Firework Science

July 5th, 11am and 1pm.

Summer Break Programming

Continue your Independence Day fun by exploring the physics and chemistry behind fireworks. During the hour you'll spend with us, you'll use a paint-popper and glue to create a fireworks landscape, learn about the logistics behind pyrotechnics, and experience a mentos and soda firework-geyser! What could be more patriotic? This program is suitable for all ages, but small children may require adult assistance.

Questions and Connections

- What are fireworks? Why are they called "fireworks?"
- Why do we light them for Independence Day?
- How do they work?
- What makes them colorful?

Materials – Powerpoint here

Balloons
TP Tubes
Decorating supplies: wrapping paper
Black paper
White crayons if we can find them? Otherwise pencils.
Paint
Paint brushes
Glitter
Glue
Packing Tape

Food coloring
Sprite Zero 2L
Mentos
Soda Geyser Launcher

Activity Details

Prep

Set paint cups on tables, slightly waterd down so that the paint is fluid and not goupy. It needs to be able to drizzle when spooned out. OPTIONAL: add glitter to the paint for some extra sparkle.

Introduction

Raise your hand if you've seen fireworks before! What do they look like?

We launch fireworks on Independence Day in part because Francis Scott Key included reference to bombs in the national anthem. Is anyone willing to sing the national anthem for us? We'll stop you when you get to the right line. If not, off read the lines on the screen: "O'er the ramparts we watched, were so gallantly streaming? And the rocket's red glare, the bombs bursting in air."

Are fireworks bombs?

(ANSWER: A "bomb" is an explosive device designed to release **destructive** material or force. Bombs are not used for non-destructive purposes. Fireworks are not designed to destroy — they are designed to amuse and delight by producing visible or audible effects. Although bombs certainly produce visible or audible effects and fireworks can be destructive, their primary purpose and design intent distinguishes bombs from fireworks.)

There are three important components of any firework:

The color (reactants): pure salts and metals (that produce colorful lights when superheated), and chlorine donors to enhance color.

The vehicle: paper wrapper, cardboard container, and binders and barriers to hold the chemical in place until the appropriate time.

The propellant: quick fuse, time delay fuse, "oxidizers," and black powder to act as a combustible.

Now let's Make One!

Gather: Balloons, Empty Toilet Paper Tubes, Packing Tape, Paint in bowls for table, Pippets, Glitter, Liquid Glue, Black Paper, and Decorating Supplies (patterned paper, stickers, etc.)

We will be using the TP tube as our container and the balloon as our launching mechanism in place of black powder.

Knot the balloon, and cut off the tip. Stretch the balloon tightly around the toilet paper tube, and secure it in place with a strip of packing tape.

Decorate your fireworks!

Grab your black paper, paint bowls, and pipets.

(Write your name on your paper with a white crayon or pencil.)

The instructor should demonstrate dripping paint onto the balloon component of the inside of your firework. A little bit goes a long way, and too much paint will just plop out when we turn the popper upside down to point it at the paper. Launch the firework by pulling the knotted end back and releasing. Now it's your turn!

With repeated application of the wet paint, your firework will become soggy. Do not expect to take it home. If you would like to, you can also use elmer's glue bottle to draw firework shapes with glue and add glitter to your night sky.

Leave paintings on the table to dry.

Combustion and chemical reactions!

Have the instructor's helper walk the soda 2Ls outside so they've had a moment to sit before being opened

Have you heard of or seen a chemical reaction before? Maybe a baking soda volcano?

With baking soda and vinegar, they combine to create water, carbon dioxide and a dissolved salt called sodium acetate.

Mentos and soda is a similar reaction. Like baking soda and vinegar, combining the two creates liquid and gas products that take up more space than their ingredients – think about it like kids at school. When everyone is calm and at their desks, a full class fits in a classroom. If everyone is running around and full of energy, it's safer to go outside. The chemical reaction of the mentos and soda lead to not having enough room in the bottle to contain all the soda, and the surplus energy creates a geyser as it escapes.

Show slide of firework color reactions, ask what color they want to make the firework geysers.

Lighting the fuse on a firework set of the black powder that propelled it into the sky, but it also set the firework itself on fire. The firework is made of packaging,

color, and propellant, remember? The packaging burns away in the sky – it's made of paper – and the propellant is spent getting it up there. All that is left is color. But how do we get it? Remember, the thing that makes the fireworks colorful is REALLY HOT right now.

Every color is produced by super heating a metal in the air. The color is determined by the metal. Have you ever seen a blacksmith making a sword, knife, or horseshoe? The iron, usually silver or black, is so hot it becomes red or yellow! And it changes back to normal after it's been out of the fire for a minute. Similarly, the metals in the air cool down after a few seconds and stop glowing. Strontium makes red, Barium makes green, Sodium makes yellow / orange, Calcium makes orange, and Iron makes gold. Blue isn't a very common color in fireworks because it's hard to find a metal that turns blue at less than RIDICULOUSLY HOT temperatures. The blue fireworks that do exist use Copper (and a chlorine donor).

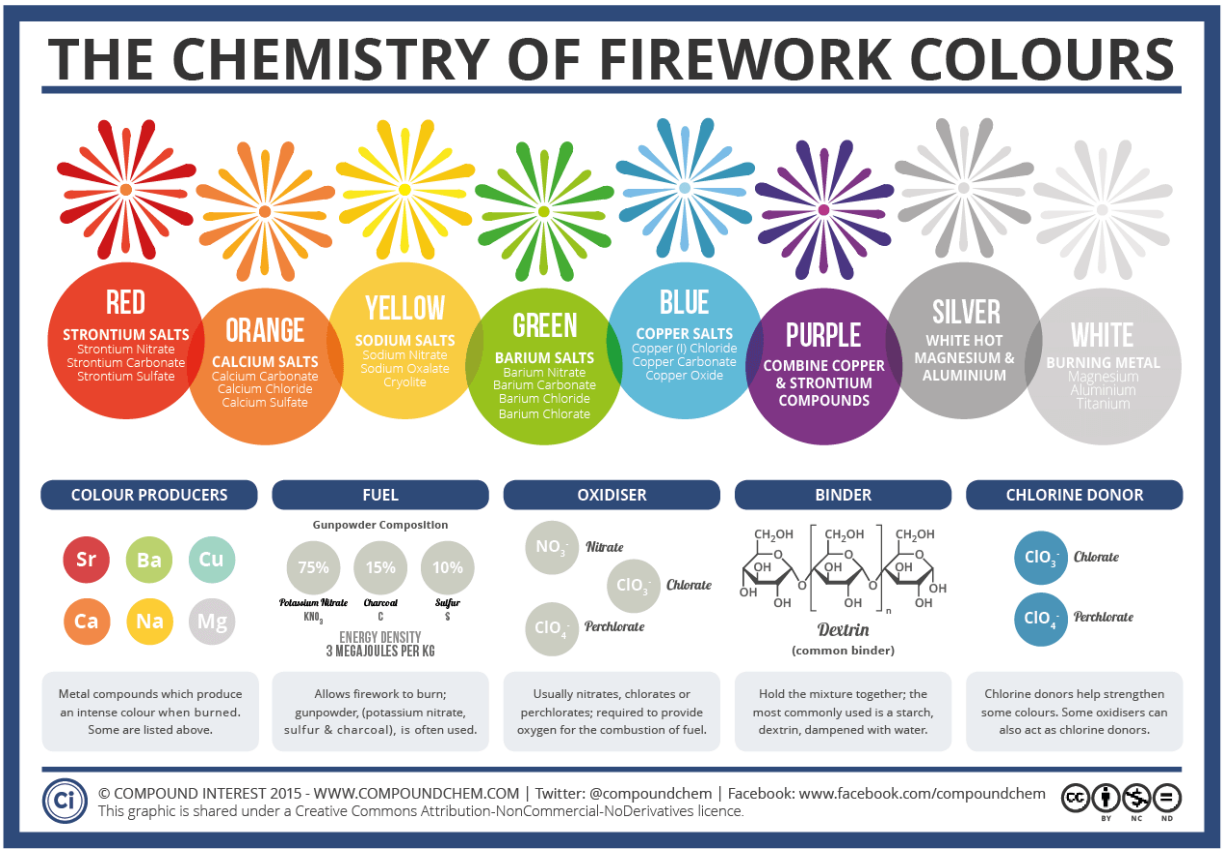
If the participants are up for a challenge or they choose an applicable color, talk about chlorine donors. Chlorine donors are stable molecules that have more electrons than they want to. That extra electron gives them a negative charge, and a little extra energy. The heat that makes metal sparkle into visibility in fireworks is another form of energy. For some colors, it's easier to superheat the metal by giving it extra energy in the form of electron donations than by making the firework even hotter.

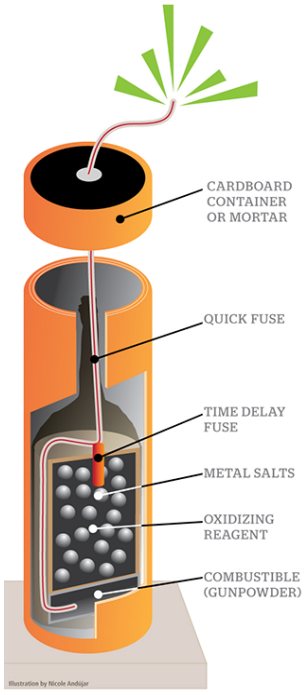
Follow the instructor to the sidewalk to react the soda, mentos, and food coloring.

(Using Sprite Zero reduces stickiness because it doesn't contain real sugar. The sidewalk will be fine to walk on as soon as it's dried.)

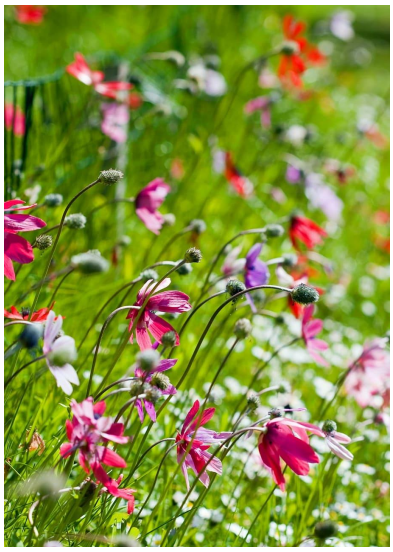
Instructor unscrews the cap of a 2L, adds the appropriate food coloring (referencing the metal and reaction that would produce it), and screws on the geyser tube. Make sure the pin is in place, and load the mentos. Ask "Are you ready?" Make sure the kids are at least 3 yards away from the bottle. Start a countdown, "10, 9, 8, 7…" then pull the pin and run away. The kids will want to do it again, and you will have a second 2L, so repeat these instructions.

Helpful Graphics for Instructor Understanding





Seed to Flower



July 6th, 11am and 1pm.

Summer Break Programming

How do flowers grow? Discover the secrets of botany at Kids N' Stuff Children's Museum. Together we will delve into the life cycle of plants and create an explosive vehicle for eco-gardening: a seed bomb. Using native plants, you can help support and restore the local ecosystem. Take your seed bomb home and see the change for yourself! This program is suitable for all ages, but small children may require adult assistance.

Questions and Connections

- Where do flowers come from?
- What else grows like flowers do?
- How do plants support an ecosystem?
- What's an invasive species?

Materials – Powerpoint here

Construction Paper
Kettle or way to heat water
Large Containers to mix/melt paper
Water
Native Seeds – Wildflower Seeds on Sale | American Meadows
Little bowls for each table
Snack baggies
Sharpies
Strainer

Activity Details

Introduction

> Raise your hand if you've ever grown a flower before? What about vegetables in a garden?

What do you need to grow a plant? (ANSWER: seeds, dirt, sunshine, water, biodegradable materials, worms)

Does the kind of plant you're growing change how you take care of it?

Talk about the seeds we're going to use and their preferred growing conditions.

Have you ever heard of a seed bomb? Ever used one?

Seed bombs are a tool that has been used for farming for centuries in Japan and parts of Africa, though it was rediscovered more recently by Masanobu Fukuoka. Seed bombs are made of seeds and biodegradable materials, usually clay but in our case paper. What does biodegradable mean? (ANSWER: Can be broken down by nature fairly quickly, especially by decomposers like worms and grubs.) The paper acts as fertilizer, providing nutrients to the seeds as they grow.

Can anyone think of another reason seed bombs might be successful? (ANSWERS: they can be planted in hard to reach places because you can just throw them to a place you can't walk to, it prevents granivores (seed predators: quirks, birds, some insects) from eating the seed before they can grow into plants.)

A hint to help participants come up with preventing granivore consumption is asking if they think it'd be easier to make cookies with home made dough or the dough from cookie dough ice cream. All the paper gets in the way and slows down or outright prevents seed consumption.

Now let's Make One!

Deliver paper and bowls to tables.

Using paper to make a seed bomb is a bit like recycling paper – Does anyone know how paper is made? (ANSWER: From Trees) Okay but then what? Can you take a branch from a tree and turn it into paper?

Tree fibers are broken down into pulp with a combination of physical and chemical means. (Think blender and cleaning chemicals.) Then the tree pulp is bleached, sometimes colored, and smoothed over a screen and the water is squeezed out.

Recycling paper works similarly, except you start with the paper as your tree fibers. Tearing the paper apart exposes the pulp.

Tear apart the paper in front of you into tiny pieces – nothing bigger than an eyeball!

Notice that when you tear paper, you get jagged edges unlike cutting paper with scissors. The fuzzy parts of tree fibers!

Soak paper in hot water. While we wait for the tree fibers to dissolve, let's talk about how they will grow!

Kinesthetic Activity - How do Flowers Grow?

Let's talk about how our flowers will grow! I need everyone to stand up for this portion of the activity, because we'll be moving around. We are going to pretend to be flowers, and use our bodies to learn how they grow over time.

Our flowers will start out as seeds. What do we know about seeds? What size are they? What do they feel like? What do they look like?

Answer: Seeds are usually small, round, flat objects. They contain everything a plant needs to start growing.

Let's come up with a way that our bodies could pretend to be a seed. Maybe we squat down on the ground, and fold our arms in, and become a little ball.

Have all students try this, or whatever motion is decided for a seed.

That's great! You can stand back up. Does anyone remember what a seed needs to start growing?

Answer: Water, Sunlight, Dirt.

That's right! I am going to represent sunlight and water. What motion could I do to pretend to be rain or sun?

Maybe sprinkling fingers, a rain cloud, arms in a circle, etc - whatever kids decide.

When a seed has water, dirt, and a little sun, they start to grow into a seedling! It's not yet a full plant - just the start of one. What do you know about seedlings?

They're small, one or two leaves, etc

That's right! So what could our seedling look like?

From seed position, kids could extend one hand up above their head to mimic a leaf or stem growing.

Okay, let's try it! Start off as seeds, and I'll come around and give you water! When I water you, grow into a seedling.

Do this.

Proceed to do this again and again, adding a full grown plant, and then finally a flowering plant. Instructor goes around and waters each student each time to change from stage to stage. Once you have full flowers, you can end the activity by saying something like: "Look around! We grew a whole garden! Now you can take your seats, and we'll start making our seed bombs!"

Native vs Invasive Species

All flowers grow basically the same way, no matter if we want them to be there or not. That includes weeds! Can you think of a flower that people call a weed? (ANSWER: Dandelion.)

Dandelions haven't always grown in Michigan, or anywhere in America. Dandelions are originally from Europe, and came over when people did during colonization. Because they didn't grow here until recently, they're considered an "invasive species."

Invasive means not supposed to be here. They're here because they *invaded.* Species in a fancy science word for "kind of living thing." An invasive species is a living thing that migrated to a new ecosystem / environment / place.

Dandelions annoy grown ups because they're bright and noticeable and they grow EVERYWHERE, even in our yards where we just want grass. A lot of invasive species do that: grow places other plants are supposed to be growing. Unlike dandelions, most invasive species hurt a lot of other plants and animals by taking away the resources they need to live. For other plants, that's sunshine, water, and dirt / land. For animals, that's the plants whose spots they took that the animals use as homes or food.

The seeds we're using for our seed bombs are called native species, which means they're plants that have always lived here and won't hurt the animals and other plants by being here.

Time to start forming our seed bombs!

Instructor, strain the torn paper and squeeze a bit of the water out of it. Add the strained pulp and flower seeds to the bowls at the tables, mix them together.

Learners, start packing your paper and seeds into cookie dough like balls. An ideal ending size has a diameter between ½ inch and 3 inches. You will need to squeeze the paper tightly together, and some water will probably drip out in the process.

Go over planting instructions while seed bombs are being formed: cover your seed bomb lightly in soil for best results. With clay seed bombs you don't need to bury them at all and ours still might sprout without dirt, but because paper isn't as similar to dirt as clay it's best to plant them. Watering them every day or so will help break down the paper, but it shouldn't need constant attention to grow like a rose bush does.

When you're done, put your seed bomb in a baggie and write your name on it. You can put your seed bombs on the back table while you play on the museum floor!

Ice Cream Laboratory

July 7th, 11am and 1pm.

Summer Break Programming

Cooking, chemistry, and ice cream! Learn about physical and chemical change in the tastiest possible way. Measure out the ingredients with beakers and churn them together in this bag-based science experiment. Remember to bring warm gloves, because chemistry is about to get cool! This program is suitable for all ages, but small children may require adult assistance.

Questions and Connections

- Are cooking and chemistry the same thing?
- What are physical and chemical changes?
- How does one thing (or many things) become another?
- Can temperature transform a material?

Materials (based on 40 participants) – Powerpoint here

20 cups Half and half
2-20 depending on usage 1 cup measuring cups
5 tsp Vanilla
1.25 cups Sugar
40lbs Ice
13.33 cups Kosher or rock Salt
40 Gallon zip locks (the ones with the sliders)
40 Quart zip locks (the ones with sliders)
Ice Cream Toppings
Up to 20 10ml plastic graduated cylinder (15ml sugar)
4 to 20 100ml plastic beakers (120ml half and half) (80ml salt)
40 Plastic pipettes (1.2ml vanilla)
Sugar cups to be set at tables (Quantity Varies)
Smaller cups for vanilla (Quantity Varies)
Kid gloves
40 Spoons and Plates
Bowls and cups for tastingl

Activity Details

Introduction

If you like ice cream, raise your hand! Why do you think ice cream is so tasty? (ANSWER: it contains a lot of sugar to make it sweet and a lot of fat that makes it rich. Other foods that have a lot of fat are butter, nuts, eggs, avocados, and cheese. The high fat content in ice cream makes it more satisfying than cookies, which have a similar amount of sugar.)

Ice Cream Creation

When is the best time to eat ice cream? (ANSWER: When it's hot out or you are hot from running around.) Why? (ANSWER: Because it's cold and cools you down.)

FOR OLDER PARTICIPANTS: Have participants scoop 1 cup of ice into a gallon size bag. Use the beakers to measure 80 ml of salt and add it to the bag. Zip then set the bag aside, and **go rinse your beaker** so you can use it to measure tastier ingredients.

FOR YOUNGER PARTICIPANTS: Have participants form a line behind the instructor with the ice. Scoop 1 cup of ice into a gallon size bag. Next, they will line up behind the instructor with the ice cream salt. Point out the 80ml line, and ask the child to tell you "when" when you have 80ml of salt. If they don't stop you at the right time, ask if you should add more. Participants should then zip their bags and return to their seats.

What is ice cream made of? (ANSWER: sugar, cream, and vanilla. Participants may recall sugar and fat from previously, or point to the name of "ice" and "cream." These are useful hints if you don't immediately get those answers. The last ingredient can be called "flavoring," and today we are using vanilla to make vanilla ice cream.)

Add the half and half to bags by:

Point out that you need 120ml of this ingredient, but our beakers only go to 100ml. How do you get to 120? (ANSWER: any correct addend/sum pair here is acceptable. For younger participants, suggest filling to the 60ml line twice!)

Instructor goes around with half and half and a beaker, asking the participants how they are getting to 120ml when they should stop pouring. This should be more than one beaker full. For younger participants, it might be easiest to pour to the 60 ml line twice!

Pass out the graduated cylinder to measure out 15 ml sugar (filling it up 1 ½ times), and add it to the bag. Additionally, pass out cups of sugar for each table

and a paper plate and spoon for each child. They should spoon the sugar into the graduated cylinder over the plate to reduce clean up.

When you use graduated cylinders, remember to go eye level with the measurement: looking down at the ingredients instead of level will cause you to add too much! This is called a meniscus error.

Pour vanilla into small cups and provide participants with pippets. Use the pipette to suck up 1.2ml vanilla – just over 1ml! – and add it to the bag. Older participants might be trusted with a vanilla cup at their table, but younger groups should have an instructor come around and coach them through using it.

Make sure to seal the bag tightly, and an adult will double check.

Has anyone ever made ice cream before today? How did you do it? How do you think they make the ice cream you buy at the store or restaurant? (ANSWER: They combine ingredients, make them SUPER HOT for a few minutes to get rid of all the germs – this is called pasteurization – and lets it cool back down. Then it's mixed in a super cold machine to make the liquid ice cream sauce into fluffy, solid ice cream. This is also when they add the flavorings and toppings.) We're going to do things a little differently: we don't have an ice cream machine to mix and cool our ingredients but we do have ice and lots of hands.

Place the smaller ingredients bag inside the gallon size bag full of ice. Make sure to seal the bag tightly, then put on your gloves! Shake and knead the bags for about 5 minutes, when your milk should be solid. Insufficient kneading will result in cold but not solid kneading, of which you should warn participants.

When most participants are done, have them set down their bags. We're going to chat briefly about what happened, then serve it up for tasting.

Chemistry

A physical change happens when something changes shape or states (solid, liquid, gas). A chemical change is when one thing becomes something totally different, like baking soda and vinegar becoming water and CO2.

Do you think this was an example of physical or chemical change? Vote by show of hands, and call on volunteers to explain why they think that. (ANSWER: physical change. We combined the ingredients until they were a mix of ice cream soup, then cooled it down into a solid, like putting water in the freezer.)

A lot of cooking is chemistry, because it's changing ingredients with heat, cold, or other ingredients. Cutting things up, like dicing an onion or slicing an apple, is also an example of physical change.

If the participants are looking for a challenge, ask if they think adding the salt to ice was a physical or chemical change. (ANSWER: Chemical change. The salt lowers the freezing point of water / ice, resulting in the ice melting faster than it should have. We wanted the ice to melt quickly because, as a liquid, water transfers / absorbs heat faster than ice.)

CONNECTION 1: Have you ever seen someone get their tongue stuck on a metal pole by licking it in winter? Why didn't their fingers get stuck when they touched it? The saliva in their mouth transferred their body heat to the pole so quickly that their spit and tongue started to freeze the moment they touched.

CONNECTION 2: When you sweat in the summer, your body is making the outside of your skin wet. The water that comes in contact with the air or wind gives off heat faster than your skin normally does. That's also why you get so cold after coming out of a pool all wet.

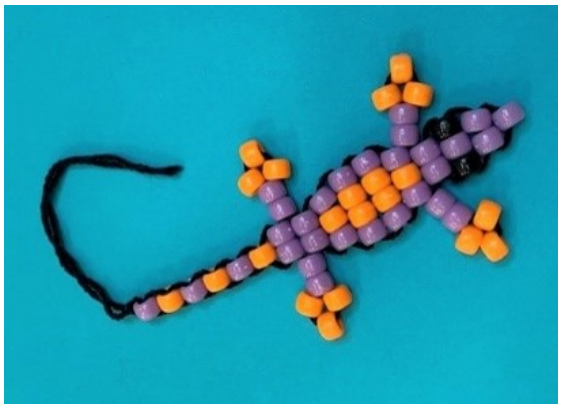
Desert Time!

While we have plates/bowls if you'd like to use them, we've found that it's easiest to eat your ice cream out of the bag. Go around with ice cream toppings, and make sure everyone has a spoon. If your ice cream is very soupy, you might want to drink it like a shake out of a cup. Enjoy! Isn't chemistry tasty? (Point out the sink and trash can for when they are done, and remind them to take home their gloves!)

Summer Camp Crafts

July 9th, 1pm.

Summer Break Programming



Summer camp is one of the best parts of the sunniest season. Get a taste of the summer camp experience with two classic camp crafts: bead lizards and yarn flowers! Design, create, and take home your creations! This program is suitable for all ages, but will require fine motor skills. Small children may require adult assistance.

NOTE: This activity takes over an hour with younger participants. If reused, it should be modified to only have one craft or only done with older children or modified into an informal program with three stations (flower, bead lizard, rope).

Questions and Connections

- What is summer camp like?
- Why do summer camps have so many crafts?
- What are arts and crafts?
- How do textiles work?

Materials – Powerpoint here

Beads
Yarn
String
Forks
Pipe cleaners – green
Scissors
glue?
Explanatory signs – linked here
Also have coloring pages for younger kids?

Activity Details

Introduction

Has anyone here been to a summer camp before? Raise your hand if you have. What did you do there? (Take about 5 answers.) Did anyone else do that? – raise your hand if you did!

Summer camp is fun, right? But sometimes it's also really hard. Is anyone willing to share a moment where they were really upset at a summer camp?

When I was at a music camp in middle school I didn't really understand the rules and how they were different from home and school. I ran ahead of my counselor on the way back to my cabin once, and got in trouble for breaking the rules. I was really scared and confused, because I didn't think I'd done anything wrong – I went to the right place at the right time and everything.

Summer camps are great because they're ***different*** – from home and from school and from grandma's house where you already know everyone and how everything works. They are a chance to make new friends, learn how to talk to other kids, and about the world outside of your bubble.

Does Kids N Stuff look like those other camps you've been to? Not really? Why not?

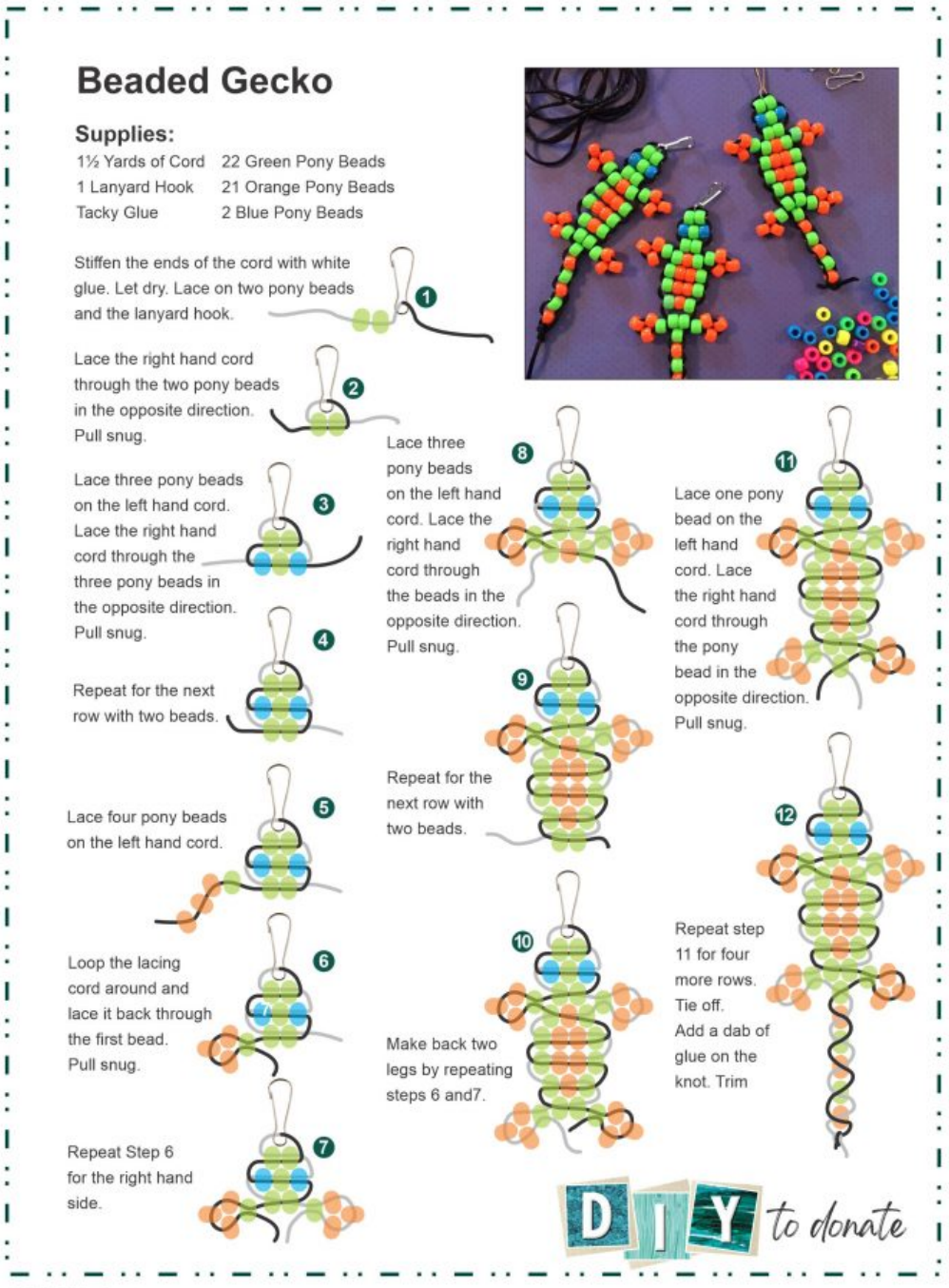
Kids N' Stuff is a museum: we work hard to make a safe and interesting space that's fun to play in and explore. We aren't actually a summer camp, with all those things summer camps have. We like parents to stay with their kids, and we don't have an outdoor space or cabins to sleep in. But today we're going to do our best to make it feel like one. Instead of being Ms. Rachel and Mr. Nick, today you can call us Counselor Rachel and Counselor Nick. We'll be teaching you two camp crafts!

Today we'll be doing two crafts, a bead lizard and a yarn flower.

Because we're trying to make this like a real summer camp, I'm not going to stand up here and pass out the supplies, going through each one together step by step. I'm going to be at this table [pointing], teaching the yarn flower, and my helper XXXXX will be at that one [pointing] teaching the bead lizard. You can switch at any time, but we'll have a short break halfway through where we'll talk more about textiles. Take a moment to decide which one you want to make first, and let's all get started!

Bead Lizard

The linked video here has instructions for making a bead lizard: bead lizard - Google Search. There is also an explanatory graphic below.



Break

A lot of arts and crafts projects involve yarn. Does anyone know how yarn is made? What is it made of? Raise your hand. (ANSWER: Yarn is made by taking a lot of thin individual strands of string or animal hair and twisting them together in a special way like a rope. Some yarn is called “synthetic” which means that scientists and factories created the string. Others are from plants – like cotton – on animal fur – like wool. What other kinds of things can you think of that could be made into yarn? What about fabric? (Possible correct answers include silk, linen, bamboo, hemp, maize, nettle, and soy fiber. Also, HAIR.)

Did you know you can turn *HAIR* into a rope? It’s a little too smooth to be yarn, but there’s actually a kind of hair braid called a rope braid that does what I’m about to show you.

> Gather a bunch of strings of yar, each about 2-3 feet long (the length doesn’t matter as long as it’s consistent). Knot one end, tape it to the table or floor. Pull the loose end up so the strings are visible to the audience. Divide the strings into two sections, twist them both clockwise until their twist reaches the knot. Turn them hand over hand, twisting counterclockwise. Continue until you have a section of rope.

This is how yarn and rope are made.Why do you think I bothered though? Why wouldn’t I just use a single string to tie something? (ANSWER: It wouldn’t be strong enough to hold against most forces.) How does having more strings help? (ANSWER: It distributes the force between many strings.) Then why don’t I just tie a bunch of strings then? (ANSWERS: It would take too long, and it wouldn’t be strong enough.)

> Everyone, (stand up and?) find someone to hold hands with. Clasp palms and thumbs, but don’t interlock your fingers. Now try to pull your hands apart without letting go – don’t squeeze too tight, this isn’t a challenge, just a control group to measure against. Next, hold your hand again, but this time put your finger together like puzzle pieces. Try to pull your hands apart again. Was it easier or harder? (ANSWER: Harder.) The friction between your fingers kept your hands together even though you weren’t holding onto each other on purpose.
>
> That’s why I twisted the strings together to make the rope, by twisting them like that I made the strings rub against each other each time someone pulls on one end of the rope, keeping individual stands from taking too much force and getting pulled out.

Now that we know a little more about yarn, let’s go back to the crafts. If you haven’t switched tables yet, now’s a great time!

Flower

Gather materials.

Place a pipe cleaner along one side of your fork.

Wrap the fork and pipe cleaner with yellow yarn. Be careful to keep the area of wrapped yarn about 1 inch wide.

Wrap the yarn 25-30 times around the fork.

Twist the pipe cleaner together around the end of the yarn. Wrap it 3 times down the stem and then back up toward the flower, you are forming the base of the stem.

Cut an approximately 1 yard piece of green yarn and tie it around the base of the flower (between the last time of the fork), then remove the tassel from the fork. Wrap the excess green yarn around the bottom of the flower all the way down to the stem.

Knot the green yarn tightly two (2) times.

Trim the ends of the green yarn close to the knot.

Cut the loops of the yellow yarn with scissors.

Use a fork or metal tool to fray the yarn slightly.

Fluff the top of your flower and trim any stray threads.

Enjoy your dandelion!

Outro

Did you guys like making the flower and bead lizard? Who likes the bead lizard more, raise your hand! Who liked the yarn flower more? Awesome!

Why do we think summer camps have so many arts and crafts projects? (ANSWER: They're fun, engaging activities that can occur inside or outside depending on the weather; encourage social interaction; and don't involve screens.)

ALSO, they put kids in the driver's seat of planning a project – teaching them how to think ahead, how one thing connects to another, and how to problem solve. Grown ups call that critical thinking. Has anyone ever heard a grown up talk about critical thinking before? Raise your hand. Do you remember what they were talking about? Was it a teacher?

School is all about teaching kids how to learn, but they have to memorize specific information all the time and that isn't always fun. The other part of school is

learning to get along with each other of course. Arts and craft projects at home or at camps are a fun way for kids to challenge their current limits as well as practice skills that they'll need as grown-ups. Being a kid forever sounds pretty nice – lots of free time and practically no chores – but it'd also get to be boring after a while I think. Life is about growing after all.