Why Children Should Attend Summer Camp:

The Benefits of Residential Summer Camp and Outdoor Education

by

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A capstone project submitted in partial fulfillment of the requirements for the degree of Master of Arts in Education: Natural Science and Environmental Education

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PROJECT SUMMARY

Most people consider summer the relaxing season of the year. School is out, family vacations are planned, and children get sent to summer camp while parents enjoy a quiet week alone. However, if you have ever worked at a summer camp you know that summer is the busiest season of the year! Every May to August, summer camps around the United States host hundreds of thousands of children and give them a summer to remember. Every summer hundreds of camp counselors put blood, sweat, and tears into helping children make memories and have experiences of a lifetime. That was my goal when I created this curriculum. This Curriculum Guide is meant to be a camp counselor's foundation to provide children with a great summer.

This Curriculum Guide covers everything from survival class and how to survive in the outdoors to a dart art lesson where campers can learn about color theory while throwing darts at paint-filled balloons. My goal for this project was to explore the benefits children gain and the skills they learn at outdoor education focused summer camps and how necessary those skills are as they develop and grow. Summer camp is meant to be filled with fun, but it can also be educational. Camp counselors are in the unique position to have an exceptional amount of influence on the children they care for over the summer. What a camp counselor teaches over one week of the summer can help children gain social-emotional skills and influence their developmental status for years to come.

This Curriculum Guide, along with the adjoining Camp Counselor Schedule, Parent Information Sheet, Camper Survey, and Parent Survey, are all designed for a single week of residential camp. The information covered in the Curriculum Guide coincides with the Camp Counselor Schedule and gives counselors all of the necessary lesson plans for a successful week

of camp. The lessons are in alphabetical order for easy accessibility and each one contains a description of the activity, a “Why learn _____?” for each activity that describes the outcomes and skills campers learn during the activity, and multiple paragraphs on how to set up the activity and how to run the activity. Over the course of one week of residential camp, counselors would use each lesson in the Curriculum Guide. The entire week and lessons can be repeated many times over a summer. Each lesson also contains enough background information on the topic that counselors should be able to answer most camper questions. This Curriculum Guide would ideally be given to camp counselors during staff training and before the first campers arrive to give counselors ample time to read and learn each lesson. It can then be referenced over the summer as a reminder or as a quick guide to each activity. There is also a letter included at the front of the Curriculum Guide written from the camp director to the camp counselors as a welcome to summer camp and an encouragement to make it a great summer for their campers.

Aside from the Curriculum Guide, this document also includes the Parent Information Sheet, Parent Survey, and Camper Survey all of which would be used during a summer of camp. The Parent Information Sheet can be used as an informational flier before camp starts or can be sent out after parents register their children for camp as an informational guide. The Camper Survey is given to campers on their last morning of camp to get feedback on their week. The Parent Survey is sent out via email after their children return from a week of camp to get the parent’s feedback on how much their children enjoyed camp and how the registration process was. In entirety, this project can be used as a foundation for a successful summer camp and as a solid foundation of camp and outdoor education information for camp counselors.

camp wohali

CAMP COUNSELOR CURRICULUM GUIDE

camp wohali

Welcome to Camp Wohali!

We are so excited that you are joining us as a camp counselor this summer! We are thrilled to have you! Camp Wohali is a great place that allows you and your campers to grow, thrive, and explore new possibilities. “Wohali” is the Cherokee word for “eagle” which is a symbol of bravery amongst the Cherokee Nation. Here in the Appalachian Mountains, there are remnants of the Cherokee Native Americans all around us and we want to pay homage to them by respecting their name and legacy. Here at Wohali we encourage you to be brave, conquer your fears, and soar as high as eagles!

This curriculum guide will teach you much of what you need to know for this summer. While this document is a great starting place and will teach you the basics of activities such as water ecology, archery, and campfire cooking, it is important to remember that we learn best through experience. There are many things in this curriculum guide you should take very seriously, but we also want you to remember that camp is meant to be fun! Put your own spin on activities! Engage your campers in whatever way works best for you and them! You are here to make this the most memorable summer they will ever have. Be flexible and always willing to learn and you will also have a memorable summer!

I want to personally encourage you, as a camp counselor at Camp Wohali, to embrace everything about our name. This is your camp and you are Wohali. You have entered one of the most supportive and caring communities you could ever find and we can’t wait to see you grow and feel empowered here!

S’mores Truly,

Ileana Friese, Camp Director

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Archery

Description:
In this lesson campers will learn how to use recurve bows. They will learn the various parts of the bow, the arrow, how to aim and fire, and the importance of consistency in the sport of archery.

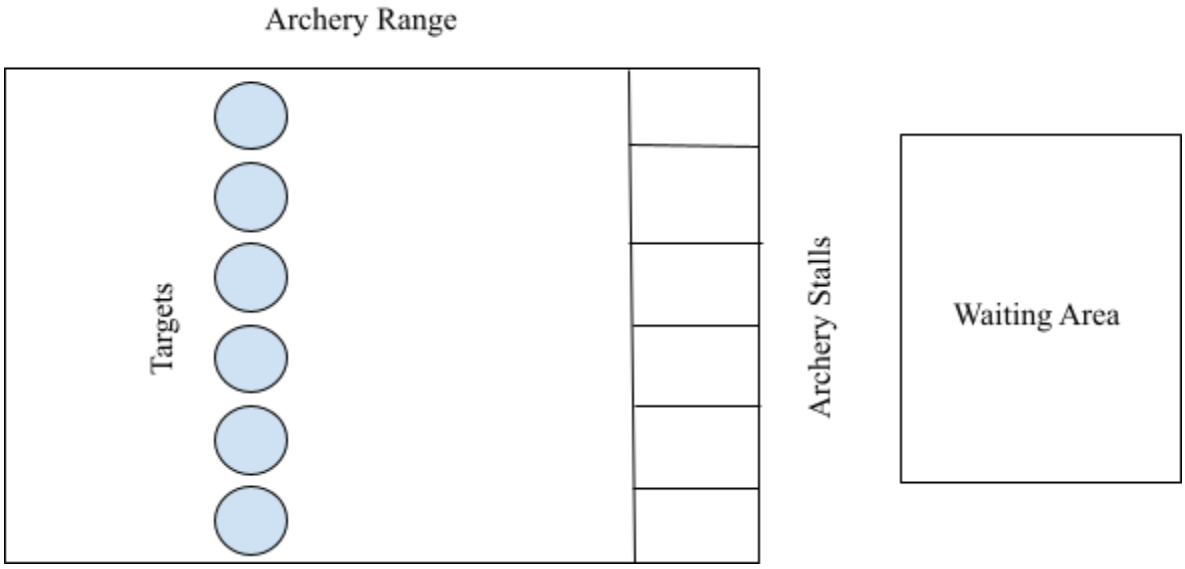
Why Learn Archery?
Archery is a great skill for any person to have! It teaches patience and consistency and helps participants learn to reach a goal. The purpose of this lesson is for each camper to feel comfortable at the archery range and hit the target consistently through consistent technique and following directions.

Set Up:
Camp counselors should have bows, arrows, and the range set up before campers arrive to shoot.

- Bows - inspect each bow for cracks or warping, bows should not be used if they show any signs of damage.
- String - inspect the string for fraying, frayed strings should not be used.
- Arrows - inspect each arrow to ensure fletchings are attached correctly, points are not dull, and the shaft is not bent or cracked. Broken arrows should be set aside for repair.

Setting the Range:

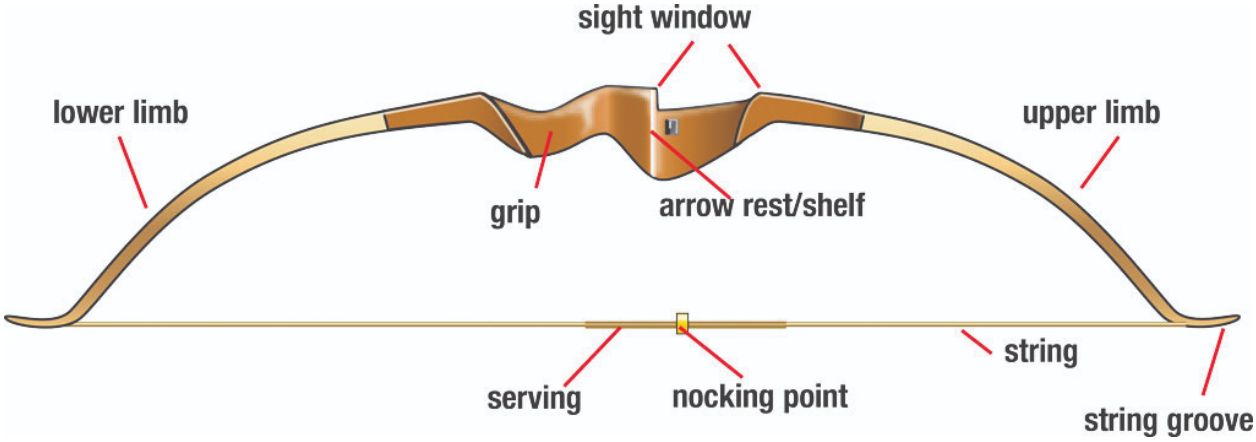
- Remove the tarps from the archery targets and set aside.
- Ensure the range is clear of debris and leftover arrows and make sure the curtain is pulled all the way closed behind the range
- Aside from the counselor leading the lesson, there should only ever be one person in an archery stall at a time.
- Follow the diagram below for range set up



Introduction:
Bows and arrows have been used for centuries as popular military weapons, hunting weapons, and as a sport. The first arrowheads were discovered in Africa which leads historians to believe that is where the first bows and arrows were (Wayman, 2012). Archery has been used as method of survival and warfare since ancient times

How a Bow Works:
Bows are mechanical devices that allow the user to direct a projectile faster and with greater strength than the user could do on their own. As the user pulls back on the bow string, potential energy is gathered in the arrow. Once the arrow is released, that potential energy converts to kinetic energy and drives the arrow forward toward the target. The bow acts as a two-arm spring which allows that kinetic energy to be directed into the arrow and not the bow (Kooi, 1983, pg 9).

Teaching Tip: Go over every part of the bow and arrow description below when teaching participants archery.



(Bowhunter-Ed, n.d.)

Safety Rules:
Please always go over these safety rules before participants shoot archery.

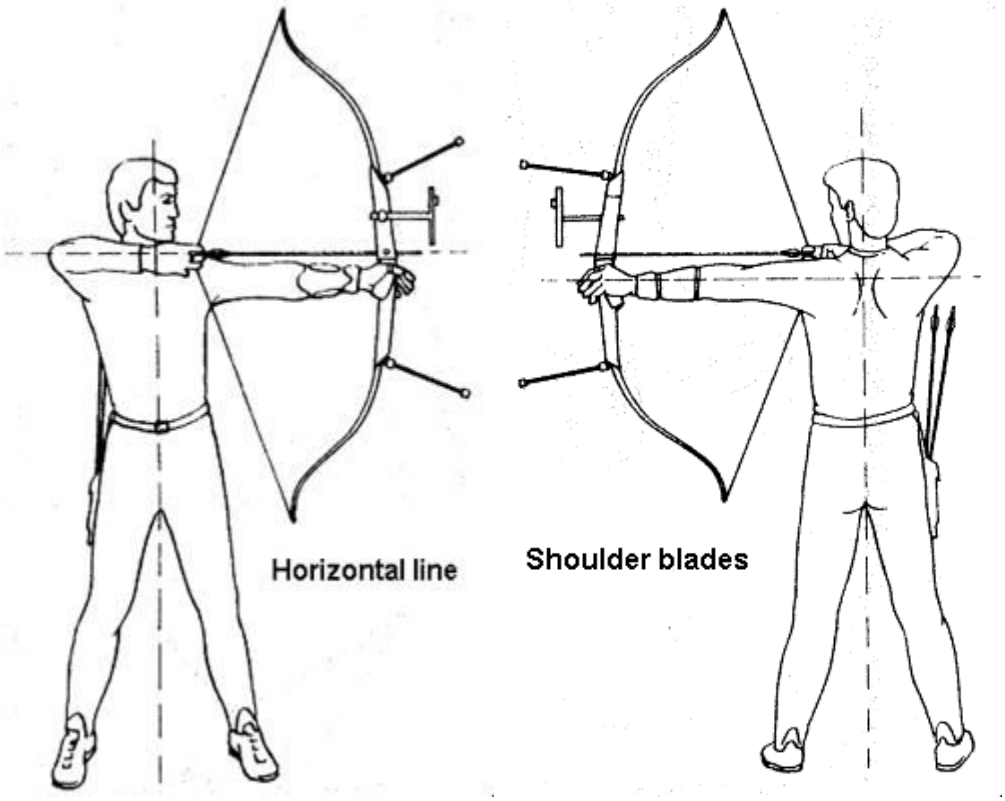
- Only the shooters should be on the range. Everyone else must wait their turn outside of the range.
- Bows and arrows (loaded or unloaded) should always face down range. THIS IS A ZERO TOLERANCE RULE.
- No one may go down range to collect arrows until everyone has finished firing and the facilitator says it is safe.
- Do not touch bows or arrows when participants are down range.
- Never dry fire a bow. Dry fire means to pull back and release the string of the bow without an arrow loaded. This could cause damage to the bow and potentially hurt the shooter.
- Never run on the range, always walk.

- Always carry arrows with the points facing downwards and never pull arrows from the targets by the fletchings.

Safety Equipment:
- Arm guards
- Finger guards
- Closed toe shoes

Range Commands:
There are two commands on the range that only the facilitator may use:
- “Range is hot " - this signals that there are participants firing and that no is allowed down range.
- “Range is cold” - this signals that the participants are done firing, all of the bows are hung up, and that participants may go down range to collect their arrows. No one is allowed to touch the bows and arrows again until the “range is hot" command is given.

How to Shoot a Bow:
Here are the keys to shooting archery correctly
- Stance - Participants should never face the target. To shoot and aim correctly, the participant should be perpendicular to the target. For instance, if the participant is right handed, they should have their feet pointing to the right and the left side of their body should be facing the target.



(Promotion and Education, n.d.)

- Body position - Feet should be shoulder width apart and participants should be standing straight up. Many people have the tendency to lean back or bend their head in towards the arrow, but the best results will come from standing up straight and keeping their head straight. The participant's head is the only body part that should be turned toward the target.
- Holding the bow - Right handed participants should hold the bow in their left hand keeping their elbow straight. Left handed participants should show the bow in their right, keeping their elbow straight. The grip of the bow should fit nicely into the palm of their hand.
- Loading the arrow - The bow string has a small piece of brass on it known as the nocking point. The arrow has a plastic piece on the end known as a nock. The nock of the arrow goes just below the nocking point of the bow. The shaft of the arrow should rest on the arrow rest. In order for the arrow to fly straight, the odd colored fletching must be facing outwards and not inwards towards the bow.
- Drawing and anchoring the arrow - To draw back the arrow, place three fingers on the string of the bow. Participants should place one finger above the nocking point and two fingers below the nocking point. Only the tips of the fingers should be touching the string and they should not be touching the arrow. Many people feel they need to wrap their whole fist around the string, but that will only deflect the direction of the arrow. Have the participants pull the string and arrow straight back towards their face, keeping their elbow pointed straight behind them. Their hand should be close enough to their face that it brushes up against their lip or cheek. This is a good thing and can be used as an anchor. Ask them to rest their thumb or first finger (the one above the nocking point) on their cheek or corner of their mouth. This helps them to keep their aim steady.
- Releasing the arrow - After the participant anchors the string near their face, they should look down the arrow and aim towards the target. Releasing the arrow should be a smooth and fast transition. They should relax their fingers just enough to release string, while keeping the bow as still as possible. They should also keep their fingers close to their face on that anchor point until the arrow hits the target.
- Hitting the target - Looking straight down the target at the bullseye does not always work for every participant. Each participant moves and aims differently so they may have to adjust the way they aim based on where the arrows go. For instance, if the participants' arrows are all landing on the right side of the target, they may want to try aiming more towards the left in order to land the arrows in the center of the target.
- Consistency - The key to shooting archery is consistency. Once the participants find a stance, aim, and method that works best for them, the key is to continue doing the exact same thing every time they fire.

Retrieving Arrows:
To retrieve arrows, participants should wait for the “range is cold” command then walk up to their targets. They should place one hand flat against the target to steady it and one hand on the shaft of the arrow and pull it straight out. Only one arrow should be removed at a time and they should never be pulled or held by the fletchings. Do not bend the arrow as it is being pulled out.

Helpful Hints for Hitting the Target:
Every participant wants to hit the target. Even if they do not make a bullseye, the facilitator should work with every participant to make sure they are at least hitting the target. Here are a couple of common mistakes that the facilitator can help the participant fix.

- Are their feet in the proper place with their body perpendicular to the target? Remember, only their head should be turned towards the target.
- The arrow should always be nocked below the nocking point, not above it and the odd colored fletching should be facing out.
- Only their fingertips should be touching the string, not the whole hand. Their fingers should not be touching the arrow at all.
- Remember they can adjust their aim if the arrows are not flying where they expect them to. Not everyone aims directly at the bullseye.

Shooting Archery at Camp:
Only eight campers can shoot archery at a time and most cabins will have up to sixteen campers. Each camper should be allowed to shoot six arrows, retrieve their arrows, and then the next eight campers should step up to shoot. This allows a fairly quick turn around so that every camper has at least three opportunities to shoot. Counselors should always be aware of the time and the number of times each camper has shot. While it is important to spend one on one time with each camper to ensure they are firing and aiming correctly, too much time spent with one camper will detract from the overall experience of the whole group and is cautioned against.

There should always be two counselors at each activity and each should share the responsibility of helping campers.

Astronomy

Description:
In this lesson campers will learn all about the night sky including stars, planets, the moon, constellations, and the origins behind constellations.

Why Learn Astronomy?
Learning astronomy allows participants to develop a deeper appreciation for the world and universe around them. It also teaches participants the importance of history, enhances their observation skills, and develops their identification skills.

Set Up
Astronomy should only be done after 8:30pm during the summer to make sure the sky is dark enough to see the stars and planets. The sky should also be free of clouds. If it is not quite dark by 8:30pm that is okay since the class starts off inside or under a pavilion before going outside. This class will cover the moon phases, the planets and their order, and constellations. Here are the materials you should have ready:

- Oreos
- Flashlights
- Planet cards

Introduction
Astronomy is the scientific study of celestial objects (American Museum, n.d.). Begin the class by going over a couple of keywords (found in the next section) and by encouraging participants to share what they already know about space, our galaxy, and astronomy.

Our solar system is made out of a star called the Sun and eight planets (formally nine but Pluto has not been considered a planet since 1999). We are located in a spiral galaxy called the Milky Way Galaxy. The following sections will cover much of the information that should be relayed to the participants.

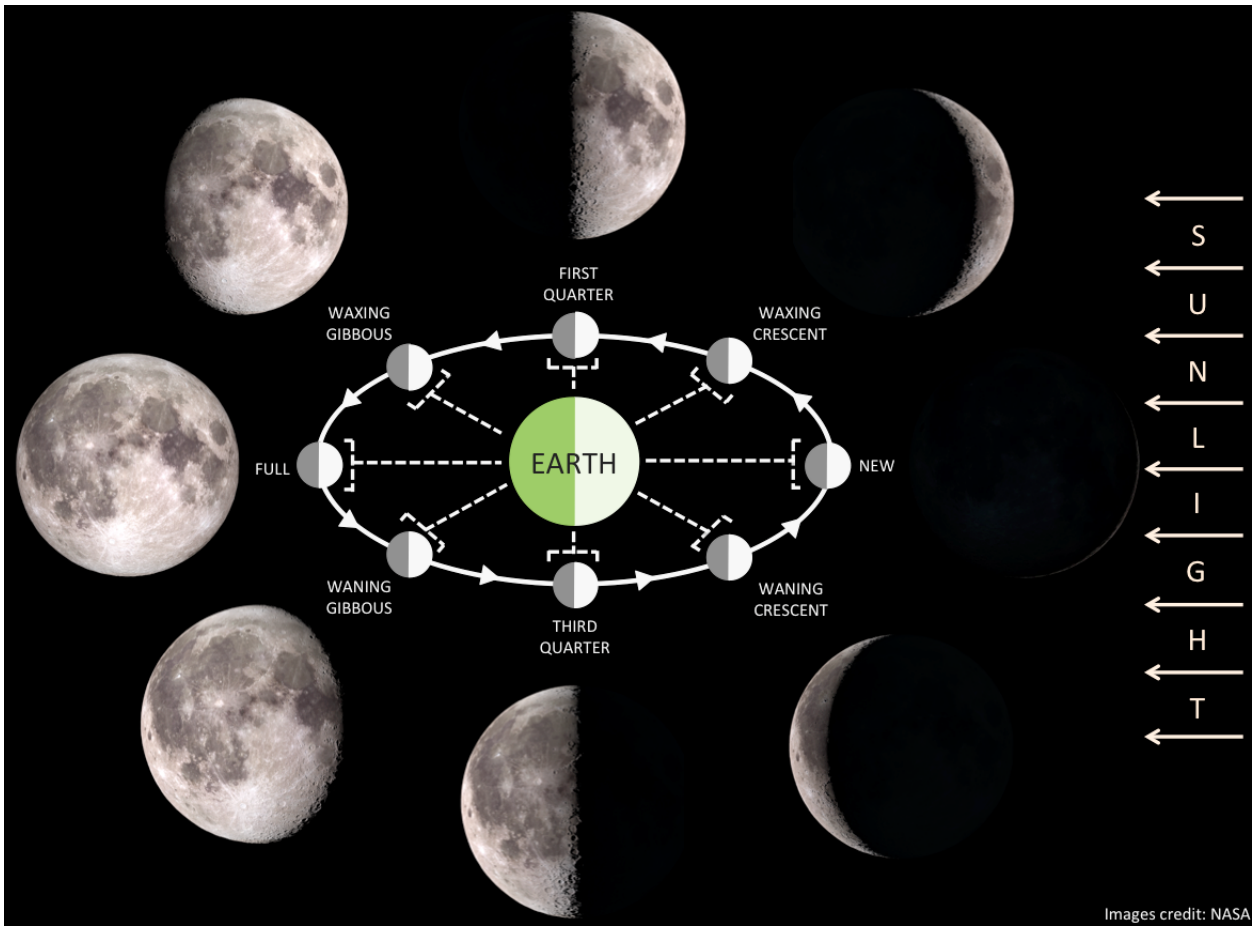
Keywords

Astronomy	The scientific study of celestial objects (American Museum, n.d.).
Constellation	A picture formed by stars (Merriam-Webster, 2022a).
Dwarf Planet	An object smaller than other planets but still orbits the sun (Merriam-Webster, 2022b).
Light Year	The distance light travels in a year. 5,865,696,000 miles per year (Merriam-Webster, n.d.)
Moon	An object trapped in a planet's gravitational pull (Merriam-Webster, 2022c).
Plant	Any large object that orbits the sun (Merriam-Webster, 2022d).

Space	The final frontier; everything outside of the Earth (Merriam-Webster, 2022e).
Star	A burning ball of gas in space (Merriam-Webster, 2022f).

Moon Phases

The moon is an object that orbits a planet due to that planet's gravitational pull (Merriam-Webster, 2022c). It is illuminated by the Sun and does not produce its own light. Only half of the moon is lit up at one time and the position of the Moon dictates what the Moon looks like from Earth (phase). The diagram below helps explain how the position of the Moon affects what we see on Earth.



(University of Iowa, n.d.)

The Moon phases begin with the full moon and this occurs when we can see the entire lit half of the Moon. The other half of the Moon is completely dark. As the Moon orbits the Earth, we will begin to see less of the lit section until the Moon forms the waning gibbous phase when we can only see ¾ of the lit section. The next phase is the half moon or third quarter where it appears that the Moon is only a half circle. The lit section will continue to get smaller until the next phase, the waning crescent. Then there is the *new moon* and this is when there appears to be no Moon in the sky at all, but really we are just seeing the dark side of the Moon not the lit side.

After the new moon phase, the Moon begins to appear as if its growing again. The next phase is the waxing crescent where we only see a small sliver of the Moon. Then the Moon works its way back to a full moon by going through the half moon or first quarter phase and waxing gibbous phase before becoming a full moon again.

Teaching Tip: The Moon phases are much easier to understand if you draw them out on a whiteboard as you teach. This gives the participants a visual and something to reference back to. Don't spend too much time on this section though because it can become very daunting, especially for younger participants.

Moon Phase Activity

This is a great activity after you talk about the Moon phases as a quick review and it keeps your participants engaged. Give each participant an Oreo but tell them they cannot eat it right away. First they must twist the Oreo apart and get all the cream on one side. If the cream is the lit part of the Moon, ask the participants what phase of the cream resembles. Full moon. Next, have them look at the blank cookie (which has no cream) and ask what Moon phase that resembles. New moon. Next go back to your drawing on the white board and ask them what phase comes after the full moon. Waxing gibbous. Show them with your Oreo how to scrape off just a small section of the cream with their teeth to make a gibbous. Have them do the same to their own Oreos. Again point to the diagram on the board and ask what the next phase is. Half moon. They can scrape off more cream to make the half moon shape on their Oreo. Follow the same steps to make the waxing crescent**.** After the activity is complete, you can give the participants permission to eat the rest of the Oreo.

Teaching Tip: The Oreo activity is best done inside or under a pavilion with a whiteboard to draw on. After finishing the activity, go over a brief explanation of the planets and constellations and then go outside to finish the rest of class. It should just be getting dark.

Planets and Dwarf Planets

We have eight planets in our solar system: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune. Planets are defined as objects in space that are large enough to have their own gravitational pull and orbit a star (Merriam-Webster, 2022d). Our solar system also has five dwarf planets: Ceres, Pluto, Haumea, Makemake, and Eris. Dwarf planets are by definition smaller than planets but still orbit the sun (Merriam-Webster, 2022b).

Stars and Constellations

Stars are simply burning balls of gas (Merriam-Webster, 2022f). Like our sun, most stars are made of hydrogen and helium. The larger the star, the more hydrogen and helium there is and the more likely the star could implode on itself and create a black hole. Stars also come in various colors which correlate with their temperatures. The hottest stars are blue and white and cooler stars are yellow and red.

Constellations are pictures formed by stars (Merriam-Webster, 2022a). Ancient civilizations developed stories and legends around the constellations and astronomers use them to locate specific stars in the sky. It is also important to distinguish a constellation from an asterism. An asterism is just a recognized group of stars. For instance the Big Dipper is only an asterism

because it is located inside of the constellation Ursa Major. There are 88 identified constellations in the night sky. They cannot all be seen at the same time since the sky changes every season and every night.

The following are the major constellations found during each season of the year.

Spring

- Cancer
- Hydra
- Leo
- Virgo
- Ursa Major
- Ursa Minor

Summer

- Aquila
- Hercules
- Lyra
- Sagittarius
- Scorpius

Fall

- Andromeda
- Aquarius
- Capricornus
- Pegasus
- Pisces

Winter

- Gemini
- Orion
- Taurus

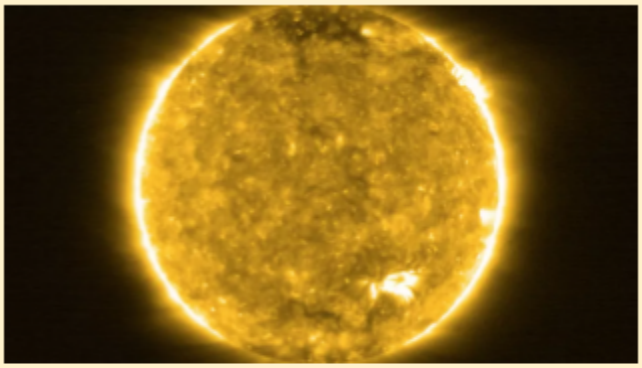
(Martin, 2018).

Teaching Tip: After going over this information briefly, take the campers outside with the planet cards. Give each camper a planet card and have them arrange themselves in order the best they can. After the campers attempt to arrange themselves in order, fix any mistakes by asking questions and guiding them to the answers. Don't just give them the answers. A great way to guide them is to say something along the lines of "the next planet is the hottest planet." Each camper would need to look at the notes on their card to see which planet that fact belongs to. After they are in order, each camper can say their favorite fact on their planet card.

Solar System Cards

Sun

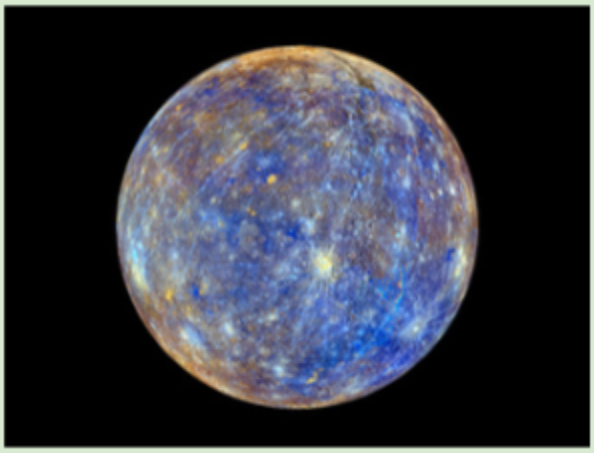
- The Sun is 93 million miles from Earth
- Light takes 7 minutes to travel from the Sun to the Earth
- The Sun is a giant ball of hydrogen gas
- The Sun is one million times larger than the Earth



(Choi, 2021)

Mercury

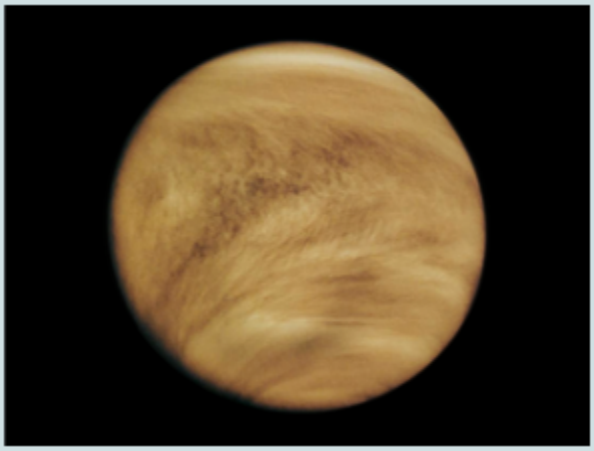
- Mercury is the closest planet to the sun
- The smallest planet in our solar system (just bigger than the Moon)
- There are no moons surrounding Mercury
- Mercury is covered in craters from being hit by meteorites because it has very little atmosphere



(National Aeronautics and Space Act [NASA], n.d.)

Venus

- Venus is the hottest planet with the thickest atmosphere
- A day on Venus (243 Earth days) is longer than a year on Venus (224 Earth days) - this means it takes longer for Venus to rotate on its axis then for it to rotate around the Sun
- Venus has no moons



(NASA, n.d.)

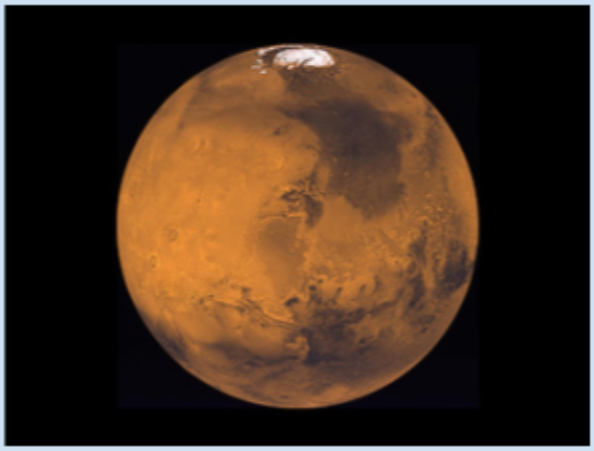
Earth

- The only planet that life is know to survive on
- The Earth orbits in the "habitable zone" where water stays liquid on the surface
- There is more water than land on Earth
- If Earth had no mountains, the oceans would only be 1.6 miles deep

(NASA, n.d.)

Mars

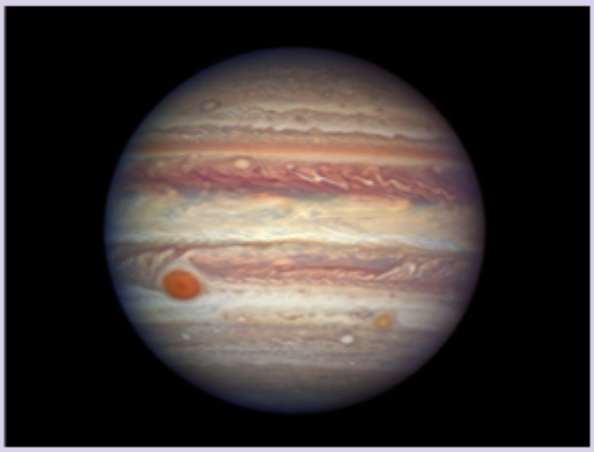
- Mars is red due the amount of iron oxide (rust) on the planet surface
- Scientists believe Mars could have water because it has polar ice caps
- It has two moons
- The surface of Mars looks likes a desert and there is evidence of old riverbeds



(NASA, n.d.)

Jupiter

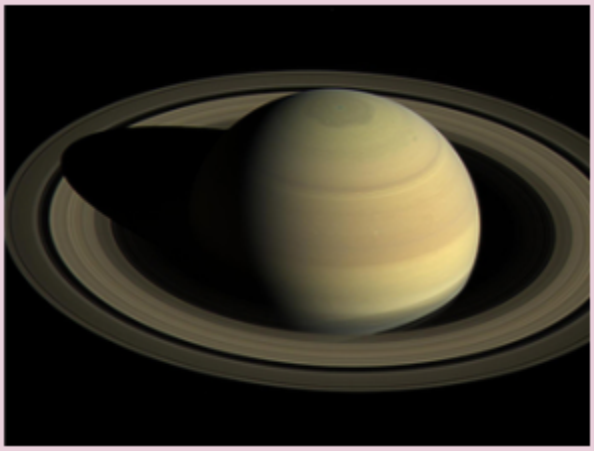
- Jupiter is a giant red ball of gas
- There is a huge storm on Jupiter that is constantly going and is the size of the Earth. It is called the Great Red Spot
- It is 2.5 times larger than all of the planets in our solar system combined



(NASA, n.d.)

Saturn

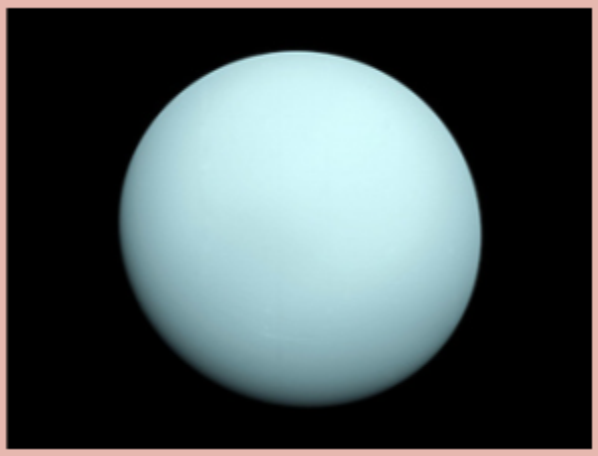
- Saturn is made entirely out of gas and only slightly smaller than Jupiter
- It takes 29 Earth years for Jupiter to orbit the Sun
- Saturn's rings are made of billions of tiny pieces of ice
- Saturn's rings are 170,000 miles wide



(NASA, n.d.)

Uranus

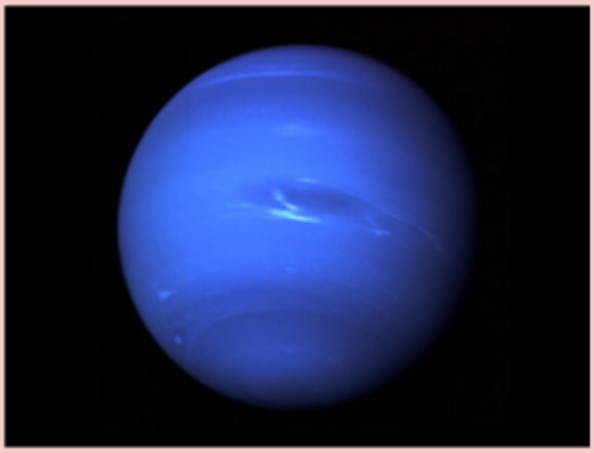
- Uranus rotates completely on its side and is the only planet that does this
- Scientists believe that Uranus was once hit by another planet and that caused the tilt



(NASA, n.d.)

Neptune

- Neptune is believed to be made of mostly water
- Neptune and Pluto's orbits cross, meaning that sometimes Pluto is closer to the Sun than Neptune is
- It was discovered in 1846 and takes 165 Earth years to make one rotation around the Sun, meaning it has only made one full rotation since being discovered. It completed that rotation in 2011



(NASA, n.d.)

Pluto

- Pluto is now considered a dwarf planet
- Pluto has only one moon named Charon and the two objects orbit each other

(NASA, n.d.)

The Next Star…

- The next closest star besides the Sun is named Proxima Centauri
- Proxima Centauri is 4.2 light years away
- Between Pluto and Proxima Centauri is nothing but empty space and some asteroids

Back Pocket (Rainy Day) Games

Description:
Back Pocket or Rainy Day games are great games to have memorized or be able to pull out quickly when you need to entertain your campers. These games are all easy set up and low prop/no prop games so they are easy to do anywhere at any time.

Why Have Back Pocket Games?
Things happen! Rain comes out of nowhere, you have an extra 20 minutes in your schedule you didn't plan for, campers get bored and you need a replacement activity, etc. It is always nice to have a back up plan for when things don't go your way.

Icebreaker Games:
Teaching Tip:These games are great for early morning or late night activities since they are a little slower. They also allow you to judge the energy of the group or get them warmed up for a more physical activity.

Beach Ball

- Materials: Beach ball, permanent marker
- How to play: This is a great game at the beginning of the week when the campers are still getting to know each other. Inflate a beach ball and use a permanent marker to write interesting questions all over the ball. Questions such as "Favorite ice cream?" "Favorite color?" "Favorite TV show?" The campers should all stand in a circle and toss the ball. Whoever catches the ball should look at the question on the ball closest to their right thumb, read that question out loud, and state their answer. Then toss the ball to the next person. The game can go on until all the questions are read or until the counselor decides to end the game.

The Hand-Slapping Game

- Materials: Table to sit at (optional)
- How to play: Have everyone sit at the table and place their right hand flat on the table. Then have them place their left hand on the other side of their neighbors right hand. One person's left wrist should cross over the other person's right wrist. No one's hands should be on the table without another hand crossing over it. Pick a person and a direction to start. Each person must slap the table one time with each hand, but the slaps must be in the order of the hands on the table. For example: Person A is the starter and they are going right around the circle. Person A slaps their right hand, then Person C slaps their left hand (because it is in front of Person B's right hand), then Person B slaps their right hand, then Person D slaps their left hand (because it is in front of Person C's right hand), then Person C slaps their right hand, and so on. The slaps must go all the way around the table so that every person gets to go. This is essentially the practice round. Once the slaps go all the way around one time, you can add an extra step. Anyone at any time can decide to slap the table twice and this sends the slaps in the opposite direction. This can happen as many times as desired. If at any time, someone slaps out of turn, that hand is out of the rotation and must be placed behind the player's back. That player still has their other hand. If a player slaps out of turn twice, then both hands are out and they are out of

the game. The game continues until there is only one person left or until the counselor decides to end the game.
- Alternative: If there is no table to play at, campers can sit on the ground and slap the ground. Or if they want to stand or there is not where to slap, they can do thumbs up instead of slaps.

Mirror
- Materials: none
- How to play: Everyone must pick a partner and stand directly in front of them. One person decides they are the mirror and must mimic everything the other person does. Switch roles after a few minutes. Switch partners next.

Never Have I Ever
- Materials: One of the following: polly dots, chairs, mats, etc.
- How to play: Place one less polly dot then the number of campers in the group in a circle on the ground. Pick one person to be "it" and stand in the middle of the circle. Everyone else should stand on a polly dot. The person in the center should say a "never have I ever" statement, such as "Never have I ever been on a plane!" The people on the polly dots listen to the statement and decide if it also applies to them. If they, for example, have also never been on a plane, they get to stay on their polly dot. However, if the statement does not apply to them, i.e. they have been on a plane, they must move to another polly dot. They cannot stay on their polly dot and cannot move to either of the polly dots right next to them. The person in the middle tries to get to an empty polly dot before they all fill up. Because there is one less polly dot then people, the person who did not make it to a polly dot becomes the next "it" in the middle. The game continues until every person gets a chance to be in the middle or until the counselor ends the game.

Two Truths and a Lie
- Material: None
- How to play: Have everyone stand in a circle and think of two true facts about themselves and a lie. The lie should not be outrageous and should be something that could possibly be true. Each person will take turns saying all three statements and the rest of the group must vote on which statement they believe is the lie. Once a statement is decided upon, the person reveals whether the group was correct or not. If the group was not correct and didn't guess the right statement, the person can reveal the actual lie.

Tag Games
Teaching Tip: These are very active games that require a large space to run.

Blob Tag
- Material: Cones to set boundaries (optional)
- How to play: One person becomes "it" also known as the "blob." That person is trying to tag everyone else. Once the blob tags someone, they join hands and also become a part of the blob. They must work together to tag others. The more people tagged, the bigger the blob gets. The blob must stay attached the entire time and only the ends of the blob can tag people. The last person to not get tagged wins and the game ends.

Hospital Tag

- Materials: None
- How to play: Each person is “it” in this version of tag and everyone has three tries before they’re out. If someone gets tagged, they must use one of their hands as a “band-aid” to cover up the “wound” (wherever they got tagged). Once a person is using both hands to cover wounds, they can no longer tag other people. If they are tagged a third time they are out of the game. Players may not tag other players' feet. The game is over when the last person is standing.

Other Games

Blind Circle

- Materials: A long rope, blindfolds
- How to play: Tie the rope at both ends so that it forms a large circle. Each person should put two hands on the rope and should keep them on the rope the whole time. Each person should also put a blindfold on. The facilitator should call out different shapes and the group has to form that shape with the rope. Encourage communication! Once the group is satisfied they have the correct shape, they can lay it on the ground and take off their blindfolds to look. If they aren’t satisfied with the shape after they see it, they can put the blindfolds back on and try again. It’s best to start off with easy shapes like triangle and square, then move on to harder shapes like a perfect circle, pentagon, or equilateral triangle.
- Variations
    - Everyone except one person is blindfolded and they guide the group. This is a great way to get a quieter camper to step up
    - Everyone starts off blindfolded but the facilitator removes the blindfold of one person without anyone else knowing. This person can see but not speak.
    - No one is blindfolded but only a select few can speak.

Circle Within a Circle

- Material: One hula-hoop
- How to play: Place a hula-hoop on the shoulder of one person then have everyone join hands and create a circle. The hula-hoop is now locked into the circle of participants. The goal is to get the hula-hoop all the way around the circle with the participants letting go of each other’s hands. If they let go of someone’s hand, they have to start over.
- Variations/rounds:
    - They cannot use their thumbs or fingers to help hold or lift the hula-hoop
    - Add a second hula-hoop and they have to get two around the circle in opposite directions
    - Do time challenges to see how fast they can move one or two hula-hoops around the circle.

Human Knot

- Materials: None
- How to play: Have the group stand in a close knit circle. Have each participant raise their right hand and then grab the right hand of someone across from them. Then have them raise their left hands and grab the left hand of someone else in the circle. They cannot grab the left hand of the same person they're already holding right hands with (this would form a tiny circle within the knot and you don't want that). Once every hand is holding another hand, tell the group to untangle the knot. If anyone lets go of the hand they are holding, they must start the game over. They must untangle themselves until they form a circle (sometimes it forms two or three interlocking circles).
- Note: This game can take a long time to play so make sure you have dedicated enough time to it.

The Grid

- Material: 25-36 polly dots, one paper and pen (for facilitator)
- How to play: Set the polly dots up in a 5x5 or 6x6 grid depending on the number of polly dots you have. On the piece of paper, the facilitator should draw out a pattern with only one starting point and one end point. The group should not see this paper! The facilitator should tell the group the starting polly dot and have them line up in a single file line behind that point. The first person in line gets to try to guess the pattern first by stepping on the polly dots in the order they believe is correct. Everyone else should be watching carefully. Legal moves include moving up, down, left, and right. You cannot move diagonally. If a person steps on the wrong polly dot (according to the pattern on the facilitator's paper) they must step out and go to the back of the line and the next person must now attempt the pattern. Participants keep trying until they guess the correct pattern. Once the correct pattern is guessed, all the participants must walk through the grid correctly to finish the game.

Turn Over a New Leaf

- Material: One tarp
- How to play: The entire group must stand on the tarp. They must flip the entire tarp over to the other side without letting any part of their body touch the ground.
- Variations:
    - Fold the tarp in half to make it smaller
    - Give half of the group blindfolds to wear
    - Give all but one person in the group a blindfold to wear

Space Jam

- Materials: A hula-hoop, 5-7 random objects
- How to play: Set the hula-hoop in the middle of a large playing area and place the other objects around the hula-hoop at varying distances. Tell the group that they are out in space and all of their supplies escaped the space station (the hula-hoop) and they must retrieve them. Assign each object the name of a needed supply such as water, food, medicine, etc. Tell the group that in order to survive they must collect each object in whatever order they think is most important. However, they cannot disconnect from the

space station (the hula-hoop) to grab the supplies. If they are not connected to the space station, they must go back and start over.

- Note: The only way to grab the objects is to have one person's foot stay in the hula-hoop and everyone else form a chain by holding hands and walking out to the object. Do not put the objects so close to the hula-hoop that they could make a simple chain with their bodies to grab the object. A few objects can be that close to let them practice, but others should be farther away so the group has to be creative in how they grab the supplies. They will realize they need to use things like jackets or backpacks to extend the chain. The order of collecting the objects does not matter. This is just a way of making the group communicate and deciding what object they want to grab first.

Campfire Cooking

Description:
This class teaches the basics of fire building, the many uses of fire, and techniques for cooking over the fire.

Why Learn Campfire Cooking?
This is a great class to teach before or with the Survival class. It is a fun-filled class that teaches participants patience and resourcefulness.

Set Up:
Be sure to gather everything you need for your campfire snack before getting to the fire rings. Once the campers are making their fires, you should not leave them unattended for any reason. Depending on which snack you have decided to make, here are the items you will need:

Hotdogs	**S'mores**	**Campfire Pies**	**Campfire Pizza**
Hotdogs	Graham crackers	Crescent rolls	White bread
Buns	Marshmallows	Pie filling	Pizza sauce
Mustard	Chocolate	Cinnamon/sugar	Mozzarella cheese
Ketchup	Roasting Sticks	Pie ovens	Pepperoni
Roasting Sticks		Oven mitts	Pie ovens
		Nonstick spray	Oven mitts
		Spatula	Nonstick spray
			Spatula

Teaching Tip: Gloves, paper plates, hand sanitizer, and a trash bag should be taken to every campfire cookout.

You will also want to split your campers into groups of three or four and have each group go to a different fire ring to build their fires. This allows each camper to have a more distinctive role in the fire building and allows the counselor to individually coach and help campers with their fires.

Introduction:
You will want to walk your campers out to the fire rings for this activity. Start by beginning a discussion about what fire is used for. Fire has been used for centuries as a way of cooking, keeping warm, a means of safety, and as a weapon. It has also been used to make items out of coal or various metals.

There are three essential things needed to create a fire: oxygen, fuel, and a spark. The oxygen comes from outside of the fire (normally in the form of blowing air on to the coals), the fuel comes from the materials gathered to build the fire (such as sticks, leaves, and pinecones), and the spark. The most common way to start the spark is by lighting a match, but you could also use flint and steel, a battery and steel wool, or a bow drill. In this class we only have the options of using a match or flint and steel. The campers can try both ways!

Building a Fire:
Before you can start a fire, you must gather the fuel. There are three kinds of fuel campers will need to gather: tinder, kindling, and wood. Tinder should be no thicker than the match you are using to start the fire. Tinder has to be thin because it must be easily consumed by a small fire. Kindling can be a little thicker than tinder, but no thicker than your pinky finger. As your small fire consumes the tinder and gets bigger it will need a bigger fuel like kindling to keep going. Then finally you'll need medium to large pieces of wood, approximately as thick as your forearm. This is the fuel that will keep your fire going.

Once you have all the necessary tools for building the fire, discuss with your campers the best methods of building a fire. There are three main methods to building a successful fire:

- Teepee fire - this method starts by building a small teepee of kindling around a bed of tinder. It grows by adding slightly bigger teepees of wood around the last one one at a time. After two or three layers, you can light the fire from the inside and then continue to build larger teepees of wood around the fire to keep it going.
- Log cabin fire - this method starts by putting a bed of tinder down then laying a few pieces of kindling vertically across the bed. Then putting a few pieces of kindling horizontally across that first layer of kindling. You can then light the fire and proceed to alternate the way you lay the wood down on the fire. ***this is the best type of build for campfire cooking***
- Lean-to fire - this method begins by laying a relatively large piece of wood down and then leaning some tinder and kindling up against it. You can light this and then continue to lean more kindling and wood against the original piece of wood.

After discussing these methods, let the campers try to build one. This should be an open build time where each group tries to get a fire going with their agreed upon method. Counselors should be mingling with the groups and helping where necessary, but not building the fires for the groups.

Once a group believes they have a solid structure, they may ask for a match. If they cannot start their fire with the first few matches, the counselor should encourage the group to rethink about the structure they built before getting more matches.

Teaching Tip: The counselor should always keep the matches. There are extra match boxes in the supply kits and the counselor should give the group three matches in a match box when they are ready to start their fire.

Maintaining a Fire:
Once a fire is started, campers should do everything they can to maintain that fire. This includes blowing on the coals (not the flames!) to keep them hot and/or adding more tinder and kindling. Most campfire cooking is done on hot coals not in active flames, however, in order to get hot coals, the fire needs to be going really well and then be allowed to die down a bit.

Cooking Over a Campfire:
You can discuss with students how cooking over a fire used to be the only way of cooking and how you need special instruments to cook in a fire. Many of the instruments are made out of cast iron because it does not melt. Remind students that proper cooking always needs to be sanitary, therefore, each student must use hand sanitizer before cooking and only the counselor can distribute ingredients with gloves on.

Cooking Hotdogs

- Distribute one hotdog and one roasting stick to each camper
- Tell campers that they should heat them up over the hot coals, not the flames. The flames will burn the outside but leave the inside cold
- Once they believe their hotdog is cooked, they can come to the counselor for a bun and plate. They should turn on their roasting sticks.
- Mustard and ketchup should be set aside for each camper to add on their own
- Be sure all trash goes in the trash bag, not on the ground or in the fire.

Cooking S'mores

- Distribute one marshmallow and one roasting stick to each camper
- Tell campers that they should heat them up over the hot coals, not the flames. The flames will burn the outside but leave the inside cold
- Once they believe their marshmallow is cooked, they can come to the counselor for their graham crackers, chocolate, and plate.
- To make a s'more, place a graham cracker on the plate, then place the chocolate on the graham cracker, then put the marshmallow on, then use the last graham cracker piece to switch the s'more and pull the marshmallow off the stick.
- Turn the roasting stick back into the counselor.
- Be sure all trash goes in the trash bag, not on the ground or in the fire.

Cooking Campfire Pizza

- This is best done at a picnic table
- Show each camper how to use the pie irons. Each camper should take one pie iron and get two pieces of white bread from the counselor.
- One piece of bread goes on the bottom of the pie iron, then add the pizza sauce, cheese, and pepperoni, then put the second piece of bread on top and close the pie iron.
- The pie iron should go directly in the flames for about six to eight minutes, flipping halfway through.
- When the pizza is done, pull it out and let it cool down. The counselor can use the oven mitts to open the pie iron and the spatula to scoop the pizza out and onto the camper's plate. It will be hot!

- Be sure all trash goes in the trash bag, not on the ground or in the fire.

Cooking Campfire Pies

- This is best done at a picnic table
- Show each camper how to use the pie irons. Each camper should take one pie iron and get two crescent roll dough pieces from the counselor.
- One piece of the crescent roll dough goes on the bottom of the pie iron, then add pie filling (apple or cherry), then add the cinnamon and sugar mixture (optional), then put the second piece of crescent roll dough on top and close the pie iron.
- The pie iron should do directly in the flames for amount twelve minutes, flipping halfway through
- When the pie is done, pull it out and let it cool down. The counselor can use the oven mitts to open the pie iron and the spatula to scoop the pie out and onto the camper's plate. It will be hot!
- Be sure all trash goes in the trash bag, not on the ground or in the fire.

Putting out a Fire:

The best way to put out a fire is to douse it in water. Only counselors should pour water on the fire to avoid campers getting burned by the smoke or any sparks that fly up. Campers can help smother the fire by throwing dirt on the fire rings after the water has been poured on. Campers can grab large sticks and stir around the water and dirt until all of the sparks have been put out. Counselors should always double check each fire pit and make sure there are no sparks or smoke still coming from the fire.

Dart Art

Description:
Dart art is a fun activity that lets campers express their inner artists in a fun and creative way by throwing darts at paint-filled balloons!

Why Learn Dart Art?
Summer camp is meant to be fun as well as educational! This activity lets campers get out energy while also teaching them color theory and precision.

Set Up:
For this activity you will need:

- Eight wooden easels
- Multiple pieces of cardstock paper available
- Masking tape
- Tempera paint (washable)
- Balloons
- Balloon pumps
- Thumbtacks
- Sharpie markers
- Throwing darts
- Clothespins

Set up the eight wooden easels in the activity field with about three feet between each one. Each easel will be shared by two campers. Give a short lesson on color theory first and then explain how the activity will be run to the campers.

Note: This class is meant to be messy! All the paint is washable, but forewarn the group that they will probably be covered in paint by the end of the activity!

Color Theory
While campers can truly choose any colors they want for their dart art, if they want the colors to coordinate and flow together they can use color theory to choose their colors instead. A color wheel starts off with three primary colors which are colors that cannot be created by mixing other colors. Primary colors can be mixed to create secondary colors. You can also mix secondary colors with primary colors to form tertiary colors.

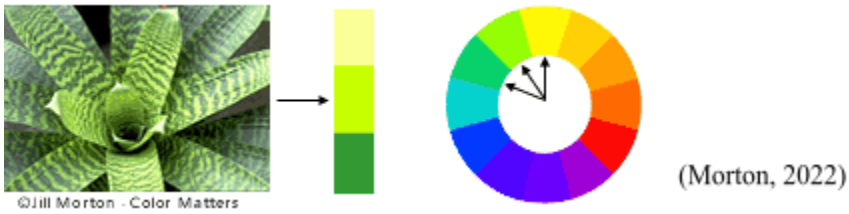
Primary Colors

Secondary Colors

Tertiary Colors

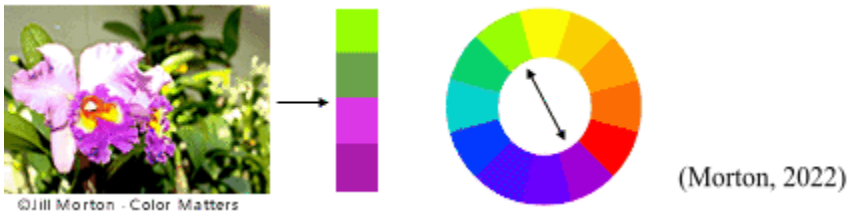
(Morton, 2022)

Finding colors that are harmonious together are generally found two ways, using analogous colors or complementary colors. Analogous colors are those that are found next to each other on the color wheel, ideally three colors right next to each other.



(Morton, 2022)

Complementary colors are colors on the color wheel that are directly across from each other.



(Morton, 2022)

How to do Dart Art

Each camper will get to fill three balloons with paint to start with. They can use their new color theory knowledge to pick complementary colors or they can just choose their favorite colors. The easiest way to fill the balloon is to insert the paint pump into the balloon and three to four pumps, carefully pull the balloon off the pump, then use the balloon pump to add air to the balloon. The best results come from balloons that are blown up to the size of volleyballs. Once it is blown up, tie off the balloon and repeat the process with the rest of the balloons.

After all the balloons are filled, have each camper grab one piece of cardstock and write their name on the back with the sharpie. At this point, if the camper just wants to pop their balloons on their paper, they can walk over and stand by their easel. Some campers may also decide to use the masking tape to create designs on their paper before splattering it with paint. This will need to be done before putting the paper on the easel.

Throwing the Darts

Once campers are ready, they may use thumbtacks to attach their papers to their easels. Have the campers stand about six or seven feet back from the easels. Each camper gets three darts and may begin throwing them at the easel when the counselor gives the signal. Just before allowing the campers to throw their darts, explain that neither of the campers at one easel should go up to retrieve their darts until both campers are finished throwing. This eliminates someone accidently getting hit by a dart.

It may take several tries to hit the balloons and counselors should walk amongst the group offering help as needed. If a camper finishes their first piece of paper and wants to create more dart art, have them follow the same process as above to start a new project.

Once a project is complete, it should hang up on the clothesline by clothespin until it dries. It is normally ready after a few hours.

High Ropes Course

Description
The high rope course elements include the Zipline, Giant Swing, and Alpine Tower. This curriculum is intended to go over the safety rules of these elements. IT IS NOT INTENDED TO BE A COMPLETE GUIDE TO USING THESE ELEMENTS. Counselors will receive training through the Association for Challenge Course Technology (ACCT) before camp begins on the proper usage of all high rope elements.

Why Learn High Ropes?
High rope elements are a great way for campers to gain confidence in themselves and push their boundaries in a safe way. Campers who attempt these elements will learn about safety, the power of working in a team, how to encourage others, and how to conquer their fears in an inclusive and safe environment.

Set Up
Refer to your training on how to set up individual elements. Before starting any high rope activity, make sure the element is set up properly and all safety inspections have been completed. Set up is different for every element. Safety inspections include checking the element for cracks, loose equipment, or missing equipment. The area around the element must also be checked for things such as insect nests, dangerous plants and animals (poison ivy and snakes), fallen tree limbs, or anything else that could potentially cause harm to the participant or facilitator. All equipment including harnesses, helmets, and hardware must always be checked for wear and tear, loose threads, shredding, or rust. All equipment should be functioning properly. THESE INSPECTIONS SHOULD BE COMPLETED BEFORE CAMPERS ARRIVE TO THE AREA.

Safety Rules
There are three sets of safety rules that must occur before participants can begin a high rope element: Area safety, head-to-toe check, and the 5 H's.

<u>Area Safety</u>
This is done first while all participants are under the pavilion.

- Explain the safe boundaries around the element.
- There is a small pavilion at each element and participants must stay underneath them unless they are actively participating in the element.
- Participants should never be underneath an element unless given explicit direction from the facilitator.
- Participants may never walk underneath a belay rope (i.e. between the belayer and climber) and must always walk behind the belayer.

<u>Head-to-Toe Check</u>
This is done just before putting on harness and helmets. After going over these rules, facilitators can help participants put on harnesses and helmets correctly.

- This safety check makes participants look from their head to their toes to ensure they are safe. These safety checks ensure that equipment such as helmets and harnesses will fit correctly.

- Head: No clips, headbands, bobby pins, or combs. Long hair should be pulled back to the nape of the neck in a ponytail or bun. No high buns allowed
- Ears: No dangling earrings or hoops. Studs are okay.
- Neck: No necklaces, dogtags, or lanyards of any kind.
- Torso: A shirt is required
- Waist: Nothing is allowed in pockets.
- Wrists and hands: No bracelets, watches, or rings.
- Legs: Pants or shorts should be long enough to comfortably fit in leg loops of harness. No skirts or dresses.
- Feet: Closed toe and close heel shoes are required. Preferably not water shoes or crocs (they don't offer enough protection).

5 H's

This should be done by the belayer and just before the participant goes on the element. It is a third check to recheck that all safety measures were done correctly. The 5 H's stand for Head, Hair, Harness, Hardware, and Human.

- Head: Always double check that helmets are on correctly before belaying a participants
- Hair: Ensure that the participants hair is pulled back and, therefore, will not get in the way of climbing or stuck in any equipment.
- Harness: Always double check that harnesses are on correctly and tight enough before belaying a participant.
- Hardware: Attach the belay carabiner (an auto-locking carabiner) to the participant. Make sure it is facing the correct direction and that it is properly locked.
- Human: Always ask how your participant is doing! Make sure you know their name and what their goal is (i.e. do they want to get all the way to the top or just to a certain area.) Encourage them and give them tips as they go!

Challenge by Choice

Challenge by choice is something you always want to make your campers aware of. You are guaranteed to have campers who are scared of heights, do not want to climb, or do not believe that they can do high rope challenges for one reason or another. Your job as a camp counselor is to instill confidence in them and encourage them to break out of those fears. You do that through demonstrating confidence, kindness, and professionalism. We never use peer pressure to get campers to do an activity. Challenge by choice means that campers ultimately have the choice to participate in an activity. It is the counselor's job to challenge the campers in an appropriate way to try the activity and face those fears.

Break Down

A high rope element area can not be left unattended until all equipment (ropes, hardware, helmets, harness, etc.) are taken down and put away properly. NOTHING CAN STAY OUT. Everything should be put away in the climbing shed neatly and in an organized fashion. All ladders should be locked up. Any ropes designed to stay out must be tied at least ten feet up (this prevents random persons from reaching the ropes when they are not supposed to). Lock all climbing sheds before leaving. Have all participants look around and ensure that no trash gets left in the area.

REMINDER: THIS IS NOT AN ALL INCLUSIVE CURRICULUM FOR HIGH ROPES, YOU WILL GET MORE IN DEPTH TRAINING AND A CLIMBING GUIDE BY THE ACCT.

Night Hike

Description
This activity is designed to test your senses! This activity involves a short hike with multiple activities for campers to test their different senses and see how much we rely on those senses when it is dark outside.

Why Learn on a Night Hike?
Humans have five senses and the main one we use is sight. But what happens when we take sight away? Will your other senses step and show what's around you? This activity will teach campers about all five of their senses and also encourage the growth of their observation skills and awareness of the world around them.

Set up
It will need to be dark or just getting dark for the night hike. This activity can start off indoors and then move outside. Pick a trail to use and make sure that there are no other groups using that trail that evening. You can stop every couple hundred yards to do a different activity/talk about a sense or walk about half of the trail, stop to do the activities, then walk the rest of the trail. Do whatever works best for your group. You will also need to grab the bag of night hike supplies before starting the activity. In that bag there should be:

- bandanas/blindfolds (multiple)
- Candle and lighter
- Paper
- Crayons
- Scent jars (at least four)
- Cloth bag
- Container of salt
- Container of sugar

Introduction
Start with an overview of the five senses: sight, smell, hearing, touch, and taste. Discuss how during the day, we often don't even realize we are using five senses, but at night our most used sense (sight) is limited so we must rely on our other senses to paint a picture of our surroundings. Animals rely on their senses in a similar way, but their senses are much stronger than ours and they are using them more intently. For an animal, they must follow their senses every day in order to survive.

We often take our senses for granted because we don't have to rely on them as heavily as animals do. So in this lesson, we will get the chance to see how well all of our senses actually work and what happens when we take away some of our senses. We will test each of our senses individually with the following activities. .

Teaching Tip: The words bolded and italicized in the following sections are words that should be used as much as possible with the group to help them understand the topic.

Teaching Tip: Do not cover the sense of taste in this class. Due to the high number and possibility of food allergies, you do not want to do any activities that involve campers putting things in their mouth.

Sense of Sight

Our sense of sight is amazing and our most replied upon sense. Humans have binocular vision, meaning that our eyes face outward and they have the ability to focus together on one object. It also allows us to judge depth and distance from objects. This is different from a lot of animals who only have monocular vision and cannot judge distances very well. We also have two special types of cells in our eyes: rods and cones. Rods allow us to see in dim light and allow for peripheral vision because they are concentrated around the edges of the retina. Cones are concentrated in the center of the retina and allow us to see during the day and allow us to see colors. At night our rods build up a chemical called rhodopsin and it is very sensitive to light which is what allows us to see at night. It takes about 15-20 minutes for our eyes to fully adjust to the dark. However, because the rhodopsin is so sensitive to the light, the moment a bright light hits our eyes, all that rhodopsin disappears and will need to be built back up again to see in the dark again.

Fun fact! Pirates knew the secret of rhodopsin long before anyone else! They would wear an eyepatch over one eye and allow that eye to sit in the dark all the time to gain rhodopsin. So when they would go below deck where it was dark, all they had to do was switch their eyepatch over to the other side and that once covered eye could see perfectly in the dark. This way they didn't have to wait for their eyes to adjust to the dark when they needed to move quickly from above deck to below deck.

Teaching tip: These first few activities can be done indoors while the group is waiting for it to get darker outside.

The Pirate Trick

- Material: A candle and lighter
- How it works: Have the group sit in a circle and light a candle in the middle. We're going to test the pirate trip mentioned above. Each person should cover one eye with their hand. Make sure it is covered really well and that no light is getting to that eye. They should use their uncovered eyes to stare at the candle. Blinking is okay! No one should strain or hurt themselves, but they will want to keep looking at the candle the entire time. They must do this for several minutes. This is a good time to tell the pirate story or talk about other night vision facts. After a few minutes, blow out the candle and have the campers look around. If they switch back and forth between their two eyes, they should be able to see a drastic difference between the eye that looked at the candle and the eye that was

building up rhodopsin as it was covered up. This is a great time to talk about how using flashlights is really detrimental to night time vision, but red light doesn't affect rhodopsin and can be used instead.

What Color Is It?

- Material: Dark room, multiple pieces of small paper, and different colored crayons (four basics of red, blue, yellow, green work best)
- How it works: Give each person a small piece of paper and a crayon. They can pass around crayons if there is not enough for everyone. Have them look at their crayon and try to determine what color it is, then write the name of that color and their own name on the paper. For instance, if a person thinks they have the blue crayon, they should write their name and the word "blue" on the paper. Because it is dark and they're not using their cones to see color, the chances of them guessing correctly are slim. Once the activity is over or once the whole lesson is over, have them go back into a well lit area and see if they guessed correctly. Colors are very hard to guess in the dark.

Sense of Smell

Our sense of smell is managed by our olfactory nerves. The olfactory nerves interpret the air particles flowing into our nose and then send those interpretations to our brain to tell us what we're smelling. Compared to animals, humans have a very poor sense of smell. We have about 6 million olfactory nerves in our nose and dogs about 300 million in their nose (Phoenix Veterinary Center, 2020). Clearly dogs have a much greater sense of smell than humans. While humans rely on their sense of sight the most, animals rely on their sense of smell the most. It can tell them where food is, when danger is nearby, and where a mate could be. Our sense of smell can easily be taken for granted, but when you come down with a cold and suddenly nose that sense, you realize just how much it makes your life easier!

Scent Jars

- Material: 4-5 premade scent jars
- How it works: If you need to premake the scent jars before the activity, grab 4-5 film canisters or small containers and 4-5 cotton balls. You'll want to douse each cotton ball in a different scent, such as vanilla, orange, coffee, garlic, etc. Put the cotton balls in the containers and seal them. Number the containers and on a separate piece of paper, create a cheat sheet with the numbers and correct scents on it. For the activity, pass around one container at a time for the campers to smell. After everyone has gotten the chance to smell, they can guess what it was. Don't say the guesses until everyone has gotten the chance to smell the container. Repeat with all the scents.
- **Note: Do not use peanuts or peanut butter as a scent due to allergies**.

Sense of Hearing

Our ears allow us a great sense of hearing. Hearing allows us to respond to events happening in our environment such as excitement, emergencies, or just simple speech. Our ears work by converting sound waves into signals our brain can recognize. The ear also controls our sense of balance and when we have ear infections or problems with our ears, our balance as well as our hearing is affected.

Because our ears are located on the sides of our head and they don't pivot like animal's ears do, sound actually reaches our ears at different times. For instance if the sound is coming directly to the left ear, it takes 600-700 microseconds (one millionth of a second) for that sound to reach the right ear. The head creates that barrier so the sound reaches the left ear first and is louder in that ear in that example. If sounds come from directly in front of a person, it will reach both ears at the same time.

Are Two Ears Better Than One?

- Material: Blindfold
- How it works: Have the group make a large circle with one person in the middle. The campers in the circle should be arms length apart from each other and the person in the middle should be blindfolded. Everyone must be very quiet for this game! Everyone also must know the name of the person in the middle. The facilitator should stand outside of the circle and quietly point to one camper at a time in the circle. When they are pointed at, the camper should say the name of the person in the center. It should be an audible whisper, not too low or too loud. The person in the center should try to point to where they heard the sound come from. After repeating this a few times, have the person in the center cover up one of their ears and guess where the sounds are coming from. You'll notice that both ears are really good at navigating sounds and their locations, but one ear is not nearly as good!

Sense of Touch

Our skin is made up of thousands of sensitive nerves and makes up the largest organ in the human body. Every inch of skin is sensitive to touch, but some parts are more sensitive than others. Our face and hands are very sensitive compared to our back and legs. The largest benefit our sense of touch provides is our pain warning.

Pet Rock

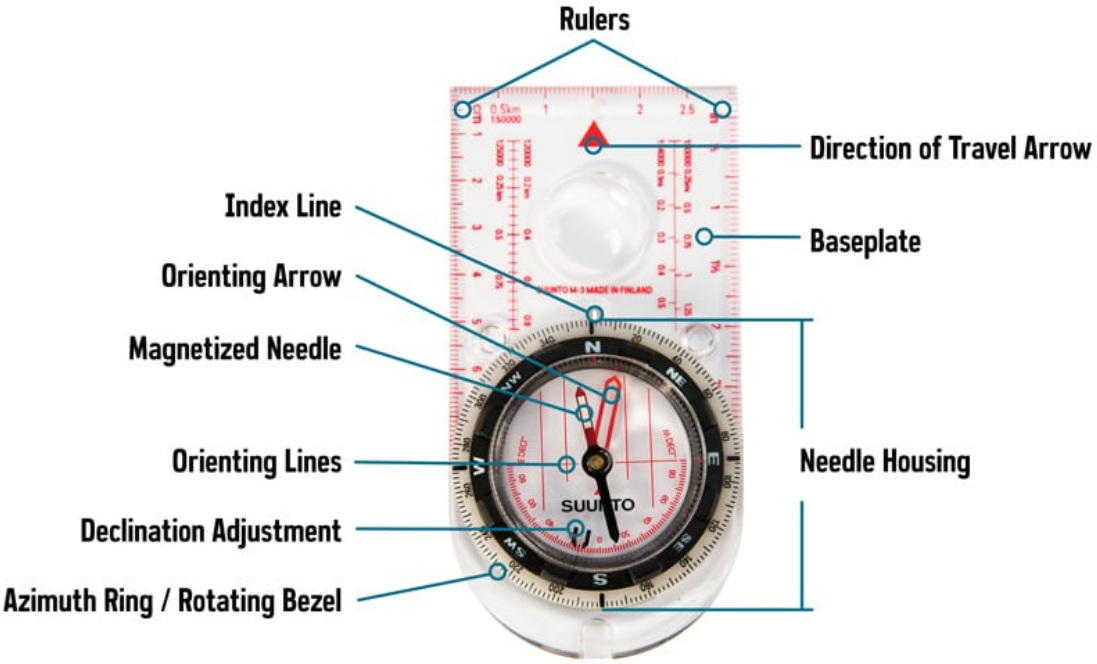
- Material: One rock per student (found before hand), Sharpie marker, cloth bag
- How it works: Before doing this with the campers, grab one rock for each camper and use the Sharpie to number them. Once you have all the campers together, have them stand in a circle and pass out a rock to each one. They should study their rock and feel the entire thing, if there are any defining features they should pay close attention to those. They should also memorize the number on their rock. After everyone has studied their rock, they should all go back into the bag. Have all the campers stand or sit in a circle and close their eyes. They have to keep their eyes closed the entire time! The facilitator should start at one person and begin passing out the rocks. With their eyes closed each person should feel the rock in their hand and try to guess if it was their pet rock! If they don't have their rock they should carefully pass it on to the next person in the circle. If they believe they found their correct rock they should shout "I found it!" and step out of the circle. This allows the rest of the group to know they should close in their circle a little bit because someone stepped out. After they step out they can look at their rock and see if they found the correct one! Once every camper has found their correct rock, ask them what specific detail about their rock made them know it was theirs.

Orienteering

Description
In Orienteering campers will learn how to navigate using a compass. They will learn the basics of how to use a compass and how to follow pace in order to get to a specific location.

Why Learn Orienteering?
Orienteering is a great skill to learn in survival situations or when out hiking. It is also a skill that teaches patience, encourages following directions, and teaches skills such as taking measurements and how to use them.

Introduction
Begin by explaining the purpose of orienteering and how it can be used to navigate oneself out of a situation where you are lost or need to find your way to a specific spot. Orienteering is actually a sport done by athletes in which orienteers use a map and compass to reach specific locations in an area. They must find those points using only their map and compass, no trails or signs. In order to orientate to a location, you must use a compass. A compass is a device that contains a small magnet that always points North towards the North Pole. Compasses point North because of the magnetic field surrounding the Earth. Once you know how to read a compass, you can go in any direction you want, not just North!



(McIntosh-Tolle, n.d.)

How to Use a Compass
Be sure to point out all of the different parts of the compass, how they work, and what they do.

- Base plate - clear plastic that house the compass, it normally has a ruler on the side to help read maps
- Bearing - measured in degrees, it is the direction you want to go
- Index line - the line on the compass where you should read your bearing
- Direction of travel arrow (Fred) - the arrow at the end of the index line that should point to where you want to go
- Red magnetic needle (Red) - this always points North!
- Orienteering arrow (Shed) - the outline of an arrow that you line up with the red needle

Use the saying “Put Red in the Shed and follow Fred.” This is a reminder that the red magnetic needle (Red) needs to line up with the orienteering arrow (Shed) after putting the bearing in, then follow the direction of the travel arrow (Fred).

Always hold the compass flat in your hand, it should not tilt up or down. It should also stay directly in front of you without rotating. You should always rotate your body, not the compass to get Red in the Shed. To follow a specific bearing, you would want to turn the dial to that direction and then turn your body (orient yourself) so that Red is in the Shed, then you are facing the correct direction based on that bearing. Before following a bearing, each camper needs to set their pace.

Pacing
You will need a 100 foot long section of flat ground with a definite start place and ending place for this. Pacing is unique to each individual person. It is a way of measuring using only your natural stepping pace.

- Have the first person put both feet on the starting line
- Starting with their dominant foot, they should walk at a normal face to the finish line (it has to be normal steps, not giant steps or baby steps)
- Every time their dominant foot hits the ground (except the very first step), they should count. 1 pace = 2 steps
- Walk at an even medium speed and walk as straight as possible. This is easier if you don’t look at your feet while you walk.
- Once they walk 100 feet, they should have a number for their pace. It is best if this is repeated and they take an average of the two numbers they come up with

The number they decide is their pace is their individual pace for 100 feet. Then they will need to break it down further because they will not always cover just 100 feet, it could be more or less. For example, if it takes a camper 20 paces to walk 100 feet, they will divide 100 feet by 20 paces to get 5 feet. Their specific personal pace is 5 feet. This means for every pace (two steps) the take, they cover 5 feet.

If you don’t get a nice even number, always round up to the nearest number. You use this number with your bearing to determine where to go. If you are given the bearing 40 feet at 360°, you will turn your compass to 360° and walk 8 paces because 40 feet divided by your personal pace of 5 feet is 8 feet. (You are traveling 5 feet for every pace, so after 8 paces you will have traveled 40 feet).

Shape Activity

Once everyone has a good understanding of how to use their compass and their pacing, there are some activities they can do to practice and put their skills to the test. You can follow the bearings below to create specific shapes. The campers can carry small markers or poly dots with them to place on the ground when they reach each point so they see the shape they're creating.

- Square
    - 10 feet at 360° (North)
    - 10 feet at 90° (East)
    - 10 feet at 180° (South)
    - 10 feet at 270° (West)
- Rectangle
    - 20 feet at 360° (North)
    - 10 feet at 90° (East)
    - 20 feet at 180° (South)
    - 10 feet at 270° (West)
- Triangle
    - 10 feet at 60°
    - 10 feet at 18°
    - 10 feet at 300°

Riflery

Description
In this class campers will use .22 rifles and learn how to properly use firearms including safety measures, aiming techniques, and cleaning.

Why Learn Riflery?
Riflery is a great way to teach safety and responsibility. Campers will learn to follow specific instructions, the importance of firearm safety, patience, and consistency.

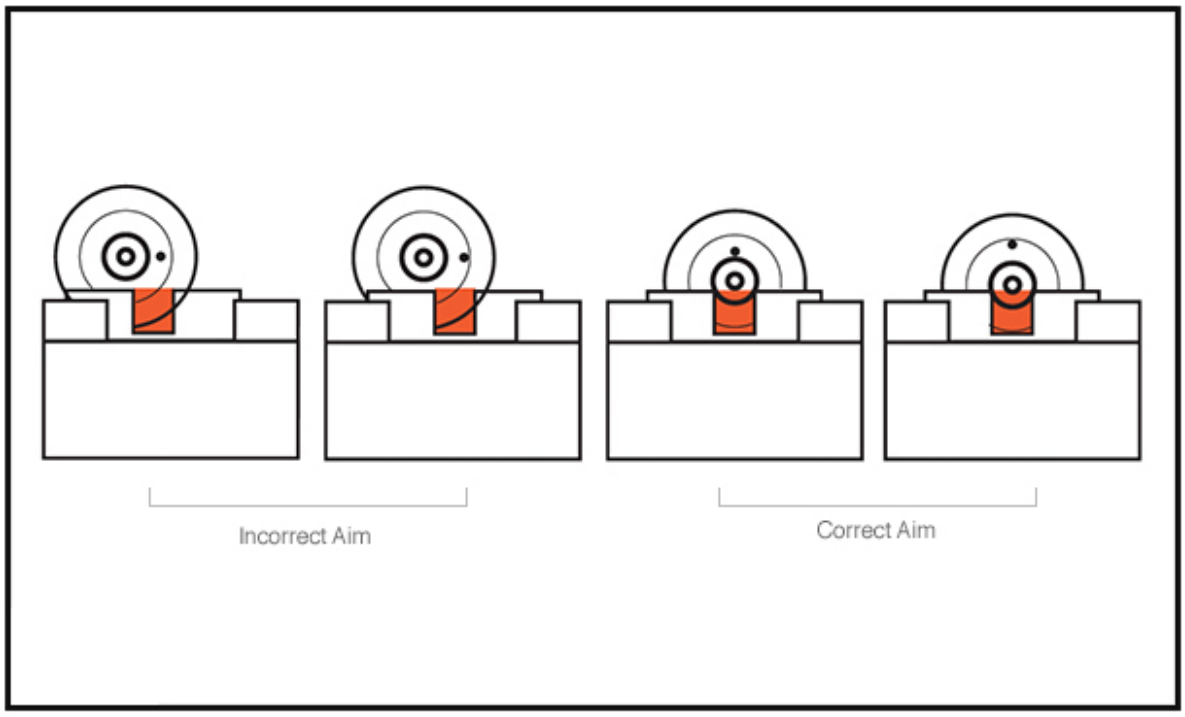
Set Up
Due to firearm safety laws, the ammo, rifles, and keys to firearm safes are all secured in different locations. Before heading to the rifle range you must grab the keys from the key box and the ammo from the program office. The keys will unlock the rifle shed and the safe inside with the rifles in it. Ensure that all rifles have their safety on before bringing them out. Also grab the box of safety glasses and earmuffs out of the shed.

Introduction
Before campers may pick up a rifle, counselors must go over all of the safety rules:

- Unless actively firing, all campers must stay behind the red safety line at all times. Only six campers can shoot at a time. The counselor should rotate through campers every four to five shots.
- All campers firing must wear safety glasses and earmuffs in order to use the firearm.
- The barrel of the rifle must ALWAYS face down range. Any camper who points the rifle anywhere but down range forfeits their right to be at the firing range.
- Describe all points of the rifle including the barrel, the sights, the safety switch, the trigger, where the ammo is loaded, and the bolt. In this class, campers will load and fire one .22 bullet at a time. We do not do multiple bullets at once.

(Lewis, 2018)

- Describe the proper way to hold the rifle. For a right-handed person, the butt of the rifle should fit snugly in their right shoulder. Their left hand should hold the barrel of the gun and their right hand should be near the trigger.
- Describe the proper way to aim the rifle. There are two sights on the rifle that the camper should use to aim. The one closest to the trigger is U-shaped and the one at the end of the barrel is a single point, similar to a lower case L. As the camper looks through the sights, they should like these two sights up horizontally, then line those up with the target at the end of the range.



(Stoeger, 2022)

How to Fire a Rifle

Each of these instructions should be done together and only at the command of the counselor:

- Have six campers take their seats at the firing range and place safety glasses and earmuffs on.
- With the safety still on, have the campers hold the rifles the proper way and line up the sights and practice aiming.
- Once they get a feel of aim, they may load a single bullet that the counselor should hand them.
- Once the bullet is loaded, they can push down the bolt and take aim again.
- Once everyone is ready, they can turn the safety off and fire.
- As soon as the rifle has been fired, they can eject the bullet cartridge by pushing the bolt back up and immediately put the safety back on.
- Each camper should get four to five shots before rotating to another set of six campers.
- Repeat until all campers have shot at least once. They may shoot again if there is still time.

Teaching Tip: If campers are taking too long to shoot four to five shots, move down to three shots to allow everyone more time to fire. If campers are successfully hitting the target, you can also find balloons in the rifle shed that can be blown up and attached to the targets with thumb tacks.

Cleaning Up

Try to pick up as many bullet cartridges as possible and put them in the container in the rifle shed. All safety glasses, earmuffs, and rifles must go back in the rifle shed. The rifles go back into the safe and it must be locked. DO NOT EVER LEAVE ANY RIFLES OUT FOR ANY REASON. The keys must go back to the key box and the ammo must go back to the program office, they cannot be stored in the rifle shed.

Survival

Description
In this class campers will get to practice their survival skills out in the woods! This class can be combined with the Campfire Cooking lesson or completed on its own.

Why Learn Survival?
Survival class teaches campers the importance of lost-proofing oneself on a hike and what to do if one does get lost. It will teach patience, dedication, goal-setting problem solving, and priorities.

Set Up
You will need to grab a survival pack from the program office and pick a trail that is not currently being used by another group. The survival pack should have the following items:

- Bandana
- Pocket knife
- Map and compass
- Emergency whistle or flair
- Water bottle (your personal one) and water filtration system
- Flashlight
- Lighter/flint and steel
- First aid kit with emergency blanket
- Paracord

Make sure all the materials are in the pack in order to show them to campers. Ideally in a real situation you would also want to bring some kind of food or high energy snacks, but that is not necessary for this lesson.

Introduction
Before heading out on the trail go over the definition of survival, a survival situation, and the steps to lost-proofing. Campers should also be properly prepared for the hike by wearing closed-toe shoes and having a full water bottle.

Survival simply means to “live on” in the most comfortable way possible in a hard situation. Survival situations evolve when people get lost on hikes, injured in the woods, or the weather changes drastically. Survival situations can come about many different ways, but most often they are from someone getting lost. Therefore, before going out one should always lost-proof themselves.

- Always tell someone else where you are going and when you will return
- Never travel alone
- Wear the proper attire so you are prepared
- Always follow a map and have a compass
- Never be out in the dark. Surrounding can change drastically in the dark
- Always take your survival pack (same as the pack listed above)

Bandana Activity

This is a simple activity that can be done at the trailhead just before heading out. You only need one bandana and it is a great way to get campers thinking about how they would survive in a survival situation. Pass around the bandana to each camper in a circle. Every person must say one way they can use a simple bandana in a survival situation. Band Aid, food storage, tourniquet, water filtration, etc. The possibilities are endless! The most important tool you can use in a survival situation is a clear head that can think through problems.

Survival Pack

As stated above, you should have a survival pack with you on this hike. After you hike for a bit and get to an open area, have all the campers sit down. Talk about the importance of being prepared and taking a survival pack with you. Have the campers guess what important items would be needed in a survival pack and bring them out as they say them. Show them how to use some of the items like the flint and steel, what an emergency blanket looks like, and the importance of the other objects as you bring them out. If they are having trouble guessing everything, give them hints until they guess it correctly.

Rule of 3s

These are special guidelines that are easy to remember in a survival situation and could help you survive!

You can survive…

- Three weeks without food
- Three days without water
- Three hours without heat/shelter
- Three minutes without oxygen
- Three seconds without a positive attitude

Looking at this backwards helps you know what is most important in a survival situation. Keeping a level head and not panicking is the most important thing you can do to survive a tough situation. If lost, don't wander! You will have a better chance of re-orienting yourself if you don't wander when lost. After you are calm and able to analyze the situation, you can address the most pressing needs. Injuries would need to be addressed right away, then finding shelter, then water, and then food.

Shelter Building

Shelter building should be the main focus of this class and take up the majority of the time. A make-shift shelter is a great way to stay warm and protect yourself from the weather when in a survival situation. There are several elements that contribute to a successful shelter:

- There should be a bed of leaves to protect from the cold ground (it should be cleared first of rough debris like sticks and rocks).
- There should only be a small opening to get in and out. It should face away from the wind as much as possible.
- It should not be built somewhere that will collect water.
- It should be stable enough to withstand wind and rain.
- It should be just big enough to fit inside of. Too small and it won't be comfortable and if it is too large, it won't retain your body heat.

- Be sure no ant hills, bug nests, or anything similar is nearby.
- There should be available water or food nearby.

Types of Shelters
The two most popular and easiest shelters to make are lean-to shelters and debris shelters. Before building shelters, split campers into groups of three or four and have each group build a shelter. They should spread out but not too far, the counselor must be able to see everyone. It is also important to stress to campers that they should only pick up dead branches for their shelters. They should not try to pull off live branches or leaves. Also, because campers are working in teams to build their shelters, they should build shelters big enough for the whole team to fit into!

Lean-to shelters are best made when a large tree with a Y-shaped split can be found. These provide the perfect solid base for a lean-to shelter. You can place a large branch in that Y and then build off of it by placing smaller sticks against it. Be sure to fill in all the cracks in the branches to protect yourself from the wind and rain. These shelters are great for the summer because they are not as insulated as other types of shelters but still protective.

Debris shelters are the best shelters because they can keep a person warm even without a fire. Debris shelters are generally much smaller than lean-to shelters and are built from debris such as logs, branches, leaves, pinestraw, etc. It is best built up against a tree or side of a hill by placing branches up against that object then filling in the holes with smaller pieces of debris. Built correctly, this shelter is very insulated and can keep the person warm in almost any weather.

Testing the Shelters
Once the shelters are built, have each group go around and describe their shelters to the rest of the campers. They can explain how they built their shelter and how it would protect them in a survival situation. Once a group has talked about their shelter, they can also test it! The whole team should be able to fit in their shelter (first test) and it should be able to withstand water (second test). The counselor can pour some water on the shelter with everyone inside and see if anyone gets wet! Repeat this with each group and their shelters.

Cleaning Up
All shelters must be torn out after building. Have the campers pull apart all of the branches and redistribute them across the forest floor. The area should also be searched for any trash, water bottles, or personal items left behind.

Team Building & Low Ropes

Description
This class has many different elements that involve campers working together to accomplish physical and mental tasks. It is a sequenced class that changes based on how well the group knows each other, how long they have been together, and the age and size of the group.

Why Learn Team Building and Low Ropes?
Team building games and low rope elements are great for increasing camper's awareness of others while also inviting them to lean on and support others. It can increase self-confidence, the sense of unity among a group, and teach cooperation.

Set Up
Various team building and low rope activities require various equipment. This document will discuss the specifics of those activities later.

Teaching Tip: You can also use games from the Back-Pocket Games section in Team Building, and vice versa, some of these games can be used as back-pocket games.

Introduction
Start by asking the group, "What does teamwork mean to you?" You'll get various answers but really want to emphasize the following four:

- Communication
    - Verbal
    - Nonverbal
- Cooperation
- Listening
- Patience

These are all important characteristics of a successful team. In this class, campers are meant to learn as they go, so throughout the games and activities the counselor should take advantage of learning opportunities and stress those characteristics of a successful team. Working as a team, problem solving, and trust are essential parts of life and the skills they learn in this class can be carried over to other areas of their life.

Sequencing is a method of organizing your games/activities in such a way that they make the most sense for the group you have. For this class, it is recommended that groups start off with some of the easier introductory games just to warm up and get in the right mind set. Counselors have to remember that their campers are all in different stages of their life and it is easier in the long run to start off a little slow then move onto bigger and more complicated activities. For instance, you wouldn't want to start this class off with the Human Knot because it is very communication heavy and involves campers getting extremely close to each other. This type of activity could turn some campers off to team building. Instead, starting with a game such as Pass the Can allows campers to warm up to the idea of team building and establishing those

relationships with the rest of the group.

Low ropes should come into play at the very end of sequencing. Low rope elements are much more team-dependent than other games and should be saved for the end of class after campers have a good grasp on the concepts of teamwork. YOU WILL LEARN LOW ROPES AND PROPER SPOTTING TECHNIQUES DURING ACCT TRAINING, THEREFORE, THIS MANUAL WILL NOT COVER THEM.

Teaching Tip: Don't worry if you don't get to low ropes during your first team building session! Most groups aren't ready for low ropes right away which is why there are two sessions of team building built into the week. By session two, your campers should be a much closer group and can progress through more strenuous activities. Keep in mind that your sequencing will also change by that second session because of this.

Team Building Games

Jump with Me
- Material: Long jump rope
- How to play: The two counselors grab either side of the rope and start spinning it like a jump rope. The goal is to get as many people as possible through the jump rope at one time. Starting with one camper, they should start on the outside of the rope, jump into the spinning jump rope, and then jump out without stopping the rope. Then two campers try together, then three, and so on. The goal is to get the whole group through at once!
- Difficulty level: Hard

Pass the Can
- Materials: Large tin can, tennis ball
- How to play: Have everyone sit on the ground in a circle. Tell them they must pass the can around the circle using only their feet. If they drop the can or use their hands, the group must start over.
- Alternatives: Place a tennis ball inside the can for difficulty. This way they have to keep it facing upwards. You can also choose a different body part to use or limit the group to only using one foot each.
- Difficulty level: Easy to medium

Human Knot
- Found in Back-Pocket Games
- Difficulty level: Medium

Helium Hoop
- Material: One hula-hoop
- How to play: All campers should stand in a circle shoulder to shoulder and place both hands palm up in front of them. Place the hula-hoop on the circle of hands. Everyone should be touching the hula-hoop and everyone must keep their hand straight the entire game. As a team, the group must lower the hula-hoop all the way to the ground. Every

hand must be touching the hula-hoop at all times and if anyone's hand comes off of it, the group must start over.
- Alternatives: The group can only use two fingers instead of the entire hand.
- Difficulty level: Easy to medium

Circle Within a Circle
- Found in Back-Pocket Games
- Difficulty level: Easy to medium

Minefield
- Material: Several random objects (stuffed toys, balls, blocks, etc.), bandanas, four cones
- How to play: Use the four cones to set boundaries for the minefield and then randomly and evenly distribute the random objects around the field. Have the group separate into three to four teams and pick a person to be blindfolded. (Once each team has a blindfolded partner, rearrange some of the objects on the field.) The blindfolded person must take directions from the other players on their team to make it through the minefield without touching any of the "mines." the other players cannot touch the blindfolded player. If a player touches a mine they must start over. The first team to get their player all the way through the minefield wins.
- Alternatives: You can play more rounds and make each one harder than the last. The next round can be played with only the blindfolded player allowed in the minefield, the other players cannot enter the mindfield. Another round can be played where players cannot say the words "right, left, forward, or backwards" but instead must make up their own code for those words. Another round can be played where the blindfolded player must pick up a certain object before exiting the minefield.
- Difficulty level: Medium to hard

LightSaber Battles
- Material: Two blindfolds, two pool noodles, four cones
- How to play: Use the cones to create a boundary area and toss the two pool noodles into this area. Make sure they are spread a few feet apart. Divide campers into two groups and have them pick one person to be blindfolded first. The first goal is to have each group guide their blindfolded teammate to one of the pool noodles while staying within the boundaries. The second goal is to then have that teammate hit the other team's player with their pool noodle while still blindfolded. The first team to do this wins.
- Alternatives: After the first round, teams can switch the blindfolded players and the counselor can instruct the rest of the team to give the directions in a different way. For instance, the team can't say the words "right, left, forward, or backward" but instead must make up their own code for those words. Another round could be done by only using unique sounds as code for those words
- Difficulty level: Medium to hard

Blind Circle
- Found in Back-Pocket Games
- Difficulty level: Easy to medium

Everybody Up

- Material: None
- How to play: Start by having everyone find a partner. Each pair is going to practice a sitting down stretch. This is when the pair sit down and face each other, their hands should be touching and their feet should be touching. The goal is for both of them to stand up without disconnecting their hands or feet from each other. (It is best to start with a stretch before attempting to stand. They can use each other to stretch their legs and back.) Have the partners do this a couple of times. Once everyone feels comfortable, have a pair demonstrate. Then have another pair join them to create a circle of four and attempt the same thing. They all must stand without disconnecting their hands or feet. Then have everyone in the group join and the whole circle must go from sitting to standing following those rules. If anyone disconnects their hands or feet the group must start over. If they're having trouble, you can give them hints on a few ways it can be completed: stepping on each other's feet instead of just touching, swapping people around if some people are getting it and others aren't, or getting up in turn or a specific order.
- Difficulty level: Hard

Debriefing

Debriefing is a way for campers to reflect on an activity. They can discuss the team's performance, the strengths and weaknesses of the team, and plans for progress in future activities. Below is a list of debriefing questions. You should ask as many as you need to get a point across or help the team come to a conclusion.

- Was there a clear leader?
- Can everyone be a leader?
- Were there good listeners?
- Are good leaders also good listeners?
- Did the entire team know the plan?
- What happens when everyone wants to lead?
- What happens when no one wants to lead?
- How can you encourage everyone to not talk at once?
- How do you choose a plan if not everyone agrees?
- What is one thing the team did really well on?
- What is something the team could improve on?
- Did you apply what you learned during the last activity to this activity?
- How can you apply these lessons to your everyday life?
- Where was there frustration? Why?
- Did everyone get to contribute?
- Did the team encourage or discourage each other? What are some examples?
- Are there any shoutouts or compliments you want to give?

Wacky Lab

Description
Wacky labs are fun-filled activities that let campers release their inner scientists! Campers will complete some kind of crazy experiment or challenge all while trying to achieve a goal or prove a hypothesis.

Why Learn Through Wacky Lab?
The experiments in Wacky Lab are engaging and meant to get your campers thinking! Learning in a hands-on experiential way allows children to develop their own hypotheses, improves critical thinking, and encourages problem solving.

Set Up
Be sure to plan out which Wacky Lab you are going to do beforehand and have everything ready when campers arrive. Each Wacky Lab will require different materials. Make this class fun! After introducing the Lab to your campers, make sure there is a planning period before starting the experiment. This kickstarts your campers' imaginations and helps them problem-solve later.

Wacky Labs

<u>Egg Drop Challenge</u>

- Material: One egg per camper/team, random packing materials (cardboard, plastic cups, newspaper, bubblewrap, popsicle sticks, feathers, etc.)
- Background information: Eggs are shaped in such a way that they can withstand a considerable amount of pressure. Standing straight up, an egg can actually hold up to 250 pounds of weight (Harvard University, n.d.)! In this experiment campers will get to test that strength by building a container that keeps their egg safe.
- Planning: First, have the campers draw out a plan on paper of how they would like to protect their egg. Here are the guidelines for their containers:
    - You must be able to easily see or uncover the egg (to check for cracks)
    - You cannot wrap the egg in anything like tape, paper, or bubble wrap in such a way that you cannot see the surface of the egg. These materials can be used, but, for instance, if you wrapped your egg in tape to protect it then it could easily be seen to check for cracks.
- Building the containers: After campers have drawn out a plan, they may start working on their containers. The counselor should keep the eggs until it is time to drop the containers. The campers may periodically ask for an egg to see if it fits in with their design, but they must bring it back. Having the counselor keep the eggs until it's time to drop them also ensures campers cannot bury their egg to a point where it can't be seen. After all the containers are built, the campers may add their egg. No more building can be done after this point.
- Dropping the containers: Each container will be dropped one by one from the balcony in the arts and crafts building. The other counselor should be on the ground to check the eggs after they drop. The campers should be on the balcony with the counselor dropping the containers. As each container is dropped, the maker of that container can help the counselor drop it and/or tell them exactly how it should be dropped (i.e. some containers

might have parachutes on them or a specific direction they should drop from). Once a box hits the ground, the counselor down below will check the egg for cracks. If the egg cracked, it is out of the competition. If the egg survives, it can be brought back up and dropped again. The containers cannot be fixed between drops. The eggs must be checked after every drop.

- Review: Ask the campers what went well and what didn't? Why did some containers protect better than others? What would you do differently next time?
- Note: Always wash your hands after handling raw eggs. Dispose of any leftover eggs and broken egg shells.

Nature Paint Brushes

- Material: Sticks, leaves, twigs, flowers, etc. (all found by campers), small rubber bands, paint, paper.
- Planning: Have campers collect things like leaves and flowers from outside. Tell them you will be experimenting with different textures so they should find as many things as they can that have different textures. They should also find a couple of pencil size sticks.
- Painting: After campers have collected their materials, they can take a seat at the picnic tables. Give the camper some small rubber bands and tell them to attach their material to their sticks to make paint brushes. (If necessary, you can also use hot glue to get the materials to stay in place.) Counselors should put a little bit of each paint color on a paint palette for each table. Have the campers try all of their different brushes to discover what textures they create. Try adding more or less paint to your brush. Try pointing it at different angles. Try pushing it down like a stamp instead of pulling it across the paper. After all the painting is done, hang up the papers to dry and have all the campers wash their hands.

(Mas and Pas, n.d.)

Oobleck

- Material: Bowls, plastic spoons, cornstarch, water, food coloring
- Background information: Sir Issac Newton discovered that there were three basic forms of matter: solid, liquid, and gas. But since his discovery, we have also discovered that there are other forms of matter: like oobleck. Oobleck is what we call a non-Newtonian fluid, meaning that it does not stay in a specific form all the time. Oobleck is sometimes a

liquid and sometimes a solid, depending on the amount of pressure on it.

- Making the oobleck: Have each camper add two cups of cornstarch to their bowl. Then they should grab one cup of water. If they would like their oobleck colored, they should also add food coloring to their water. Have the campers slowly add their cup of water to their cornstarch and use the spoon to mix it up. They should mix slowly. The oobleck will begin forming immediately.
- Experimenting: Because oobleck is a non-Newtonian fluid, it varies in form depending on how much pressure is added to it. The harder or faster you hit or mix oobleck, the more it acts like a solid. The softer or slower you mix or place your fingers in the oobleck , the more it acts like a liquid. Have the campers practice! Gently dip your fingers in and it will run through your hands like water. Hit it hard with your spoon or hand and it feels solid.

Dissecting Owl Pellets

- Note: MAKE SURE ALL SUPPLIES ARE AVAILABLE BEFORE STARTING THIS LAB. Please order all supplies from Carolina Biological Supply Company when running low. https://www.carolina.com
- Material: One owl pellet per camper or pair of campers, tweezers, magnifying glasses, owl pellet dissection charts, gloves, paper towels paper plates, and small bags
- Background information: Owls are birds of prey, meaning they are carnivores that hunt for their own food. Owls generally eat anything they can fit in their mouths, including mice, rats, fish, frogs, snakes, other birds, and sometimes other owls. When an owl eats its prey, it generally eats it whole in one large bite. However, an owl's stomach cannot actually digest every part of the animal they eat, it can only digest the meat. Because owls cannot digest the fur or bones of the animal they ate, they must find a way of getting rid of it. After they have eaten their prey and give their stomach time to digest the meat, they spit up small pellets that contain all of the bones and fur of their prey. By dissecting these pellets we can discover what type of prey the owl last ate.
- Preparation: After discussing what owl pellets are, have each camper take a seat and place a paper plate, tweezers, magnifying glass, gloves, and a dissection chart in front of them. They can put on the gloves as you pass out the owl pellets. Instruct them to carefully and gently pull apart the owl pellet. The bones inside are fragile and you don't want to break them. As they pull out bones they can try to match them to the pictures on the dissection chart.
- Cleaning up: Once everything has been pulled out of the owl pellet and campers have been given the chance to identify their findings, it is time to clean up. If campers want to keep the bones they found, they can be placed in a small bag for the camper to take with them. The rest of the pellet, paper plates, paper towels, and gloves should be thrown away. Tweezers and magnifying glasses should be washed. Dissection charts and table tops should be disinfected. Everyone should wash their hands when done.


OWL PELLET
Open the aluminum foil to expose the owl pellet. Examine the pellet's exterior.
Carefully, using your fingers or a probe, break off a small piece of the owl pellet. Continue breaking the pellet apart. Set aside any bones that you find.
Note: The bones in the pellet are often small and fragile. Be careful as you dissect the pellet.
Compare the bones from the pellet with the bones on the chart and identify as many bones as possible. Refer to the skeleton diagrams on the back for further comparison.
Rodent
Shrew
Mole
Bird
Skull
Jaw
Scapula
Forelimb
Hindlimb
Pelvic Bone
Rib
Vertebrae
CAROLINA

(Carolina, n.d.)

Water Ecology

Description
Water ecology is the study of a body of water and the things that make that body of water a home to all of the organisms in it. This activity allows campers to explore the stream on property, discover its contents, and come to their own conclusion on the health of the stream.

Why Learn Water Ecology?
The water has always been a fascinating place that people have explored for decades. In this activity, campers will get to do their own exploring and learn some of the secrets the water holds. Water ecology encourages campers to use their critical thinking skills, improve observation skills, how to draw a conclusion based on facts, and how to be mindful of their environment.

Set Up
Before taking campers out into the stream, a few things must be set up first. Make you grab enough nets for each camper. You should also grab the two observation buckets and several viewfinders. You should also grab several copies of the dichotomous key and pictures of the commonly found macroinvertebrates in the area (found at the end of this curriculum). You should also double check the water level of the stream before attempting this lesson. It should be no higher than to your campers' knees (i.e. mid-calf for most adults).

Teaching Tip: Most of the time spent during this activity is spent in the stream searching for organisms. Be sure to know the material well and don't spend too much time in the beginning explaining what each organism is. Campers will discover this along the way. Leave enough time at the end of the activity periods to discuss the oransims, look at them through viewfinders, and determine the health of the stream.

Introduction

Teaching Tip: All the words underlined in the following sections should be discussed during the lesson.

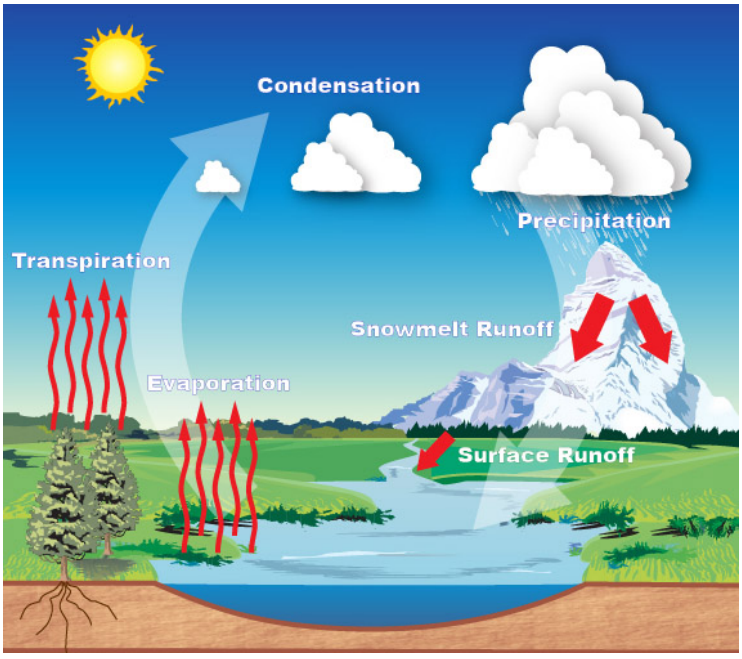
Begin by breaking down what exactly water ecology means. Ecology is the study of the interactions between all living and nonliving things. The prefix "eco" means "home" or "habitat" and "ology" means "the study of." So water ecology is the study of water as a home and all of the interactions between the living and non living things in that home (Merriam-Webster, n.d.; Pimm, 2019).

Start a list on a piece of paper or a dry erase board: have the camper list as many things as possible that can be found in a stream or that can affect a stream. Put them in two categories, but don't tell the campers what those categories are. Your list will look something like this:

Biotic	Abiotic
Fish	Air
Insects	Sun
Plants	Rocks
Frogs	Leaf litter
Salamanders	Speed of the water

After the list is made, ask the campers what the difference between the two columns is. They should notice that one is living organisms and one is non living organisms. These are called biotic and abiotic factors. Biotic means living and abiotic means non living. Ask the campers to give some examples of how these biotic and abiotic factors interact. For example, fish need air in the water to breath, salamanders hide under the rocks for protection, plants use the water to grow, etc. This helps them to establish the connection that biotic and abiotic factors must work together to create a successful home.

Most of the biotic factors campers will find in the stream are macroinvertebrates. Macroinvertebrates are small invertebrates that live in the water. Macro means "large" and in this case it means large enough to see without the aid of a magnifying glass or microscope. Invertebrate is any organism without a backbone, but instead has an exoskeleton. We will catch a lot of these in the stream and discuss them further then!



(National Weather Service, n.d.)

Discuss how streams form and their role in the water cycle. A simple water cycle has five steps: precipitation, runoff, transpiration, evaporation, and condensation. (There are much more

complex versions of the water cycle available but this is all campers need to know for this class.) Precipitation is water falling from the sky in some form. Runoff is when that water is collected on the surface and begins to flow towards a body of water. That water is then absorbed into the ground, collected in pools, or makes its way to streams and then the ocean. Transpiration is the water vapor that is released from plants and evaporation is the water vapor that is released from bodies of water as that body of water heats up. That water then gathers in the sky as condensation and forms clouds which, once full, begin to precipitate and start the cycle again.

Pollution is a topic that often comes when talking about water and waterways. Pollution is more than just trash thrown on the ground or an oil spill in the ocean. While these are very real types of pollution, water can also be polluted by chemicals used in agriculture or construction or from airborne pollutants coming from factories. Pollutants generally fall into two categories: point source pollution and nonpoint source pollution. Point source pollution means that we can identify exactly where that pollutants came from. Nonpoint source pollution means that we cannot identify where the pollutants came from.

The health of a stream can be determined by the amount of pollutants found in the stream. Pollution in the water also determines the organisms in the water. Some organisms, tolerant species, are able to live in high-pollution areas and thrive in those environments. Other organisms, intolerant species, can only survive in very clean water with little to no pollutants. These species are called indicator species because they can help indicate the health of the stream. Other factors that influence the health of the stream are the temperature, turbidity, and dissolved oxygen in the water. Colder faster moving water generally supports more life because it contains more oxygen.

Stream Exploration & Identification

This is the main part of the activity and where the most time should be spent. During stream exploration campers will be able to get in the stream and catch the macroinvertebrates they learned about just minutes before. Before allowing campers in the stream, set up a few rules first.

- Always give them specific boundaries of how far down the stream they can go.
- No rough housing in the stream. Not only will it disturb the ecosystem, but someone could easily fall and get hurt.
- Walk, do not run!

Show campers how to properly use the nets and find organisms in the steam. They should always have their net facing upstream so whatever organism they catch will flow into their net. To look under rocks, the camper should place their net near one edge of the rock and lift the rock with the other hand. Any macroinvertebrates that were under the rock will flow into the net. They can also push their net under the rock and move it around a little bit while holding it up with the other hand. Always place rocks back where you found them, those organisms live there.

One counselor should be in the stream with the campers helping them catch macroinvertebrates. Try to spend some one on one time with each camper and make sure each camper catches at least one organism. The other counselor should be on the bank of the stream with the observation buckets. That counselor should help campers transfer their macroinvertebrates from the nets to the buckets and start identifying them. When the campers have about five minutes of exploration

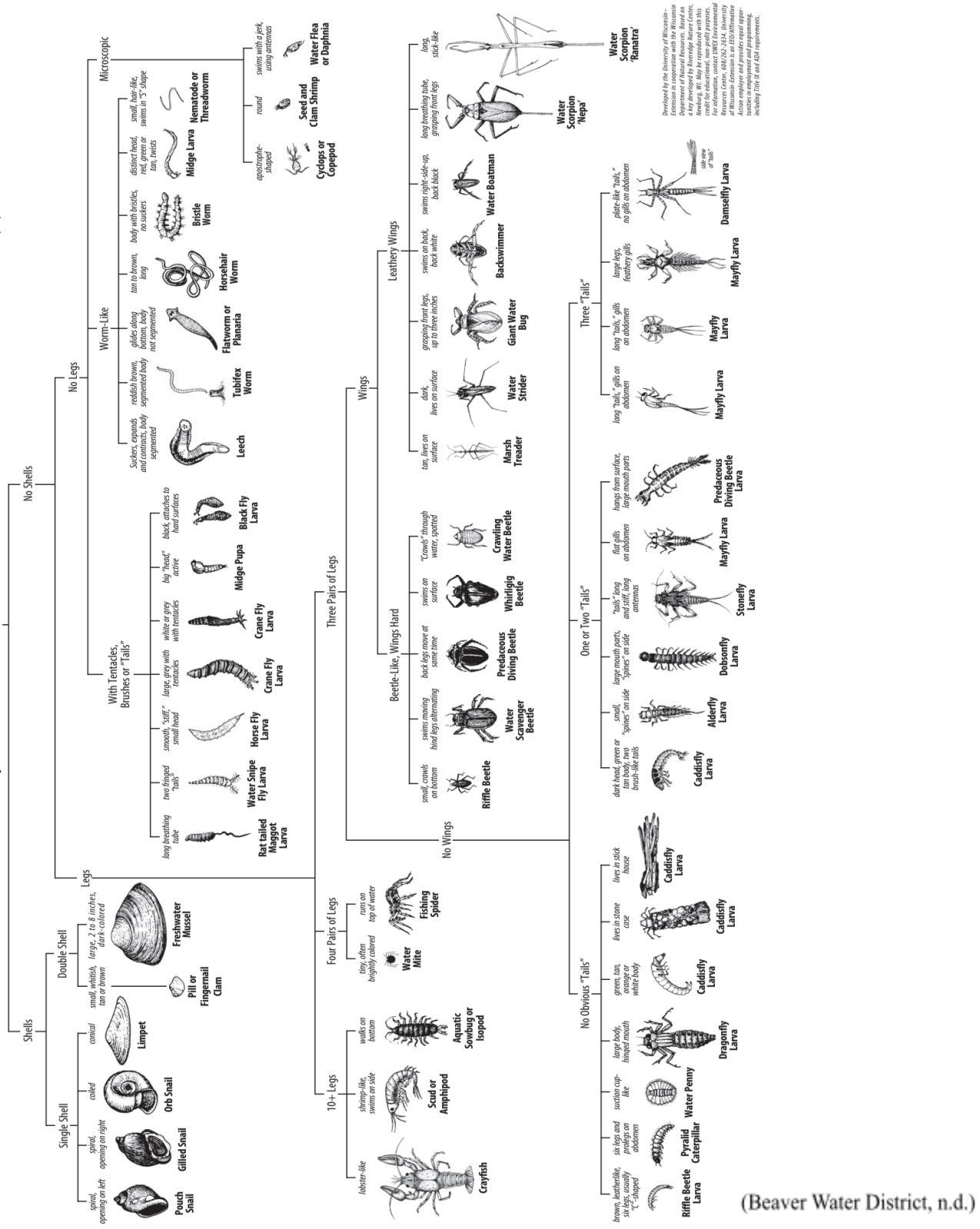
left, the counselor on the back should put some of the macroinvertebrates into viewfinders for the campers to look at more closely.

When the stream exploration is over, instruct the campers to wash out their nets by turning them inside out and shaking them out in the stream. They should carefully check their nets to make sure no macroinvertebrates got stuck inside of them.

Using the dichotomous keys and pictures of macroinvertebrates, give each camper or group of campers a viewfinder and let them determine what they found.

Once all the campers have determined what their macroinvertebrate is, all viewfinders and observation buckets should be emptied back into the stream.

Dichotomous Key

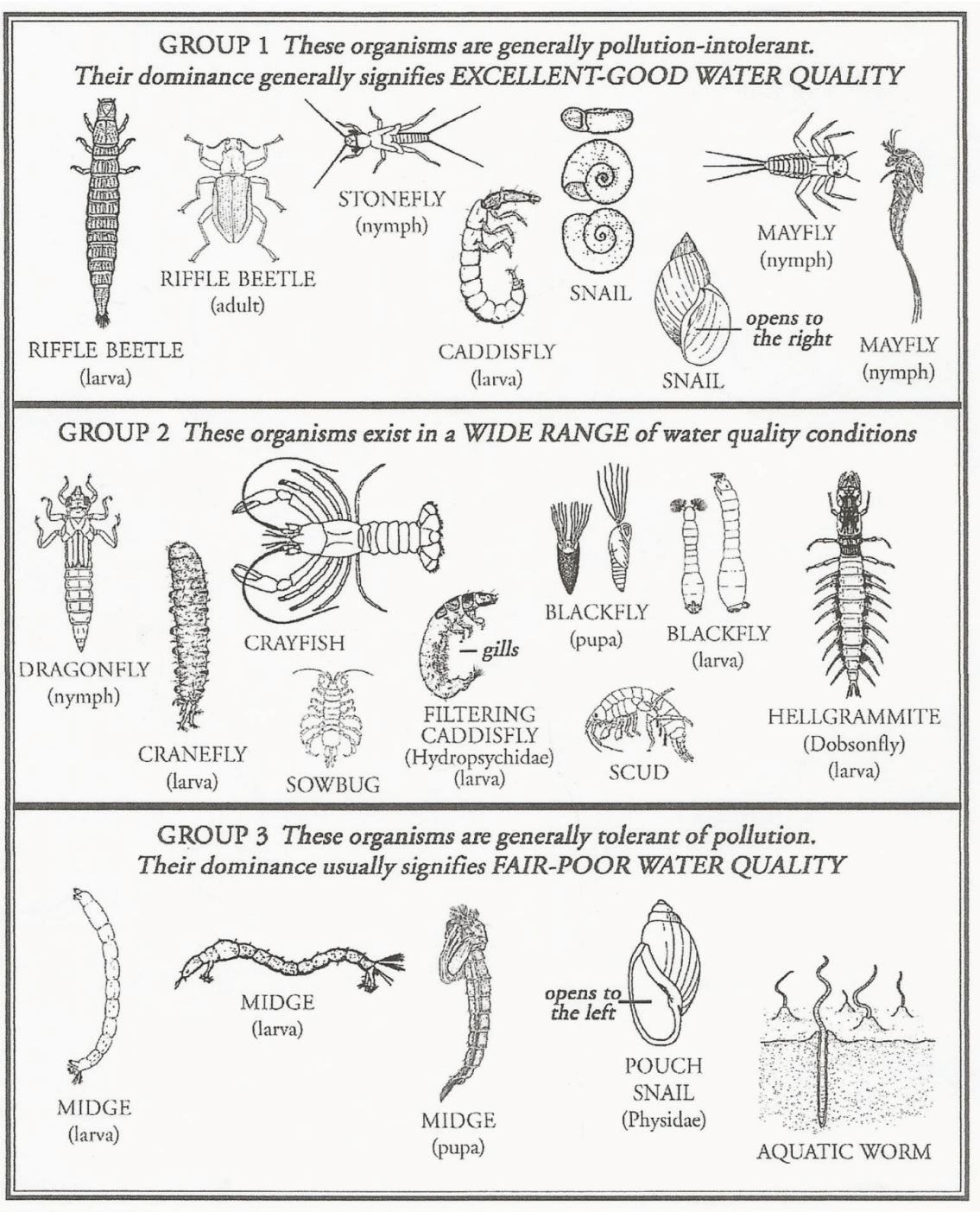


(Beaver Water District, n.d.)

Indicator Species Chart

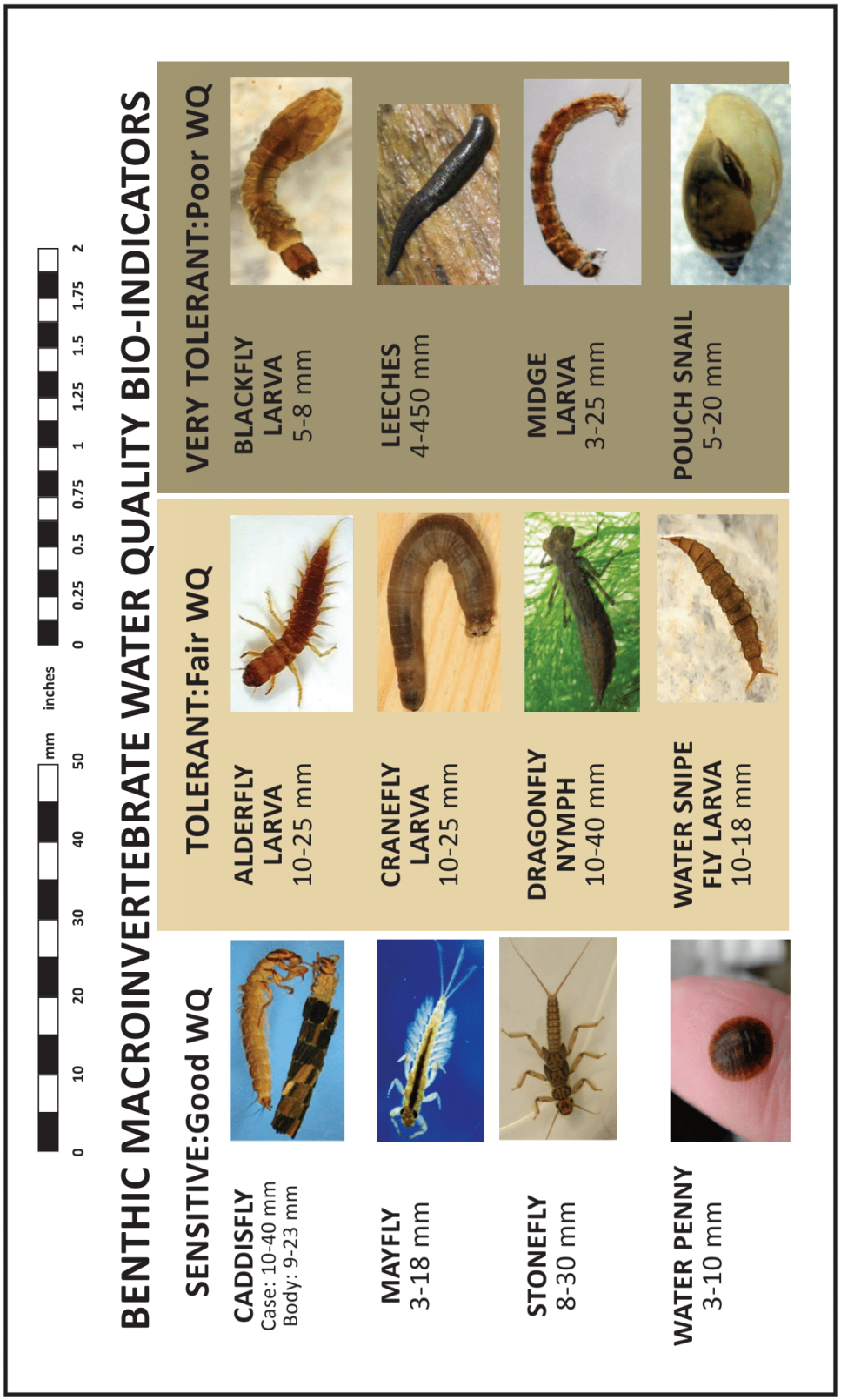
MACROINVERTEBRATE GROUPS

BEGINNER'S PROTOCOL – PICTURE KEY



(Beaver Water District, n.d.)

Commonly Found Macroinvertebrates



(Beaver Water District, n.d.)

Wildlife and Nature Center

Description
This class utilizes the Nature Center on property and discusses some of the native animals of the area. It also covers the various classifications of animals and how to identify them.

Why Learn About Wildlife and the Nature Center?
Learning about wildlife is a great way for campers to learn to appreciate nature and the world around them. It teaches the importance of habitat protection and the vital role animals play in our world. It also encourages campers to use their observation skills, deductive reasoning, and learn how to respect animals and biofacts.

Introduction
Before entering the Nature Center, tell all the campers that they must keep their voices low inside and that running is not allowed inside. There are animals living in the Nature Center and it is their home meaning we should be respectful when entering it.

Let the campers spend a few minutes looking around the Nature Center when they first enter. Tell them they can only look, not touch anything. After a few minutes have them sit down near the display cases. Explain that you will bring out several animals and biofacts and that they are allowed to touch but they cannot hold any of them.

Biofacts
Discuss the biofacts on the table first. This allows counselors to ensure campers are mature enough to see real animals later by following the rules during this section. Campers should gently touch the biofacts, not hold them or grab onto them.

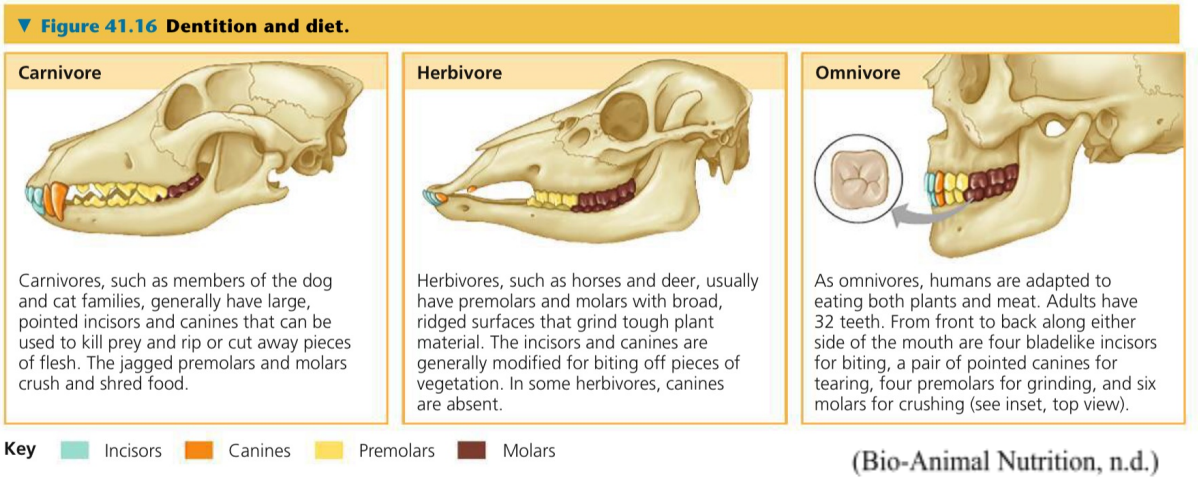
- Raccoon pelt
- Raccoon skull
- Otter pelt
- Grizzly bear pelt
- Black bear skull
- Deer skull
- Deer antlers
- Bobcat skull
- Venomous snake skull
- Python skull
- Yellow-belly slider shell

Discuss the difference between carnivores, herbivores, and omnivores and how a skull can show campers what that animal was. Carnivores are meat-eaters. Herbivores are plant-eaters. Omnivores eat plants and meat. Campers can determine what classification an animal was in based on that animal's eyes and teeth.

- Eyes: Carnivores are predators and hunt for their prey. In order to do that, they must have binocular vision (like humans) that allow them to see depth. It means that their eyes are also forward facing on their skull. Herbivores are prey animals and must be able to carefully watch their surroundings in order to not be caught by predators. Prey animals

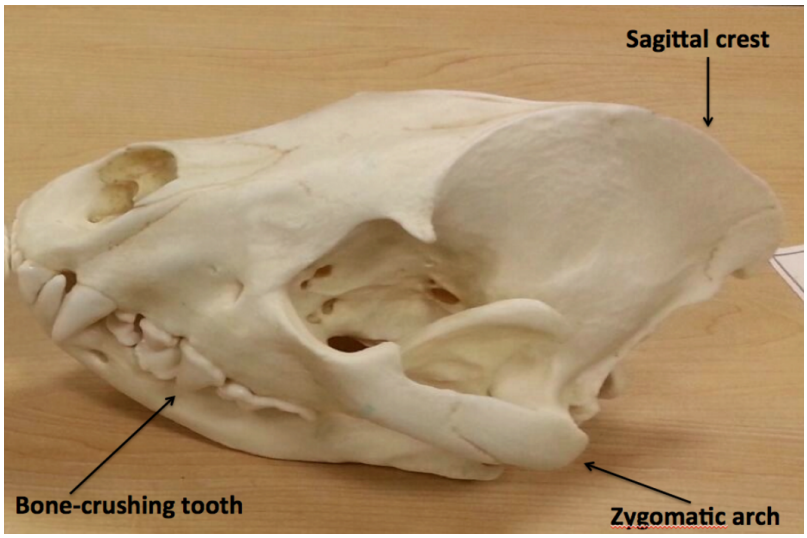
have monocular vision which allows them to see a wide area at one time. Their eyes are the side of their face so that they can see around themselves to look out for predators. Omnivores have eyes that are somewhat in the middle of their face.

- Teeth: Carnivores have teeth that are designed to tear apart meat such as canines. Herbivores have incisors and molars used for chopping and grinding plant material. Omnivores have all three types of teeth to eat both plants and meat.



(Bio-Animal Nutrition, n.d.)

You can also tell the strength of an animal's bite based on their sagittal crest and zygomatic arch. The muscles connected to the jaw also connect to the top of the skull at the sagittal crest and to the zygomatic arch near the cheeks. The larger the sagittal crest and zygomatic arch, the stronger bite the animal has.

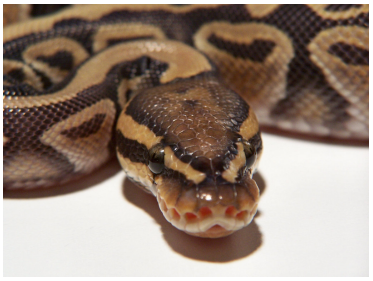


(Reed College, 2015).

Animals

Before moving on to live animals, remind the campers of the rules. No loud noises, stay seated, and gentle touches only, no holding or grabbing the animals. The counselor is responsible for the animals during the class. If campers are not willing to listen to the rules, the counselor does not

have to bring out any animals. ALL COUNSELORS MUST BE CHECKED OFF ON PROPER HANDLING TECHNIQUES BY THE CAMP DIRECTOR BEFORE HANDLING ANIMALS.

Animal	**Information**	**Picture**
Rabbit	• Herbivores • Native to Europe originally, now highly domesticated • They have long incisors that continue to grow their entire life	 "Rabbit" by KevinJump is licensed under CC BY 2.0.
Box turtle	• Omnivore • Native to southern US • Top of their shell is called a carapace and the bottom is called a plastron • The plastron has a hinge that allows the box turtle to completely close themselves inside of their shell • Spine and spinal cord connect directly to carapace meaning that they can feel everything through their shell	 "Eastern Box Turtle" by cotinis is licensed under CC BY-NC-SA 2.0.
Bearded dragon	• Omnivore • Native to Australia • Have small flexible spikes on face and side of body to serve as protection from predators • They have a “third eye” on top of their head that is a bundle of nerves that can see shadows	 "Central Bearded Dragon" by fro_Ost is licensed under CC BY-NC-ND 2.0.
Ball python	• Carnivore • Native to Africa • Medium size non-venomous python • A constrictor that strangles prey after ambushing them • Color combinations allows them to hide in trees or bushes	 "Ghost Ball Python" by Alex Butler

		is licensed under CC BY-NC-ND 2.0.
Cornsnake	• Carnivore • Native to US • Non-venomous and constrictor • Commonly found in cornfields preying on mice, hence their name • Uses tongue to smell through their Jacobson Organ (all reptiles)	 "Red Cornsnake" by amdubois01 is licensed under CC BY-NC 2.0.
Milk Snake	• Carnivore • Native to US • Non-venmous and constrictor • Pattern is similar to coral snakes • “Red touching yellow kill a fellow, red touching black venom lack” - poem is often used to distinguish between the venomous coral snake and non-venomous milk snake	 "New Mexico Milk Snake" by J. N. Stuart is licensed under CC BY-NC-ND 2.0.

camp wohali

Camp Wohali is the place to be this summer! With state of the art equipment, quality programs, and first-aid and CPR certified staff, Camp Wohali is a great place for your child to grow and develop into their best self! For registration, prices, and more information, call 555-555-5555 or email info@campwohali.org.

A Week Full of Fun!

Take a glimpse at your camper's schedule!

7:15	Wake up
8:00	Breakfast
9:00	1st Activity - Archery
10:00	2nd Activity - Wacky Lab
11:00	Free Choice Activity
12:00	Lunch
1:00	Siesta
2:00	Pool Time
3:15	3rd Activity - Orienteering
4:15	Free Time
6:00	Dinner
7:00	4th Activity - Rock Wall and Zipline
9:00	Shower and Cabin Time
10:00	Bedtime

(Alpine Towers, n.d.)

(Camps Kenwood and Evergreen, 2016)

Get ready for the best summer ever!

camp wohali

Parent Survey

Thank you for sending your camper to Camp Wohali! Please fill out this survey and tell us how much your camper enjoyed their stay!

What inspired you to send your child to camp?

Did your child make a new friend this week?

What was your child's favorite thing about camp this week?

What was your child's favorite meal this week?

Rate on a scale of 1-10. 1 being "poor" and 10 being "excellent."

1. Do you think your child gained a new skill while at Camp Wohali?
   1 2 3 4 5 6 7 8 9 10
2. Do you feel your child's counselor improved your child's camp experience?
   1 2 3 4 5 6 7 8 9 10
3. Do you feel that Camp Wohali provides a wide-enough variety of activities for each child to enjoy?
   1 2 3 4 5 6 7 8 9 10
4. Do you feel our schedule allows for a good amount of both structured activities and supervised free time?
   1 2 3 4 5 6 7 8 9 10
5. How likely are you to recommend Camp Wohali to a friend?
   1 2 3 4 5 6 7 8 9 10
6. Do you think you got your money's worth by sending your child Camp Wohali?
   1 2 3 4 5 6 7 8 9 10
7. Were all your questions properly answered before, during, and after camp?
   1 2 3 4 5 6 7 8 9 10
8. How satisfied are you with your overall experience at Camp Wohali?
   1 2 3 4 5 6 7 8 9 10

Optional: Are there any additional comments you would like to provide?

camp wohali

Camper Survey

Thanks so much for spending the week with us! Please fill this survey out and let us know how much you enjoyed Camp Wohali!

Favorite Meal:

Least Favorite Meal:

Favorite Camp Activity:

Least Favorite Camp Activity:

Something you wish you could have tried this week:

Something you learned this week:

Rate on a scale of 1-10. 1 being "poor" and 10 being "excellent."

1. How would you rate your counselor this week?
   1 2 3 4 5 6 7 8 9 10
2. How would you rate the variety of activities provided this week at Camp Wohali?
   1 2 3 4 5 6 7 8 9 10
3. How would you rate the interactions with the other campers this week?
   1 2 3 4 5 6 7 8 9 10
4. Would you say you had a good time at summer camp?
   1 2 3 4 5 6 7 8 9 10
5. How likely are you to return to camp next summer?
   1 2 3 4 5 6 7 8 9 10

Optional: Is there anything else you would like us to know about your time at camp?

Camp Wohali

Camp Counselor Weekly Schedule

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
7:15		Wake-up	Wake-up	Wake-up	Wake-up	Wake-up
7:30						
7:45		Travel time	Travel time	Travel time	Travel time	Travel time
8:00		Breakfast	Breakfast	Breakfast	Breakfast	Breakfast
8:15						
8:30						
8:45		Travel time	Travel time	Travel time	Travel time	Travel time
9:00		Archery	Low Ropes & Team Building	Water ecology	Wildlife & nature center	Apline Tower
9:15						
9:30						
9:45		Travel time		Travel time	Travel time	
10:00		Wacky Lab		Riflery	Wacky Lab	
10:15						
10:30						
10:45		Travel time	Travel time	Travel time	Travel time	Travel time
11:00		Free Choice	Free Choice	Free Choice	Free Choice	Free Choice
11:15						
11:30						
11:45		Travel time	Travel time	Travel time	Travel time	Travel time
12:00		Lunch	Lunch	Lunch	Lunch	Lunch
12:15						
12:30						
12:45		Travel time	Travel time	Travel time	Travel time	Travel time
1:00		Siesta	Siesta	Siesta	Siesta	Camp Talent Show & Closing Campfire
1:15						
1:30						
1:45		Travel time	Travel time	Travel time	Travel time	
2:00		Pool time	Kayak and Canoeing	Pool time	Low Ropes & Team Building	
2:15						
2:30						Camp Check Out
2:45						
3:00		Travel time		Travel time		
3:15		Arts & crafts	Travel time	Arts & crafts		
3:30			Orienteering			
3:45						
4:00						

4:15	Camp Check In	Travel time	Travel time	Travel time	Travel time	
4:30		Free Time	Free Time	Free Time	Free Time	
4:45						
5:00						
5:15						
5:30						
5:45	Travel time	Travel time	Travel time	Travel time	Travel time	
6:00	Dinner	Dinner	Dinner	Dinner	Dinner	
6:15						
6:30						
6:45	Travel time	Travel time	Travel time	Travel time	Travel time	
7:00	Opening campfire	Rock wall & Zipline	Astronomy	Survival & campfire cooking	Dart Art	
7:15						
7:30						
7:45					Travel time	
8:00					Night hike	
8:15						
8:30						
8:45	Travel time	Travel time	Travel time	Travel time	Travel time	
9:00	Shower Time	Shower Time	Shower Time	Shower Time	Shower Time	
9:15						
9:30						
9:45						
10:00	Cabin Time	Cabin Time	Cabin Time	Cabin Time	Cabin Time	
10:15						
10:30	Bed Time	Bed Time	Bed Time	Bed Time	Bed Time	

Helpful Hints!

Camp Check-In: Be on time, in camp uniform, and have your name tag on for check in. This is the first time you will meet your campers and their families so be welcoming and be ready to answer questions.

Travel Time: This time is built in for traveling between activities! Use it wisely and don't be late for your next activity!

Opening Campfire: Be ready for the all staff skit. Interact with campers as much as possible and get them comfortable at camp.

Shower Time: All campers must take a shower every night! You will be glad they did!

Cabin Time: Use this as a reflection time with campers and to prepare for the camp talent show on Friday.

Free Choice: Each camper will get the opportunity to sign up for an extra activity each morning at breakfast and use this block of time for that activity. Activities include various games, sports, arts & crafts, wacky labs, and extra time at the pool.

Free Time: This free time is for campers, not counselors. Campers use this time to meet people from other cabins or go to the camp store. Counselors should stil be mingling around with campers and keeping an eye on them.

Siesta: Every camp counselor's favorite hour! Use this as a quiet, restful time to get yourself and campers energized for the rest of the day.

Camp Talent Show & Closing Campfire: The final activity of the week! Cabins and campers get to show off what they have been practicing all week and counselors give their final goodbyes to their cabins

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