not monophyletic), independently evolve similar traits as a result of having to adapt to similar environments or ecological niches

**Trait:** a specific characteristic of an organism

**Geometric morphometrics:** an approach that studies shape using Cartesian landmark and semi landmark coordinates that are capable of capturing morphologically distinct shape variables

**Adaptation:** the biological mechanism by which organisms adjust to new environments or to changes in their current environment

1. How does understanding how animals work, or specifically move help scientists study them?  
How does this relate to animals in general?

2a. Travis described how evolution determines how species develop and change. Why might certain gecko toe pads be shaped differently or have different shaped hairs in the wild?

2b. Come up with two examples of things a gecko might need to do in the wild and how their feet might adapt over time:

3. Name some of the ways lizards are adapting to live in cities in Puerto Rico. Then, give two examples of other animals you know of, listing how they have adapted to live closer to civilization.

4. Come up with 3 research questions a scientist studying gecko's feet might ask:

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[Student Survey](#)