

## Science and Nature

### Playing Defense

**Best with Day 2 or 5**

**Why:** Reflect on how other living things take care of themselves and one another.

**Supplies:** Paper and markers

**How:** Take a walk and invite campers to stop and see what defenses various plants have to protect themselves. This might include bark, thorns, thick branches, etc. Some might even be hazardous to people. Ask the campers to think of ways that animals protect themselves and their community. Write their answers on a piece of paper. Invite the campers to reflect on the ways people protect themselves and others and how this compares to the examples they have explored in nature. Focus on the different roles animals play and how they work together. For example, different colorings of males and females can match the roles they play in caring for eggs or children. With older campers, you might want to spend some time talking about how human “defenses” can become hurtful to self and others. Reflect on how these observations match or challenge the daily scriptures for days 2 or 5. How is nature like “the Body of Christ? How does nature show love of self, others, and God?

### Circle of Life

**Best with Day 3 or 5**

**Why:** Explore some of the conflicts in nature and reflect on what it can teach us.

**Supplies:** Paper and markers

**How:** Invite campers to make a list of predators and prey in nature. Ask them to try and track a food chain forward and backward from one of their pair so that plants are at the beginning and a primary predator in that ecosystem is at the top. You can also draw it as a cycle, with the predator eventually returning to the ground after its death to strengthen the soil for plants. Ask the campers

how conflict in nature is different from conflict in human relationships. There doesn't have to be a clear answer or consensus. Invite the campers to name ways people create unnatural conflicts in nature by invading or changing ecosystems.

### Boiling Up

**Best with Day 3 or 6**

**Why:** Use a simple experiment to see how pressure impacts water and discuss how pressure in our lives can impact peace or conflict.

**Supplies:** Room temperature water, large syringe with no needle, cap or something to seal the syringe

**How:** Practice this before trying with campers to make sure you have a feel for the amount of pressure needed and can hold the syringe still enough to observe. When ready, draw the syringe about a third of the way full. Quickly pull the plunger back to extract air and create pressure in the tube. The water will start boiling because of the amount of pressure it is under. Let the campers observe the reaction, then spend some time talking about how it works. You can either enter a conversation about the things that put pressure on us and create conflict in our lives, or discuss how there is more than one way to solve a problem.

### Crystal Clear Love

**Best with Day 4**

**Why:** Make a cool craft and talk about experiencing what our eyes cannot see.

**Supplies:** pipe cleaners, string, popsicle sticks, tape, borax, small containers (jars or plasticware), hot water, small sandwich bags.

**How:** Invite campers to make a small heart out of a pipe cleaner, then tie a string between it and a popsicle stick. You can use tape to make sure it doesn't slide on the stick. Boil 1 cup of water for every 3 tablespoons of borax powder. Stir them together and pour into small containers with a

# Extras

mouth large enough for hearts to come in and out easily. Invite campers to dip their hearts into the water using the popsicle sticks, being careful not to touch the water with their hands. Let the hearts soak overnight and the borax powder will form crystals all around the pipe-cleaner. Campers can pull them out the next day and put them in a sandwich bag for safe keeping. This activity invites different conversations for different age groups along the way. Younger campers might be introduced to the activity after the boiling and mixing has already been done, starting with what appears to be a clear liquid. You can discuss what might be there that they can't see and how God's love is always with us. Older campers might dive into the science a little more, talking about saturation and how there is more borax than the water can handle, discussing the abundance of God's love and how we are a landing place for "more love than anyone can contain."

like "S" rotating between the two ends. You might be able to create a 3-arch demonstration, but it is harder to sustain this pace in rhythm. Spend some time talking about the ways we impact one another in community and how the way we live can have ripple effects around us.

## Waves of Change

### Best with Day 5 or 6

**Why:** Explore movement and waves of energy as a way to discuss the impact we have on the world around us.

**Supplies:** long length of rope or a metal slinky toy

**How:** Have one person hold the rope steady at one end and stand about 5 feet away from them with the other end. Raise and lower the rope quickly to send a visible wave through the rope. Do this at different levels of intensity to show campers how the motion will create a return wave coming back at you if you send a hard-enough wave to start. Spend some time talking about the things we want to change in the world and how hard we might have to work in order to see some benefit from our efforts. After this discussion, set up the experiment again, this time repeating a steady simple motion to create a "down and back" wave that will almost look like you are spinning the rope for jump rope. If you speed up the motion, you can create a double arch that almost looks