



**SUMMER
CAMP**



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approved by:

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School Senior

Quick as a Wink

Grades: 3rd-8th

Each of the five days is set to three-hour periods. Depending on how much time is allotted you may extend or shorten times if needed, however, the set minutes are a good time frame.

Each day accounts for about 20-30 minutes of clean up and preparing the next activities. Some days you might not have time to do everything. Each group of kids will go at their own pace. The most important thing is that they are learning and having fun.

Day One:

Introduction - 5 minutes:

It's always good to start by introducing yourselves to one another. Have everyone say their name, grade, and something they hope to make or do in this camp. You can write down the ideas that they give you and if you want to you can make sure to do those through the camp if it's not on the agenda. Not all ideas will be 5 minutes but they are still quick to do

Slime- 15 minutes:

Slime is simple. You just need 3 things: glue, borax, and water. Make a borax and water solution. Start with how much glue you want in one cup then add some water to it and the color that you want. Mix that around well then add the borax slowly and mix well. After some time you will need to start using your hands to fully mix it. It works well if you put the slime in a plastic baggy so it doesn't get as much on their hands. You will want to make it yourself first before doing it with the kids so that you know all the measurements. We like to have about 4 oz of glue, 6 oz of water and about 3 oz of the borax solution, see what that will get you. If it's stiff then use less borax, if it's still sticky use more borax. When making it with the kids explain

how the borax acts as the activator and is what reacts with the glue to make it slimy.

Oobleck- 10 minutes:

Oobleck will be similar to slime. Oobleck acts as both a liquid and a solid. If you hit it fast it will feel solid but if you slowly put your hand in it, it will go in like a liquid. To make it you just mix water with cornstarch. It will be a 2:1 ratio with more corn starch than water, so you can decide how much you want to make. Again have a bag so they can play around with it without getting messy.

DIY bouncy ball- 10 minutes:

to make these you will just remake the slime from before but when your done but some of the corn starch into it and play around and roll it into a ball as it gets a little harder and now you will have a bouncy ball

Density jar- 10 minutes:

We will be putting different liquids into a clear jar and they are all different densities so some will sink to the bottom and some will be at the top but all the liquids will have their own level. Have the kids predict which liquids will be in what order. Once they all make their guesses, start adding the liquids one by one into the class in a random order and watch as they move places. You can put food coloring into them so that you stick out more from each other. It's also optional to drop other solids in to see how far they sink like a ping pong ball, popcorn kernel, or a bolt

game- 15 minutes:

now that we've done all this learning and experiments it's time for a quick game. Play the classic musical chairs or a different game of your choice. This is to get the kids up and going and get some energy out before doing some more experiments

Diy lava lamps- 10 minutes:

this is really simple, just put some food coloring into vegetable oil then mix it with some water. You want more water than you do oil. Then put in an alka seltzer tablet. Watch as the oil will go up and come back down

Skittles experiment- 5 minutes: on a plate put some water on it and then put skittles in a circle in the water and watch as the colors move around. Try this with hot, cold, and room temp water to see which one works fastest



Popsicle stick explosion- 20 minutes:

This one will take awhile but it will be worth it. All you need is some popsicle sticks, a lot of them. This website goes into detail about how to make the chain.

Cobra Weave Exploding Stick <https://www.instructables.com/Cobra-Weave-Exploding-Stick-Bomb/>

Try to make the chain go from one wall to another

Watch water rise- 5 minutes:

this is very simple. In a dish have water, put a lit candle in the middle of the dish then cover it with a glass and watch as the water gets sucked up after it starts burning through all the oxygen in the glass

Leak proof bag- 5 minutes:

this is another simple one. Fill up a ziploc bag with water and start poking sharp pencils through the bag fast. If you do it clean then no water should spill from the bag, it might not work for everyone but you can explain why the pencils are able to go through.

Floating marker man- 5 minutes:

in a plate or a dish have the kids draw a stick figure or other shape and when they are done with their drawing put water on top and watch it pop off the surface. Make sure it's a dry-erase marker

Crush a can- 5 minutes:

in an empty soda can put in a little bit of water just to cover the bottom then put it on a stove and wait for the water to come to a boil. Once it is boiling grab the can with tongs and bring it over a bowl of ice water. Quickly slip the can over and but the open end in the bottom of the ice bowl and watch it instantly collapse

Carbon sugar snake (adults will perform this in front of the kids)- 20 minutes:

in a small bowl put 4 tsp powdered sugar and 1 tsp baking soda. In a pie tin fill it with sand and have a mound in the middle then make an indent with your knuckle in the middle of the sand. Pour lighter fluid on the mound and in the indent, make sure it is soaked. Poor the sugar and baking soda mix on the indent. Then carefully light the sand around the sugar mixture. It will be a slow process but then a black snake will form and grow and can continue to burn for up to 20 minutes

Step through a paper circle- 10 minutes:

this is a fun way to learn about surface area. Give each kid a paper and let them be creative to see if they can cut the paper in a way that they could put it all the way around their body. Once everyone is done assuming that not all of them did it, show them how to do it and let them do it again. To do it see the instructions from this website:

<https://www.messforless.net/science-experiments-for-kids-index-card-chain/>

paper chain- 10 minutes:

for the end of the day have a little competition with the kids. Divide them into teams of 2-3 depending on how many there are. They will each get the same amount of papers, you choose how many you want to give them. They will have scissors and tape and they have 10 minutes to see who can make the longest paper chain

Day Two:

Invisible ink - 10 minutes:

to make some invisible ink all you need to do is squeeze the lemon juice into a small bowl. Use a cotton swab as a pencil and dip it into the lemon juice then write something on a paper. After is completely dries put the paper next to a heat source and watch as the message appears out of nowhere

Rubber Band instrument- 5 minutes:

for this, you just take a small cup and wrap rubber bands around it. Put them in order from thinnest to thickest, and start plucking them from the open side of the cup and listen to the different noises they make.

Fingerprint balloon- 5 minutes:

for this have each kid get stamp ink on their finger and press it down on a balloon. Try to look at it and see what details you can see while it is small. Then blow up the balloon and watch as the fingerprint expands and becomes big. Now look to see what details you didn't see before. Compare to friends to see how we all have our own unique fingerprints.

Disappearing egg shell- 5 minutes:

all you need to do is have a bowl of vinegar and submerge the eggs into the vinegar. Nothing will happen right away but in 2 days the shell will be gone and they will be squishy. Put the eggs somewhere the kids can't see them until they are ready to be brought back out.



Catapult catcher- 20 minutes:

this will have the kids test their creativity and problem solving. Put the kids in groups of two and each group gets 6 popsicle sticks, 3 rubber bands, a plastic spoon, and an aluminum ball to launch. They will have 10 minutes to design and create their catapult. Once time is up make a catcher with a plastic sup supported but 2 pencils or sticks and tape. See how many shots it takes for them to make it into the cup from 5 feet away.

Soda explosion- 5 minutes:

simple, get diet sodas and see which one shoots the highest when you add mentos into them. Be outside for this because it will make quite the mess. Have the kids back up so none gets on them.

Star projector- 10 minutes:

For this the kids will have a small paper cup. Flip the cup over and have the kids draw a design with dots on the bottom with a pencil, make sure there is enough space between each dot. While they think about what design to do, talk about the stars and how they only come out at night and that's like what we are going to do now. Once they finish the design, have them poke holes through each dot. Put a flashlight inside the cup and put it on a table upside down. Turn the lights off and see all the stars appear on the ceiling.

Shaving cream rain- 5 minutes:

fill the cup or glass with water. The water will represent the air outside. Then put a layer of shaving cream on the top of the water, these are the clouds in the sky. Now put drops of blue food coloring on top of the shaving cream, these drops are the rain. Sit and watch the rain go through the clouds and down through the air. There is now rain in your cup.

Rain gauge- 5 minutes:

take the plastic bottle and cut the top off about 3-3.5 inches down, flip cut off part around and place it down in the rest of the bottle like a funnel. From the bottom of the bottle, start marking every inch going up with the marker. Now take some water and pour it in to see how many inches of rain that would be.

Game- 15 minutes:

Play a fun game for 15 minutes to give the kids a break. A fun game that you can play is ships and sailors. Here is a quick page that explains how to play or you can play something else.

<https://connor.anglican.org/wp-content/uploads/2018/01/Game-Ships-Sailors.pdf>



Unpoppable balloon- 5 minutes:

blow up a balloon and take two pieces of tape. With the tape, make an X on the balloon. Now take a small needle and poke it through the center of the X. see how long it takes for the balloon to pop after you poke the hole in it.

Paper cup platform- 5 minutes:

have them try to stand on top of a single paper cup. It should break under the weight. Then have them put 6 cups on the group in a rectangle spread out, put a sheet of cardboard on top and have them stand on it now. Hopefully, this should be able to support everyone there.

Magic Milk- 5 minutes:

in a bowl, cover the bottom with milk. Put some food coloring throughout the bowl. Then put a drop of dish soap in it and watch the colors spread out.

Tie-dye- 15 minutes:

roll up the shirt in different ways and use the rubber bands to keep them together. Start dipping the shirts in different colored dyes or drop dots of it along the shirt. Let the kids be creative with this and take time so it doesn't get messy. Set the shirts down when done and wait for them to dry.

Upside down water- 5 minutes:

in a small cup or a bottle, fill it all the way to the top with water. Make sure that the bottle or cup can be covered by a playing card. When it's filled up, put the card on top of the cup, the water should be above the edge of the cup. When the card is on top, flip the bottle over and the card should stay put and keep the water even upside down.

Light refraction- 5 minutes:

have everyone draw a picture of some kind. Just take a few minutes with it. Then when they are done, put a clear glass of water down and let them put the drawing on the other side of the glass and look at it through the water. It will be going the other direction.

Clean a penny- 10 minutes:

An easy way to clean your coins is with vinegar or lemon juice and salt. In a cup put about ¼ cup of the vinegar or lemon juice and add a teaspoon of salt then stir until fully dissolved. Put the



coins in and see how they react to it. After about 5 minutes take out the coins and rinse them with warm water then dry it with a soft cloth. See the color and shine come back to the coin.

Paper airplane competition- 10 minutes:

Give each kid a piece of paper and a paper clip. Give them 5 minutes to design and fold their paper and use the paperclip as they want. When time is up see whos airplane will go the farthest. Make sure to show them what happens when you throw at different strengths.

Day Three:

Elephant toothpaste- 10 minutes:

in a bottle put ½ cup of hydrogen peroxide in a bottle. Put a good amount of dish soap in the bottle and swirl it around to mix. Then add food coloring if you would like but not required. In a different cup mix 1 tablespoon of yeast and three tablespoons of warm water. Pour the yeast mix into the bottle and quickly step back to watch what happens. Make sure to do this in an area easy to clean up

Exploding colors- 5 minutes:

in many dishes, put some baking soda. Hide some food coloring inside the baking soda so the kids can't see it. Have them try to guess what color it is then pour vinegar into the dish for the color to pop out.

Dominant side of the body- 10 minutes:

this is a series of tests to see what different sides of your body are dominant. To test your eyes, make a triangle with your pointer fingers and thumbs on your hands. Then make the center smaller by moving your hands. While looking with both eyes, extend your arms out and focus on something in the room. Close one eye and then the other. If you closed your left eye and the thing you focused on moved out of the hole in the triangle then your right eye is dominant and vice versa. Now write your name on a piece of paper with both hands and see which one looks better, that is your dominant hand. Also, try throwing a small ball across the room and see which arm is more accurate. Stand on one foot and see which side you can balance longer on.

Make a rainbow- 5 minutes:

in the sunlight hold a glass of water over the white paper. Move it to different distances to see if you can make a rainbow on the paper

Traveling water- 5 minutes:



have a glass full of water and an empty glass. With a paper towel twist it together and put one end in the full glass and one in the empty glass

Cup music- 5 minutes:

with a few different cups with different levels of water take a pencil and hit the edges of the cups to listen to the different sounds they make. Have fun making music

Bottle race- 5 minutes:

this will be a quick competition for the kids. Have a bucket full of water and a bottle that can be filled up in the bucket. Let each kid empty the bottle as fast as they can into the bucket. When they are done do it yourself but make a tornado when you start to empty it to see how fast it pours out.

Blow up a balloon- 5 minutes:

take the balloon and stretch it out. Pour about 40 ml of water into a bottle then add a teaspoon of baking soda and stir. Add the lemon juice then quickly cover the bottle with the balloon

Fizzy lemon drink- 5 minutes:

in a bottle put an equal amount of lemon juice and water. Stir in a teaspoon of baking soda then stir. Give it a taste and add sugar to make it sweeter

Paper bridge- 10 minutes:

put the kids in teams of 2. Give them 2 plastic cups and a piece of construction paper. They will fold and design a bridge out of the paper to put across the 2 cups. See which group can hold the most pennies on the bridge.

Homemade kazoo- 5 minutes:

cover the cardboard tube with wax paper and put the rubber band on to keep it in place. Poke a few holes in the side of the tube with a pencil. Put your mouth over the open side of the tube and hum into it to see if it makes a noise. This might take some practice to get but when you do start covering the holes to hear different notes

Game- 15 minutes:

take a break by playing a game. Play freeze tag or kids from mars or something that the kids want to play.



Balloon siren- 5 minutes:

put a small metal nut into a balloon and fill up the balloon. When it's full and tied, spin it around to hear it make a noise. Don't spin it too fast because it will pop

Homemade butter- 10 minutes:

put heavy cream in a jar or container with the marble and shake. After shaking for some time the butter will start to separate and when it's all done get out some crackers and try the butter

Cut ice in half- 5 minutes:

with some fishing wire see if you can cut an ice cube in half with it

Life of germs- 10 minutes:

have everyone put some baby oil on their hands. Get in a line and the first will put glitter on their right hand. Shake hands with the person next to you and keep it going down the line to see how far the glitter goes. Then pick something up and look at how much stayed on that object. Wash your hands without soap and then with soap to see how it makes a difference

Float with 8 fingers- 10 minutes:

have someone sit in a chair. Have 4 people stand on each corner of the chair and put their hands in a ball then stick out their pointer fingers. Put your fingers on the chair and see if you can lift the person sitting down. Have each person rotate through each spot

Duck call- 5 minutes:

take a straw and at one end cut the straw into a point at the top. Put that part in your mouth and blow to try and make noise.

Egg drop- 20 minutes:

put the kids into groups of 2 or 3. Give them 15 minutes to build a contraption to protect the egg from 10 feet high. Give each group the same number of materials and let them be creative to see what they make. After the time is up drop each one from 10 ft high and see if their eggs survive



Day Four:

Disappearing eggshell - 5 minutes:

bring the eggs from day 2 back out and see how they have changed. Feel how they are different but be very careful because they can still break open and cause a mess.

Volcano- 10 minutes:

mix 10 ml of dish soap, 100 ml of warm water, 400 ml of vinegar, and some red food coloring into the empty bottle. In a separate thing mix $\frac{1}{2}$ cup baking soda and $\frac{1}{2}$ cup water. Then mix the two things together and step back. See what different from the elephant toothpaste

Static electricity- 5 minutes:

blow up a balloon and rub it on your shirt. Use the static electricity that was created to try and pick up a paper. Also, put it above your head and see what it does to your hair

Hovercraft- 10 minutes:

put hot glue on the edge of the bottle cap and stick it over the hole of the CD. let it cool and then put the balloon over the cap. When you are ready blow up the balloon from the other side of the cd and put it on a flat hard surface to watch it float

Plastic milk- 5 minutes:

microwave a cup of milk for about 1.5 minutes to make it warm but not boiling. Stir in 4 tablespoons of vinegar and stir for about 1 minute. Then strain out the rest of the liquid and use paper towels to press down on the clumps to absorb the rest of the liquid. Now play with the new plastic milk

Real-life potion- 5 minutes:

have some liquid in a big clear jar. Show the kids what dry ice is and what it's made of and how cold it is (-110 degrees Fahrenheit). Then put it in the liquid and have fun with the bubbles and steam on the top. Make sure not to touch with bare skin

Stomp rocket- 15 minutes:

cut off the top of the bendy straw and then insert the pointy side into the juice pouch. Cut the second straw in half (this is the rocket). With the card stock, cut out some fins that will fit onto the straw and tape them on, doesn't matter how many they make or what size. Use a little clay to roll a little tip to put on the top of the rocket so no air gets in. add other decorations on the

rocket if you want. Blow up the pouch, put the rocket on the bendy straw and stomp on the pouch with the rocket pointed up. Don't point it at others

Balancing bird- 5 minutes:

use the link from the supplies list to print off a cut-out for this activity to see how weight distribution affects balance.

Exploding bag- 5 minutes:

in a bag put $\frac{1}{4}$ cup of vinegar in the bottom, add some food coloring if you want. Twist the bag in the middle and secure it with a binder clip. In the top half of the bag put $\frac{1}{8}$ cups baking soda and fully close up the bag. In an area ready to clean up take the clip off the bag and let the two mix, step back from the bag to watch it fill up with gas and pop

DIY compass- 10 minutes:

take the magnet and rub it down the needle about 50 times. Then flip the needle to the other side and flip the magnet to the other side (that is very important that you don't use the same side), rub for about 50 more times. Cut the cork to be about 1-2 cm thick. Carefully put the needle through the cork, center it as much as possible. Put the cork in the bowl with water and watch it move around. It should be pointing to the north when it's done.

Hoop and straw airplane- 10 minutes:

with the paper cut 3, 5"x1" strips. Tape two of the strips together so you have one long one and one smaller one. Wrap these into circles and tape them together. Tape the hoops to the ends of the straw, make sure the straw is on the inside of the hoops. Hold the straw in the middle with the small hoop out in front and give it a toss.

Game- 15 minutes:

time to play another game for a break. A fun game is a rock paper scissors race. Have a line or about 15 spots on the floor. Divide the kids into 2 teams and put each team at their own end of the line. The first person will jump from spot to spot until they meet the person from the other end at the center or wherever they end up meeting. When they get face to face they will play rock paper scissors. Whenever one loses, the next person from that team will start jumping from spot to spot as the winner from the other team continues to advance to the other team. This will keep going until someone gets to the end. Or you can play any other game you would like.



Breathing leaf- 5 minutes:

This is very simple to see how plants breathe. Get a healthy leaf from a tree and submerge it in a glass of water. Bubbles will start appearing on the leaf as it is underwater showing how photosynthesis works. Try doing it in different amounts of sunlight

Solar Oven- 10 minutes:

line the inside of the pizza box with aluminum foil. Use some sticks to keep the pizza box propped open. Place the black paper in the middle of the box and put a thermometer on the paper then cover it with the glass bowl. If you would like, you can put another item inside the bowl to heat up. After a little bit compare the thermometer inside the bowl to the actual temp

Balloon power car- 15 minutes:

use this link to teach you how to make a balloon-powered car.

<https://raisingwhasians.com/juice-box-balloon-car-craft/>

Leaf tracing- 10 minutes:

this is something everyone has done before. Let the kids go outside and pick out leaves for them to trace. When you have a leaf, put it under a piece of paper and take a crayon with no wrapping and rub it on the paper over the leaf. This is a good way to see how they are all similar but different at the same time.

Aluminum foil boat- 10 minutes:

put kids in teams of 2 and give them all a square of aluminum foil that is 5"x5" or any measurement you would like. Give each team 5 minutes to design and fold a boat out of the aluminum foil. When finished, put the boats in the water and see which one can support the most amount of weight with the coins.

Day Five:

Dreamcatcher - 15 minutes:

use this website to help walk you through the process of making a dreamcatcher.

<https://www.wikihow.com/Make-a-Dreamcatcher>. I would recommend that you talk about dreams with the kids while they are working on this project. A few quick facts to talk about is that most people will have 3-5 dreams every night but most are quickly forgotten, dreams occur during the 2 hours of REM sleep you have during an 8 hour sleep period, and dreams can last only a few minutes or up to 30 full minutes. Also talk about the importance of getting a full



night's rest, even though the dream catcher isn't really science you can still help them learn while they make it.

Straw siphon- 5 minutes:

start by filling the taller glass with water and put it next to the smaller glass that is empty. Put the long end of the straw in the taller glass and pull it up to see if anything happens. Make observations of what the water did. Now cover the short end of the straw with your finger and put the long end back in the glass of water then release your finger. Make sure to try and aim the short end of the straw to shoot the water into the small glass.

Changing color potion- 10 minutes:

for this, you will need to chop up chunks of a red cabbage and boil them in a pan of water. When it turns into a purple-looking juice, put some in 3 different glasses for everyone to see. Set one glass aside so you can see the starting color and in one glass add baking soda, in another add vinegar. Once everyone has seen the color change add the baking soda and vinegar glasses together. After a chemical reaction, it should go back to its normal color. The reason the color changes is because the pH changes the shape of the pigment which is what gives something its color.

Coffee filter flowers- 10 minutes:

give each kid a coffee filter and some washable markers. Have them flatten out the filter and then draw some designs onto it, whatever patterns or shapes that they want. Place the coffee filters in a bag and spray them with water to see the colors start blending. After they dry up for a little bit, hand them back out and have the kids fold it into a flower shape then use a pipe cleaner as a stem to complete the flower. You might want to move to the next activity while they dry

Floating egg- 5 minutes:

for this you will need an egg and a glass of water. Put the egg in the glass and notice how it doesn't float. Take the egg out and add a spoonful of salt in the water and stir. Put the egg back in and see if it is floating. If not, take it back out and add 2 more spoonfuls of salt in the water and stir. Does the egg float now? Keep adding salt until it does start floating because the density of the water will be more than the egg

Make a simple telephone- 5 minutes:

Just like what you have seen as a kid we are making a telephone. This is the basic string and plastic cup phone. Make a small hole on the bottom of both cups. Take your string (I would suggest having it a few feet long) and put it through each hole. On the inside of the cup tie the string to a paperclip so that the string doesn't fall out of the hole. One person put it up to their ear and the other person talk through it. You can hear them because the sound waves are traveling down the string.

Heat reactions- 5 minutes:

to learn about exothermic and endothermic reactions mix water with potassium chloride to see the exothermic reaction and it starts heating up. Then mix water with laundry detergent to see the endothermic reaction and the surrounding area gets colder

Is mint cold?- 5 minutes:

We all know that when we have a mint in our mouth it gives your mouth a cooling effect, especially when you breathe in. But does mint actually change the temperature or is it just a sensation? For this all you need is 2 jars of warm water, some mints, and 2 thermometers. In one glass put the thermometer in to be able to compare the other glass to, as we know water cools down over time so we use this to see the other differences. In the second glass put in 5 of the mints then put the other thermometer in that glass. While we wait for a little bit go around the room and see what each kid thinks will happen. Have them explain their reasoning for why they think that. If they think it will change, how much do they think it will change? After you go through the room check the temperature of the 2 glasses. After you check that add 5 more mints to the glass that already has some. Let it sit for a few minutes and we will check back on it after the next activity.

Water temp density- 5 minutes:

Have 6 jars of water. 3 of the jars are at a warm temp and the other 3 at a cold temp. Have each jar be a different color or shade of color. Match them up into 3 pairs of 1 cold and 1 warm jar. Take the warm jar and flip it up on top of the cold jar. The waters will start switching places as the cold one rises and the warm one sinks down. This is because even though they are the same liquid because of the temperature they have different densities.



Is mint cold? Continued- 5 minutes:

now that it has been a few minutes let's check back in on the water with and without the mints. Are there any differences? You can take this time to learn about what mints are. Talk about how it is a plant and how the mint taste is actually for protection from bugs.

Game- 15 minutes:

For today's game you can play anything that you would like or anything that the kids want to play. If you want some ideas you could set up an obstacle course or some sort of race for them to go through and see who goes the fastest. Other options are just games like freeze tag or zombies. Just do something fun

Stick bridge- 15 minutes:

put the kids in groups of 2 or 3 to build a bridge out of popsicle sticks, give each group the same number of sticks. Before they start, show some pictures of different kinds of bridges around the world. Point out some of the similar characteristics in them. Most of the strongest ones have triangles because of torque and other forces that push and pull on the structure, so triangles are a good idea to put on the sides. Give them 10 minutes to build the bridge. When they are done building, test out to see how much weight each one can support before it snaps. Tie a bucket onto the bridge when it is suspended in the air by two tables and add rocks into the bottom for the weight. They will be able to use hot glues to hold the bridge together.

Floating ruler- 5 minutes:

this is a simple way to look at surface tension. If you try to put only $\frac{1}{4}$ of the ruler on a table will it stay? It will fall down because of gravity. Now if you put a piece of paper over the $\frac{1}{4}$ of the ruler, will it stay now? It does because the paper adds so much surface tension that it stays down on the table. Now hit the ruler and see how much force it requires to pull it down off the table. See how much weight you can put on it and balance before it falls.

How many balloons to float objects- 5 minutes:

for this we will see the difference between helium and air. Fill a balloon with air from your lungs, then fill one with helium. Why does one float and the other doesn't? It's because helium is a lot lighter than air so it floats up, just like the water we saw earlier. Now play a fun guessing game to see how many helium balloons it takes to make objects in the classroom float.

Survive an earthquake- 10 minutes:

once again put the kids into groups of 2 or 3. Give each group the same number of building blocks, these can be plastic or wooden, whatever you have available. Have them build a house on top of a flat table. After about 7 minutes of building, go around from table to table and shake the table around to see if they can survive an earthquake.

Scuba diver- 5 minutes:

Make a scuba diver, this could just be a lego figure or make one from aluminum foil. As long as the diver floats in the water and can fit into an empty plastic bottle. Put the diver in the bottle and fill it with water all the way to the top. Put the cap on the bottle and make sure it's tight, then squeeze the bottle and the diver should go down to the bottom. When you release it should float back up to the top.

Disappearing reflection- 5 minutes:

give each kid a piece of aluminum foil, it should be big enough that they can clearly see their reflection in it. Have them look and make sure they can see a reflection of themselves in the aluminum foil. Next crumple it up as much as possible, then flatten it back out. Once it is flattened back out do they see the reflection still? If it was crumpled enough then they shouldn't be able to see it because all the wrinkles on it are reflecting the light in many different ways so you can't see anything anymore.

Ice cream in a bag- 10 minutes:

to learn some chemistry and enjoy a tasty snack at the end follow this website to make some ice cream in a bag. <https://www.sciencebuddies.org/stem-activities/ice-cream-bag>

Rube Goldberg Machine- 20 minutes:

to end the camp we will do a fun teamwork building activity. Make a rube goldberg machine. These machines are very complex things with lots of steps and objects that work to accomplish one simple task like dropping a spoon into a bowl or something else. So come up with an idea of what you want the simple task to be that you will complete at the end of the rube goldberg machine, it might be worth watching some videos of ones before you start. Once you have it all drawn up using the ideas from all the kids, get to creating. Don't make this too big or complex because you want to be able to finish within the time frame that you have left in the day. This will use any of the materials that you have with you so there's no other instructions other than get to work and be creative.



Supplies:

- Day One
 - slime
 - Glue (clear or white)
 - Borax
 - Water
 - food coloring
 - Plastic bags
 - Oobleck
 - Water
 - Food coloring
 - Corn starch
 - Bouncy ball
 - Glue
 - Borax
 - Water
 - Corn starch
 - Food coloring
 - Density jar
 - (not all levels are required)
 - Water
 - Honey
 - Corn syrup
 - Maple syrup
 - Milk
 - Vegetable oil
 - Rubbing alcohol
 - Other objects to sit in the middle of the jar (optional)
 - Clear glass for every kid
 - Lava lamp
 - Vegetable oil
 - Water
 - alka seltzer tablet
 - Popsicle stick explosion
 - Popsicle sticks
 - Rising water
 - Dish

- Water
 - Candle
 - Glass
- Leak proof bag
 - Ziplock bag
 - Water
 - Sharp pencils
- Floating marker man
 - Dry-erase marker
 - Water
 - Plate
- Crushing can
 - Soda can
 - Water
 - Ice
 - Stove (or other heating method)
 - Tongs
- Carbon sugar snake
 - Powdered sugar
 - Baking soda
 - Sand
 - Pie tin
 - Lighter fluid
 - Lighter
- Step through a piece of paper
 - Scissors
 - Paper
- paper chain
 - paper
 - Tape
 - Scissors
- Day Two
 - Invisible ink
 - Lemon
 - Cotton swab
 - Paper
 - Heat source

- Rubberband interment
 - Different thickness of rubber bands
 - Small plastic cup
- Fingerprint balloon
 - Stamp pad
 - Balloon
- Disappearing egg shell
 - Eggs
 - Vinegar
- Catapult catcher
 - Popsicle sticks
 - Rubber bands
 - Plastic spoon
 - Plastic cup
 - Pencils or sticks
 - Tape
 - Aluminum ball
- Soda explosion
 - Diet sodas
 - Mentos
- Star projector
 - Paper cups
 - Pencils
 - Flashlights
- Shaving cream rain
 - Clear cup or glass
 - Water
 - Shaving cream
 - Blue food coloring
- Rain gauge
 - Plastic bottle
 - Ruler
 - Marker
 - Something to cut open the bottle
- Unpoppable balloon
 - Balloon
 - Tape

- Small needle
 - Paper cup platform
 - Paper cups
 - Sheet of cardboard
 - Magic milk
 - Milk
 - Food coloring
 - Dish soap
 - Tie-dye
 - White shirt
 - Dye
 - Rubber bands
 - A bucket to put it in
 - Upside down water
 - Bottle or cup (needs to be able to be fully covered by a playing card)
 - Water
 - Playing cards
 - Light refraction
 - Paper
 - Pencil or marker
 - Glass of water
 - Clean a penny
 - Pennys or other coins
 - Vinegar or lemon juice (only need one)
 - Salt
 - Water
 - Soft cloth
 - Paper airplane
 - Paper
 - Paperclip
- Day Three
 - Elephant toothpaste
 - Bottle
 - Dry yeast
 - Warm water
 - Dish soap
 - 3% hydrogen peroxide

- Exploding colors
 - Baking soda
 - Vinegar
 - Food coloring
- Dominant side of your body
 - Pencil
 - Paper
 - Small foam ball
- Make a rainbow
 - Glass of water
 - Paper
 - Sunlight
- Traveling water
 - Paper towel
 - Glass of water
 - Empty glass
- Cup music
 - Water
 - Pencil
 - Glasses
- Bottle race
 - Water
 - Bucket
 - Bottle
- Blow up a balloon
 - Balloon
 - Water
 - Bottle
 - Drinking straw
 - Lemon juice
 - Baking soda
- Fizzy lemon drink
 - Lemon juice
 - Water
 - Baking soda
 - Sugar
 - Cups



- Paper bridge
 - Construction paper
 - Plastic cups
 - Pennies
 - Homemade kazoo
 - Cardboard tube (toilet paper or paper towel ones work)
 - Wax paper
 - rubber band
 - pencil
 - Balloon siren
 - Balloon
 - Metal nut
 - Homemade butter
 - Closed container
 - Heavy cream
 - A clean marble
 - Cut an ice cube
 - Ice
 - Fishing wire
 - Life of germs
 - Baby oil
 - Glitter
 - Soap
 - Something to grab
 - Float by 8 fingers
 - A chair
 - Duck call
 - Straw
 - scissors
 - Egg drop
 - Egg
 - Paper
 - Bag
 - Straws
 - string
 - Other things you would like to see them make an egg dropped
- Day Four



- Volcano
 - Warm water
 - Dish soap
 - White vinegar
 - 2 litter bottle
 - Red food coloring
 - Baking soda
- Static electricity
 - Balloon
 - Paper
- Hover craft
 - Balloon
 - CD
 - Bottle cap with a hole in it
 - Hot glue
- Plastic milk
 - Milk
 - Vinegar
 - Strainer
 - Paper towels
 - Microwave
- Real life potion
 - Liquid of your choice, can be water or juice doesn't matter
 - Dry ice
- Stomp rocket
 - Empty juice pouch
 - Bendy straw from the juice pouch
 - Normal straw
 - Card stock
 - Tape
 - Molding clay
- Balancing bird
 - <https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcRmtBCIGSOcuya9Je2HWIHmDKvnzk2reZZ6-wzIn1BtENonDK2s-IIAr2S2YmcEj577b2A:https://www.exploratorium.edu/sites/default/files/images/Artboard%25201BalanceToy.jpg&usqp=CAU>

- Scissors
- Exploding bag
 - Vinegar
 - Baking soda
 - Binder clip
 - Ziplock bag
 - Food coloring (optional)
- DIY compass
 - Sewing needle
 - Magnets
 - Cork
 - Bowl
 - Water
- Hoop and straw airplane
 - Cardstock
 - Straw
 - Tape
 - Scissors
- Breathing leaf
 - Glass of water
 - Healthy leaf
- Solar oven
 - Pizza box
 - Glue
 - Aluminum foil
 - Tape
 - Black paper
 - Glass bowl
 - Thermometer
- Balloon powered car
 - <https://raisingwhasians.com/juice-box-balloon-car-craft/> use this link to see supplies
- Leaf tracing
 - Paper
 - Crayons
 - leaves
- Aluminum foil boat

- Aluminum foil
 - Bowl
 - Water
 - Coins
- Day Five
 - Dream catches
 - String
 - 5" metal or wooden hoop
 - Sueded lace or ribbon
 - Feathers
 - Beads
 - Any other decoration piece you may want for the dream catcher
 - Straw siphon
 - Flexible straw
 - Scissors
 - Tall glass
 - Short glass
 - Water
 - Changing color potion
 - Clear glasses
 - Red cabbage
 - Water
 - A pan and stove to boil the water
 - Vinegar
 - Baking soda
 - Coffee filter flowers
 - Coffee filters
 - Pipe cleaners
 - Washable markers
 - Water
 - bags
 - Floating egg
 - Egg
 - Water
 - Salt
 - Make a simple telephone
 - Plastic cups

- String
 - paperclips
- Heat reactions
 - Water
 - Potassium chloride
 - Laundry detergent
- Is mint cold?
 - Mints (mentos, tic tacs, andes, any kind)
 - Glasses
 - Warm water
 - Thermometers
- Water temp density
 - Water
 - Food Coloring
 - jars
- Stick bridge
 - Popsicle sticks
 - Hot glue
 - Bucket
 - String
 - Rocks
- Floating ruler
 - Paper
 - Ruler
- How many balloons to float objects
 - Helium
 - Balloons
 - String
 - Objects around the room
- Scuba diver
 - Plastic bottle
 - Water
 - Something for a scuba diver (lego figure, make one from aluminum foil, or any other methods that would float on water)
- Disappearing reflection
 - Aluminum foil
 - Scissors

- Make ice cream in a bag
 - Sugar
 - Half-and-half
 - Vanilla extract
 - Salt
 - Ice cubes
 - Small sealable bags
 - Gallon sealable bags
 - Over mitts, or hand towels
- Rube Goldberg Machine
 - Anything you have around to make a machine, some ideas are:
 - Dominos
 - Marbles
 - Hot wheels
 - Tracks
 - Strings
 - Tubes