

STUDENT ACTIVITY GUIDE

WEEK 2: AMPHIBIANS

HOW DO WE KNOW THAT AN AMPHIBIAN IS AN AMPHIBIAN?

FROGS, TOADS, AND SALAMANDERS ARE ALL CONSIDERED AMPHIBIANS. WHAT DO THEY HAVE IN COMMON?

HABITATS

AMPHIBIANS HAVE BACKBONES, ARE COLD-BLOODED, LIVE PART OF THEIR LIFE IN THE WATER AND PART OF THEIR LIFE ON LAND, HAVE PERMEABLE SKIN, AND LAY GELATINOUS EGGS. WITH THESE THINGS IN MIND, WHAT DO YOU THINK A GOOD HABITAT FOR AN AMPHIBIAN WOULD LOOK LIKE? TAKE NOTES BELOW, OR DRAW A PICTURE:

HINT: A HABITAT PROVIDES FOOD, WATER, SHELTER, AND SPACE.

A GOOD HABITAT FOR AN AMPHIBIAN WOULD INCLUDE:

TYPES OF AMPHIBIANS

BASED ON THE DESCRIPTIONS OF EACH TYPE OF AMPHIBIAN, LABEL THE PHOTOS BELOW: WHICH ONE IS A FROG, TOAD, SALAMANDER, NEWT, AND CAECILIAN? HOW DO YOU KNOW? ANSWER KEY LOCATED AT THE END OF THE STUDENT GUIDE.



CANYON AMPHIBIANS: WESTERN CHORUS FROG

DESCRIBE THIS FROG LIKE YOU ARE WRITING AN IDENTIFICATION GUIDE, SO MAKE SURE YOU ARE SPECIFIC ENOUGH THAT YOUR DESCRIPTION WOULD HELP OTHERS TELL THIS FROG APART FROM ANOTHER SPECIES.



WESTERN CHORUS FROG

CAPTIVE BOREAL CHORUS FROG - BROWN MORPH BY CHARLES (CHUCK)
PETERSON IS LICENSED BY CC BY-NC-ND 2.0.

NOTES:

CANYON AMPHIBIANS: BOREAL TOAD

THE BOREAL TOAD HAS A LOOKALIKE CALLED THE WOODHOUSE'S TOAD. HOW WOULD YOU BE ABLE TO TELL THEM APART? DESCRIBE EACH TOAD IN THE BOX BELOW.



BOREAL TOAD

BOREAL TOAD (BUFO BOREAS BOREAS), JUVENILE (~2 YRS OLD) BY J. N. STUART
IS LICENSED BY CC BY-NC-ND 2.0.



WOODHOUSE'S TOAD

WOODHOUSE'S TOAD BY ANDREW DUBOIS IS LICENSED BY CC BY-NC 2.0.

NOTES ON TOADS:

HINT: WOODHOUSE'S TOADS LIVE AT LOWER ELEVATIONS THAN BOREAL TOADS, SO YOU ARE NOT LIKELY TO SEE THEM IN THE SAME HABITAT!

CANYON AMPHIBIANS: WESTERN TIGER SALAMANDER

IN THE WILD, ANIMALS WITHIN THE SAME SPECIES CAN LOOK VERY DIFFERENT FROM ONE ANOTHER. THE SALAMANDERS PICTURED BELOW ARE BOTH WESTERN TIGER SALAMANDERS. HOW CAN EACH SALAMANDER'S COLORATION HELP THEM IN THEIR ENVIRONMENT?



TIGER SALAMANDER BY PIPE SPRING NATIONAL MONUMENT/NPS, 10 JULY 2013. PUBLIC DOMAIN.



TIGER SALAMANDER BY PIPE SPRING NATIONAL MONUMENT, 27 MAY 2011. PUBLIC DOMAIN.

NOTES ON SALAMANDERS:

FIELD GUIDE SCAVENGER HUNT

USING THE UTAH DIVISION OF WILDLIFE RESOURCE'S FIELD GUIDE, COMPLETE THE SCAVENGER HUNT BELOW:

ACCESS FIELD GUIDE USING THIS LINK: [HTTPS://FIELDGUIDE.WILDLIFE.UTAH.GOV/?
CLASS=AMPHIBIA](https://fieldguide.wildlife.utah.gov/?CLASS=AMPHIBIA)

WHAT IS THE SCIENTIFIC NAME FOR THE ORDER THAT FROGS AND TOADS BELONG TO?

WHAT IS THE SCIENTIFIC NAME FOR THE ORDER THAT SALAMANDERS BELONG TO?

WHAT FAMILIES OF FROGS AND TOADS LIVE HERE IN UTAH?

WHICH FAMILY IS THE BOREAL TOAD IN? (HINT: THE FIELD GUIDE CALLS THEM WESTERN TOADS)

WHICH FAMILY IS THE WESTERN CHORUS FROG IN?

WHICH SPECIES OF FROG OR TOAD IS EXTIRPATED? (HINT: EXTIRPATED MEANS THAT THE SPECIES HAS GONE LOCALLY EXTINCT. THEY STILL LIVE IN OTHER STATES, JUST NOT HERE IN UTAH):

WHEN AND WHERE WAS IT LAST SPOTTED?

FIELD GUIDE SCAVENGER HUNT

ARE THERE ANY SPECIES THAT ARE INTRODUCED (OR NON-NATIVE) TO UTAH? WHICH ONES?

WHY COULD THIS BE A PROBLEM?

WHICH SPECIES OF TOADS WOULD YOU BE MOST LIKELY TO SPOT AROUND THE SALT LAKE VALLEY?

WHICH SPECIES OF FROGS WOULD YOU BE MOST LIKELY TO SPOT AROUND THE SALT LAKE VALLEY?

WHAT HAS HAPPENED TO THE POPULATIONS OF COLUMBIA SPOTTED FROGS ALONG THE WASATCH FRONT?

WHAT FAMILY IS THE WESTERN TIGER SALAMANDER IN?

DO YOU THINK IT WOULD BE POSSIBLE TO SPOT A TIGER SALAMANDER AROUND THE SALT LAKE VALLEY?

FIELD GUIDE SCAVENGER HUNT

PICK ONE OF THE FROGS OR TOADS THAT DON'T LIVE IN THE CANYONS. REPORT ON HOW YOU WOULD IDENTIFY THE ANIMAL, WHAT IT EATS, WHAT ITS HABITAT IS, ITS SIZE, NOTES ON ITS BEHAVIOR, AND MAYBE EVEN A FUN FACT. USE THE UTAH DIVISION OF WILDLIFE RESOURCES FIELD GUIDE, OR ANY OTHER RESOURCES (INTERNET OR BOOK) THAT YOU HAVE AVAILABLE. IF YOU HAVE A NATURE NOTEBOOK, TRY DRAWING A PICTURE OF YOUR ANIMAL AND INCLUDE WHAT ITS HABITAT WOULD LOOK LIKE.

FIELD GUIDE SCAVENGER HUNT

USING THE ANIMAL YOU PICKED TO REPORT ON, DESCRIBE HOW IT IS SIMILAR AND DIFFERENT FROM THE AMPHIBIANS THAT LIVE IN THE CANYONS. IF YOU PICKED A FROG, COMPARE IT TO THE WESTERN CHORUS FROG. IF YOU PICKED A TOAD, COMPARE IT TO THE BOREAL (WESTERN) TOAD.

HABITAT ASSESSMENT

FIND A SPOT OUTSIDE NEAR YOUR HOME, SCHOOL, OR LOCAL PARK. ONCE THE SNOW MELTS YOU CAN TRY THIS IN THE CANYONS, TOO! WOULD THE SPOT YOU CHOSE BE A GOOD PLACE FOR AN AMPHIBIAN TO LIVE? WHY OR WHY NOT? WOULD IT BE ABLE TO GET EVERYTHING IT NEEDS FROM ITS SURROUNDINGS? WHAT ELSE COULD THIS SPOT HAVE TO MAKE IT A GOOD HABITAT FOR AN AMPHIBIAN? TRY THIS EXERCISE IN A FEW DIFFERENT LOCATIONS. RETURN TO THESE SPOTS IN THE SPRING AND SUMMER AND SEE IF YOU CAN FIND ANY EVIDENCE OF AMPHIBIANS.

HABITAT ASSESSMENT LOG #1:

LOCATION NAME:

DATE:

TIME:

WEATHER;

PROVIDE A DETAILED DESCRIPTION OF THE HABITAT (YOU CAN TALK ABOUT ANY WATER NEARBY, AQUATIC AND TERRESTRIAL PLANTS, PLACES TO FIND SHELTER, FOOD SOURCES, POTENTIAL HAZARDS, ETC.):

DO YOU THINK THIS LOCATION WOULD BE A GOOD PLACE FOR AN AMPHIBIAN TO LIVE? WHY?

HABITAT ASSESSMENT LOG #2:

LOCATION NAME:

DATE:

TIME:

WEATHER;

PROVIDE A DETAILED DESCRIPTION OF THE HABITAT (YOU CAN TALK ABOUT ANY WATER NEARBY, AQUATIC AND TERRESTRIAL PLANTS, PLACES TO FIND SHELTER, FOOD SOURCES, POTENTIAL HAZARDS, ETC.):

DO YOU THINK THIS LOCATION WOULD BE A GOOD PLACE FOR AN AMPHIBIAN TO LIVE? WHY?

HABITAT ASSESSMENT LOG #3:

LOCATION NAME:

DATE:

TIME:

WEATHER;

PROVIDE A DETAILED DESCRIPTION OF THE HABITAT (YOU CAN TALK ABOUT ANY WATER NEARBY, AQUATIC AND TERRESTRIAL PLANTS, PLACES TO FIND SHELTER, FOOD SOURCES, POTENTIAL HAZARDS, ETC.):

DO YOU THINK THIS LOCATION WOULD BE A GOOD PLACE FOR AN AMPHIBIAN TO LIVE? WHY?

AMPHIBIAN ADAPTATIONS

ADAPTATIONS ARE THINGS THAT HELP AN ANIMAL SURVIVE AND THRIVE IN THEIR ENVIRONMENT. ADAPTATIONS CAN BE PHYSICAL OR BEHAVIORAL. A PHYSICAL ADAPTATION IS SOMETHING ABOUT AN ANIMAL'S BODY OR APPEARANCE, WHILE A BEHAVIORAL ADAPTATION IS SOMETHING THAT THEY DO. LABEL THE ADAPTATIONS BELOW AS EITHER A **PHYSICAL** OR **BEHAVIORAL** ADAPTATION.

BRUMATION DURING THE WINTER:

A FROG'S POWERFUL HIND LEGS:

THIN, PERMEABLE SKIN:

BURROWING TO ESCAPE THE HEAT:

CALLING OR SINGING:

COLORATION THAT LETS THEM
BLEND IN WITH THEIR
SURROUNDINGS (CAMOUFLAGE):

HELPING OUR AMPHIBIAN FRIENDS

BEFORE GOING OVER THE SECTION ON WAYS YOU CAN HELP AMPHIBIANS, BRAINSTORM A FEW WAYS THAT YOU CAN HELP AMPHIBIANS IN YOUR EVERYDAY LIFE:

AFTER READING THROUGH THAT SECTION, WHAT ARE SOME THINGS YOU'D LIKE TO DO OR TRY IN ORDER TO HELP AMPHIBIANS?

ANSWER KEY - TYPES OF AMPHIBIANS

BASED ON THE DESCRIPTIONS OF EACH TYPE OF AMPHIBIAN, LABEL THE PHOTOS BELOW: WHICH ONE IS A FROG, TOAD, SALAMANDER, NEWT, AND CAECILIAN?
ANSWER KEY LOCATED AT THE END OF THE STUDENT GUIDE.



SALAMANDER

NORTHERN SLIMY SALAMANDER BY KENT WALTERS. PUBLIC DOMAIN.



CAECILIAN

A LARGE CAECILIAN BY PAVEL KIRILLOV IS LICENSED BY CC BY-SA 2.0



TOAD

SPADEFOOT TOAD BY NATIONAL PARK SERVICE, 8 OCTOBER 2011. PUBLIC DOMAIN.



FROG

NORTHERN GREEN FROG BY ALICIA LAFEVER. PUBLIC DOMAIN.



NEWT

RED-SPOTTED NEWT BY NATIONAL PARK SERVICE. PUBLIC DOMAIN.

ANSWER KEY - SCAVENGER HUNT

WHAT IS THE SCIENTIFIC NAME FOR THE ORDER THAT FROGS AND TOADS BELONG TO?

ANSWER: ANURA

WHAT IS THE SCIENTIFIC NAME FOR THE ORDER THAT SALAMANDERS BELONG TO?

ANSWER: CAUDATA

WHAT FAMILIES OF FROGS AND TOADS LIVE HERE IN UTAH? **ANSWER: CHORUS FROGS, SPADEFOOTS, TRUE FROGS, TRUE TOADS.**

WHICH FAMILY IS THE BOREAL TOAD IN? (HINT: THE FIELD GUIDE CALLS THEM WESTERN TOADS) **ANSWER: TRUE TOADS**

WHICH FAMILY IS THE WESTERN CHORUS FROG IN? **ANSWER: CHORUS FROGS**

WHICH SPECIES OF FROG OR TOAD IS EXTIRPATED? (HINT: EXTIRPATED MEANS THAT THE SPECIES HAS GONE LOCALLY EXTINCT. THEY STILL LIVE IN OTHER STATES, JUST NOT HERE IN UTAH) **ANSWER: RELICT LEOPARD FROG**

WHEN AND WHERE WAS IT LAST SPOTTED? **ANSWER: 1950; ALONG THE VIRGIN RIVER IN ST. GEORGE, WASHINGTON COUNTY**

ANSWER KEY- SCAVENGER HUNT

ARE THERE ANY SPECIES THAT ARE INTRODUCED (OR NON-NATIVE) TO UTAH? WHICH ONES? **ANSWER: AMERICAN BULLFROG AND GREEN FROG**

WHY COULD THIS BE A PROBLEM? **ANSWERS CAN VARY, BUT CAN INCLUDE COMPETITION WITH NATIVE SPECIES, NO NATURAL PREDATORS, ETC.**

WHICH SPECIES OF TOADS WOULD YOU BE MOST LIKELY TO SPOT AROUND THE SALT LAKE VALLEY? **ANSWER: WOODHOUSE'S TOAD AND GREAT BASIN SPADEFOOT.**

WHICH SPECIES OF FROGS WOULD YOU BE MOST LIKELY TO SPOT AROUND SALT LAKE? **ANSWER: AMERICAN BULLFROG, COLUMBIA SPOTTED FROG, GREEN FROG, NORTHERN LEOPARD FROG, WESTERN CHORUS FROG.**

WHAT HAS HAPPENED TO THE POPULATIONS OF COLUMBIA SPOTTED FROGS ALONG THE WASATCH FRONT? **ANSWER: REDUCED ABUNDANCE AND DISTRIBUTION DUE TO HABITAT DESTRUCTION. POPULATIONS ARE THREATENED DUE TO LOSS AND DEGRADATION OF AQUATIC HABITATS.**

WHAT FAMILY IS THE WESTERN TIGER SALAMANDER IN? **ANSWER: MOLE FAMILY**

DO YOU THINK IT WOULD BE POSSIBLE TO SPOT A TIGER SALAMANDER AROUND THE SALT LAKE VALLEY? **ANSWER: YES, THEIR RANGE EXTENDS THROUGHOUT THE ENTIRE STATE.**

ANSWERS - AMPHIBIAN ADAPTATIONS

BRUMATION DURING THE WINTER:

BEHAVIORAL ADAPTATION

A FROG'S POWERFUL HIND LEGS:

PHYSICAL ADAPTATION

THIN, PERMEABLE SKIN:

PHYSICAL ADAPTATION

BURROWING TO ESCAPE THE HEAT:

BEHAVIORAL ADAPTATION

CALLING OR SINGING:

BEHAVIORAL ADAPTATION

COLORATION THAT LETS THEM
BLEND IN WITH THEIR
SURROUNDINGS (CAMOUFLAGE):

PHYSICAL ADAPTATION