



# WILD Kids



7-12

Published by the Arizona Game & Fish Department - Education Branch and the Heritage Fund

Number 11

## Lizard Aerobics

Have you ever seen a lizard doing push-ups on a fence, wall, rock, or tree trunk? Ever wonder why? There are two general reasons for lizard push-ups: breeding and temperature control. Coloration is involved in both and has a lot to do with lizard behavior.

Lizard push-ups are a form of breeding behavior. If you look carefully around a lizard doing push-ups you may see another lizard close by. If this is the case, then the lizard is 'showing off' or displaying. During the breeding season, males of most lizard species become brightly colored, generally in metallic blues, greens or yellows. These colors are concentrated on the neck, sides and belly. Colored patches indicate the fitness of a lizard. Fitness is a combination of health, age, ability to avoid predators and obtain food, water and shelter. Large, brightly colored patches on a male indicate a very fit lizard!

Push-ups expose patches of bright colors to any nearby watching lizard in flashes of color. Other behaviors that go along with push-ups are head bobbing and inflation of the gular flap. (The gular flap is a loose section of skin on the throat of a lizard that can be expanded or inflated to show off color.) If the watching lizard is a male, then both may begin push-ups. Push-ups between males establishes a breeding hierarchy - the more brightly colored and healthy lizard will obtain the best breeding site. If the watching lizard is a female, she is able to determine the fitness of the male by the size and color of his patches and his ability to do push-up and head bobs.

All of these activities, push-ups, head bobbing and inflating the gular flap, can also attract the attention of

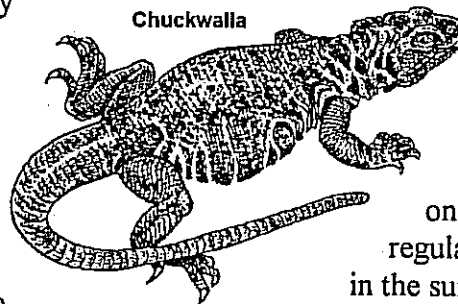
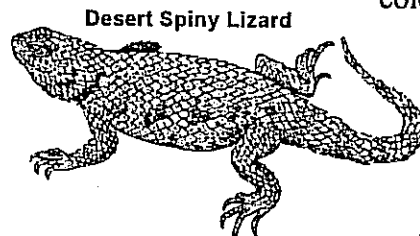
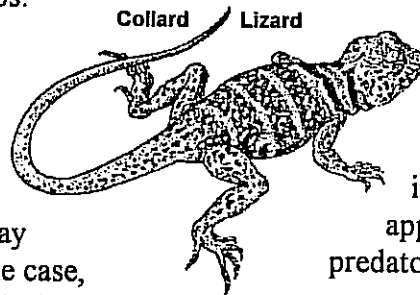
predators. If you watch male lizards closely, they are on constant lookout for predators. Their eyes are always moving. If they see an approaching predator, they will "freeze" instantly, no longer exposing bright colors. The sudden lack of color and movement may cause the predator to lose sight of its intended prey. If the predator continues to approach, the lizard runs and hides before the predator can catch it.

How do you know if the bright colors you see in a lizard are breeding colors? If the lizard is brightly colored only for a short period of the year the colors are breeding colors. The Gila monster is brightly colored all the time. Its bright pink and black colors are **aposematic** or warning coloration. The bright colors warn other animals that it is venomous.

Lizards also do push-ups to regulate their internal body temperature. Lizards are ectothermic, meaning their internal body temperature is close to the air temperature. A lizard doing push-ups may be trying to cool down by lifting its body above the hot surface (fringe-toed lizards do this).

Behavior and color are important in regulating body temperature in lizards. To increase body temperature, the skin on the back side of a lizard becomes darker. (Remember, dark surfaces absorb more heat and get hotter.) To keep the lizard from overheating, skin on the back lightens. Additional behaviors regulating body temperature include basking in the sun to warm up or hiding in shade, deep crevices or underground to cool off.

So the next time you see a lizard doing push-ups, take a closer look. You may be surprised at what you see.



## Activity: The Meaning of Scientific Names

Many scientific names are Latin or Greek in origin and if you know a few key words most scientific names are easy to decipher. Scientific names generally describe an organism's shape, color, habitat, structure, activity, texture, etc., or are named in honor of someone important. For example, if you did not know what an octopus looked like, you could get some hints from its name. *Octo* is Latin for eight and *pūs* is Greek for foot. So an octopus would be a creature with eight feet. A list of common Latin and Greek word roots is given in the right hand column.

Use the list to decipher the following species names of Arizona lizards.

virgatus	trivirgatus
multivirgatus	bilineatus
euryxanthus	triangulum
punctatus	melanoleucus
rufipunctatus	flavescens
triseriata	arenicolor

Make up species names for the following names.

six blue lined	yellow-eyed
white-speckled	black-necked
warty skin	flat-headed
northern yellow nose	five-toed red belly
worm-nosed	water living gray-bellied
large-toed	green frog
ten wavy brown lined	black and white

Finally, make up your own names. Draw a picture of your animal with a short description of its **niche**. Can your classmates correctly decipher the name before they see your picture and description or after?



Banded Gecko

## Latin and Greek Word Roots

### Quantity

one:	mono, uni	nine:	ennea, novem
two:	bi, di, duo	ten:	deca, decim
three:	tri	many:	multi, poly
four:	quandri, tetra	few:	oligo, pauci
five:	penta	all:	omni
six:	hexa	empty:	ceno, vani, vacu
seven:	hepta, septem	even-numbered:	artio
eight:	octo	odd-numbered:	perisso

### Shape

large:	grandi, macro, mega	tent:	scen
small:	micro, minute, parvi	row:	seri
angled:	anguli	line:	linea, virga
cresent:	lunuli	wavy:	undulata
curled:	cyrto, toxo	thin:	gracil, leptu
flat:	platy	spot:	punctat
forked:	dicho	warty:	helo
hooked:	grypho, onco	wide:	eury, lati

### Color

black:	melano, nigri, atr	green:	chloro, virid
brown:	brunne, fusc	yellow:	flav, xantho
blue:	cerule, cyano	red:	erythro, rufi
gray:	glauc, polio	white:	albi, leuco

### Habitat

sand:	areni	island:	insul, neso
water:	aqua	marsh:	eleo, limno
woods:	drymo	river:	amni, potamo
cave:	speleo	sea:	pelag, marin
mountain:	montan	snow:	chinono, nival

### Direction

northern:	boreal	western:	hesperi
southern:	austral	below:	hypo
eastern:	europ	above:	hyper

### Animal Structures

skin:	derm	back:	dorsum, noto
eye:	oculi	breast:	pectus, sterni
neck:	auchen	claw:	chela, onyx
head:	cephala	leg:	cnemi, scelis
belly:	gaster	face:	faci, ops
nose:	rhino	tooth:	dent, odonto
toe:	dactylo	mouth:	ora, stoma

### Types of Animals

bird:	avi, ornitho	lizard:	lacerta, sauro
cat:	aeluro, felis	mouse:	muri, mus
cow:	boo, bov	reptile:	herpeto
dog:	cani, cyon	snake:	aspidi, colubi, ophio
frog:	batracho, rana	worm:	neinins, vermi
insect:	entomo		