



# Troop Tidings

August, 2015  
Volume 12, Issue 8

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**Troop 805**  
Danville, CA

## 2x25 Bike Ride – August 22-23

*By Mr. Gary*

The [permission slip](#) is now available for the two-day (2x25) mile bike ride and campout from Half Moon Bay to Santa Cruz on August 22-23. This outing has a lot of flexibility built in. Scouts or adults can choose to ride one day (either day) instead of two, and can skip the overnight campout. It's a "pick and choose" on the three components (Saturday ride, Saturday night campout, and Sunday ride). However, the more you do, the more fun you'll have!

Please [email me](#) with "option" selections as soon as you are reasonably sure of how you would like to participate, so I can make advance planning on campground reservations and logistics. We will need lots of adult support (riders and drivers). Non-leader adults are welcome! Email me if you can help, as this outing will require a great deal of advance planning.



## Emigrant Wilderness Backpacking – August 8 - 15

*By Mr. Mahoney*

Troop 805 will be heading up to Emigrant Wilderness to do a 50-mile backpack over eight days. The Emigrant Wilderness is a glaciated landscape of great scenic beauty featuring broad expanses of granite peaks and domes, lava-capped peaks, alpine lakes, mountain streams, and deep canyons. The northeastern third of the wilderness is dominated by volcanic ridges and peaks; the remaining areas consist of many sparsely vegetated, granitic ridges interspersed with numerous lakes and meadows. This is an adventure you will NEVER forget!



Note: This is a HIGH ADVENTURE OUTING – 14 and Older Scouts ONLY and scouts must have completed TWO prior backpacking outings (10 Miles or Greater or attended Philmont) or completed the Plumas 25 Mile Backpack Hike. We have one remaining mandatory meeting on Friday August 7th at 6:00 p.m. to distribute food, do the final pack check, and impound packs.

## This Month's Theme: Science

### Outings

#### Emigrant Wilderness 50 Miler Backpacking

**When:** August 8-15

**Where:** Emigrant Wilderness

**Adult in Charge:** Mr. Mahoney

**Patrol in Charge:** BPs

**Permission Slip Due:** August 15

#### 2x25 Bike Ride

**When:** August 22-23

**Where:** Half Moon Bay – Santa Cruz

**Adult in Charge:** Mr. R. Gary

**Patrol in Charge:** Flaming Arrows

**Permission Slip Due:** August 4

### Meetings

August 4 – Troop Meeting

August 11 – Troop Meeting

August 18 – Troop Meeting at  
Dougherty Valley HS Pool

August 25 – First Day of School

August 25 – PLC / BOR

August 27 - Roundtable

August 20 – ASM Meeting

## 9/11 Memorial Service – September 11

*By Mrs. Kim*

On September 11, 2001, thousands of people lost their lives in one of the most infamous attacks on America. We will honor & remember them during San Ramon Valley's 9/11 Remembrance Ceremony. All uniformed Scouts and leaders are invited to participate in this meaningful patriotic ceremony. Scouts will parade holding American Flags at the All Wars Memorial. The entire family is also welcome to attend the ceremony.

Look for a permission slip coming soon.

## Mt. Diablo Overnighter – September 18-19

*By Mr. Marshall*

On September 18 the Cobra Patrol is sponsoring an overnight stay on scenic Mt. Diablo. This is a nice local trip and a good way for new scouts to get experience camping.

More details to follow.

## Popcorn Sale Help Needed

*By Mrs. Alexander*

The annual BSA popcorn is about to begin. Scouts who sell popcorn earn a commission that can be used for attending camps and other scout activities.

We are looking for an adult volunteer to help out this year and possibly take over in 2016.

If you're interested, please contact Karen Alexander at [karen.alexander@ymail.com](mailto:karen.alexander@ymail.com).

## Farewell and Welcome the New Newsletter Editor

*By Mr. Dougherty*

This will be my last newsletter as editor. My son, Blake, will age out in a couple of months so I decided to step down. Mr. David Morrow will take over next month. I'd like to thank him for volunteering. The Troop Tidings couldn't be in better hands.

As many of you know, Cub Scouts requires much more parent participation than Boy Scouts. I took a bit of a break when my son bridged over from Pack 689 to Troop 805. When I was ready to start being more involved I thought I might become an ASM, but I was very happy to be asked to become the newsletter editor because I know Microsoft Word better than knots, hiking, or camping.

Putting together the newsletter each month has been a great way to get to interact with our fantastic troop leadership and I couldn't have done it without their help and support. Mr. Chan, all the ASMs and other adult leaders have been super helpful and patient with my typos, occasional nagging, and one bout of extreme tardiness. I like to especially recognize Dr. Ed Laubach for always giving me great content in the educational series. I never lacked for content to fill up the newsletter each month thanks to him.

Farewell and best of luck to the new newsletter editor.

## Next Month's Theme: Rocking It

### Outings

#### 9/11 Memorial Service

**When:** September 11

**Where:** TBD

**Adult in Charge:** Mrs. Kim

**Patrol in Charge:** Order of the Arrow

**Permission Slip Due:** TBD

#### Mt. Diablo Overnighter

**When:** September 18-19

**Where:** Mt. Diablo

**Adult in Charge:** Mr. Marshall

**Patrol in Charge:** Cobras

**Permission Slip Due:** TBD

#### Advance Camp

**When:** September 26

**Where:** Contra Costa Fairgrounds

**Adult in Charge:** Mrs. Kim

**Patrol in Charge:** Dragons

### Meetings

September 1 – Troop Meeting

September 7 – Labor Day / No School

September 8 – Troop Meeting

September 15 – Troop Meeting

September 22 – Troop Meeting

September 24 - Roundtable

September 29 – PLC / BOR

September 10 – ASM Meeting

## Educational Series: Amazing Science Tricks

*By Dr. Laubach, Adapted from  
Boy's Life*

### Amazing science tricks with common household items



Using common objects around the house, you can demonstrate cool scientific laws. Here's how:

### Keeping Water Separate



Fill two identical glasses with water. Add two tablespoons of salt to the water in one glass and stir well. Add a few drops of food coloring to the water in the other glass.

Cover the glass containing the colored water with a sheet of paper, turn it upside down and place it on top of the glass containing salt water. (Be sure to do this trick over a saucer or bowl.)

Gently pull the paper out from

between the glasses. The colored water and the salt water will remain separate.



### How Does It Work?

Salt water is heavier than colored water, so the two stay separate as long as the boundary between them isn't disturbed. Try turning the two glasses over, though. The heavier salt water will now be on top, so it will flow down and mix with the colored water.

### A Can That Can "Walk"



Place an empty aluminum can on its side on the floor. Blow up a balloon and tie a knot in the end. Rub a tissue back and forth on the balloon.

When you put the balloon near the can, the can will start rolling toward the balloon.

### How Does It Work?

When you rub the balloon with a tissue, the balloon gets a negative



electric charge of several thousand volts. When you put the balloon near the can, electrostatic induction affects the molecules in the metal. The outside of the can gets a positive charge, so it is drawn toward the balloon and starts rolling in that direction.

### A Candle That Sucks Water



Place a candle upright in the middle of a saucer. Fill the saucer with water. Light the candle. Place a glass over the candle. When the flame goes out, the water in the saucer will get sucked into the glass.



#### How Does It Work?

When the candle is burning inside the glass, the heat makes the air expand, so some of the air escapes outside the glass. The candle goes out after it uses up all the oxygen, so the air inside the glass cools. As it cools, the pressure inside the

glass drops. Some of the carbon dioxide formed by the flame dissolves in the water as well, decreasing the pressure even more. The water outside the glass on the saucer is forced into the glass by the higher air pressure outside.

### A Flying Trash Bag



Hold the mouth of a black trash bag in one hand. Use a hair dryer to blow hot air into the bag.

Seal the mouth of the bag with tape. Tie a long piece of string around the tape so you can hold it. Take the bag out into the sun. The bag will rise slowly into the air. (It's best to do this trick in an open area on a windless day.)



#### How Does It Work?

Since the bag is black, it absorbs heat from the sun. That heat makes the air inside the bag expand and become lighter. When

the bag and the air inside are lighter than the surrounding air, the bag starts to rise.

### Bending Light Through Water



Punch a hole in a clear plastic bottle two inches from the bottom. Put your finger over the hole, fill the bottle with water and cap it to keep it from draining out.

Darken the room and cover part of a flashlight with your fingers to make the beam narrower. When you take the cap off the bottle, the water will flow out in an arc. Shine the flashlight at the stream from the side of the bottle opposite the hole. The light will bend with the arc and create a bright glow where the water hits the sink.



#### How Does It Work?

When the light in the stream strikes the boundary between the water and air, much of the light is reflected back into the stream. The

light continues this internal reflection all along the arc formed by the falling water. The same principle is used to transmit light signals through flexible optical fibers.

### Reading Through an Envelope



With a black felt-tip pen, write a three-letter word in large letters on a white piece of paper. Place the paper in a brown envelope, and insert that envelope into a white envelope. The writing on the paper should now be impossible to read. Get a piece of dark construction paper or tear out a page from a magazine that is printed on both sides. Roll up the paper into a four-inch-long tube. When you hold the tube against the envelope, you'll be able to read the writing inside.



#### How Does It Work?

Usually you can't read the writing

inside an envelope because of the light reflected off the envelope's white surface. But the tube blocks that reflected light, so you see only the light coming through the envelope.

### Egg Into Bottle



Find a glass bottle that has a mouth slightly smaller in diameter than an egg. Pour some hot water into the bottle (be careful!), shake it vigorously and empty the water. Peel a soft-boiled egg and place it on the mouth of the bottle. Leave it there for a while and it will get sucked inside.



#### How Does It Work?

The vapor from the hot water drives the air out of the bottle. Once the egg seals the top of the bottle, the air can't get back in. As the water vapor cools, it turns back into water, causing the pressure inside the bottle to drop.

The higher pressure of the outside air pushes the egg into the bottle.

### Toothpick Torpedo



Dab a little shampoo on the blunt end of a wooden toothpick. Drop the toothpick in a pan of water. The toothpick will start moving in the direction of the sharp end.



#### How Does It Work?

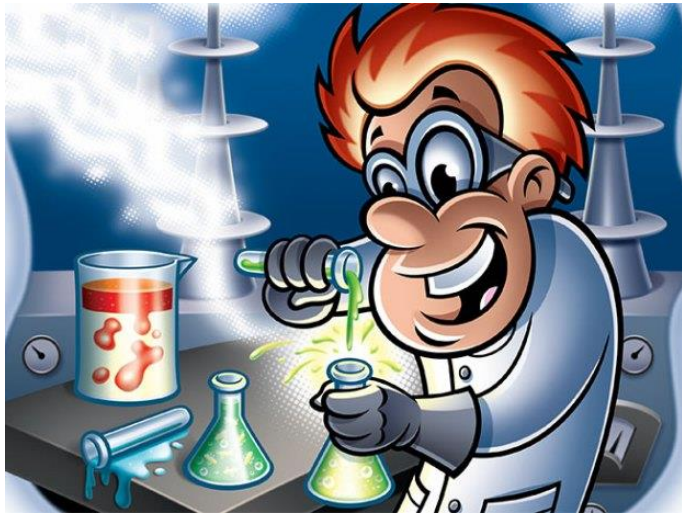
Shampoo contains agents that reduce the surface tension of liquids. As the shampoo on the end of the toothpick dissolves, it reduces the water's surface tension around it, thus releasing the water's hold on that end of the toothpick. The water around the other end of the toothpick still has surface tension, so it pulls the toothpick in that direction.



## Educational Series: Weird Science Experiments

By Dr. Laubach, Adapted from *Boy's Life*

With just a few items nearly everyone can find at home, you can do amazing science experiments. Want to make a lava lamp? Just grab a little cooking oil, water and salt. How about writing with secret “ink” on a mirror? All it takes is dishwashing detergent, water and a cotton swab. Get set for fun and learn a little science?



Note: Be sure to ask for a parent’s help and permission before starting any experiment.

### SWIMMING SPAGHETTI

Make spaghetti do tricks with this fun and fizzy experiment.



#### What You Need:

- uncooked spaghetti
- 1 cup of water
- 2 teaspoons of baking soda
- 5 teaspoons of vinegar
- tall clear glass

#### What You Do:

Put water and baking soda in the glass. Stir until the baking soda is dissolved.

Break spaghetti into 1-inch

pieces. Put about 6 pieces in the glass. They will sink to the bottom. Add vinegar to the mixture in the glass.

Observe what happens to the pieces of spaghetti. Add more vinegar as the action starts to slow down.

### What’s Going On:

When baking soda and vinegar are mixed together, a chemical reaction occurs. It produces a gas called carbon dioxide, which forms lots of bubbles on top of the mixture and smaller bubbles at the bottom of the glass. These little bubbles stick to the spaghetti and make it float to the surface, just as you do when you sit on a swimming pool noodle! When the spaghetti reaches the surface, the bubbles pop and the spaghetti sinks to the bottom.

### WRITE A SECRET MESSAGE

Write an invisible message on a mirror using a soapy solution and a cotton swab. The secret message will appear only in a foggy room.



#### What You Need:

- liquid dishwashing detergent
- cup of water
- a few cotton swabs
- hand mirror or bathroom mirror

#### What You Do:

Place a few drops of dishwashing detergent into the cup of water. Stir to mix well. This is your secret message “ink”.

Dip a cotton swab into the soapy solution. Write a short message on the mirror. When the liquid dries, the message will be invisible. (If not, use a little less of the solution.)

When you take a hot shower or bath, do not get the mirror wet, but get the mirror close enough to the steam from the water so that it gets fogged up. Close the door so the steam stays in the bathroom.

Observe what happens. Can you read the message?

More fun: Write a message and wait until someone else takes a shower or bath. See how quickly they discover your secret.

### What’s Going On:

The steam on the mirror is made up of water molecules. These tiny drops of water stick together on the mirror because of a force called surface tension. The liquid dishwashing detergent breaks the surface tension of the

water. Wherever there is detergent, the water molecules are unable to form into droplets. The words written with the soapy solution stand out clearly against the foggy background of the mirror.

### THE POWER OF ICE

Why do people put covers on their outside faucets in the winter? Why isn't it a good idea to leave water in a garden hose during freezing temperatures? It's the power of ice.



#### What You Need:

- three small plastic drinking cups, one with a lid dish or pan big enough to hold all three
- cups
- water
- freezer
- 

#### What You'll Do:

Fill all three cups with as much water as possible without overflowing. Put the lid on one.

Set all three cups on the dish and place in the freezer overnight.

Check to see what happened the next morning. Did the water stay the same size after it became ice?

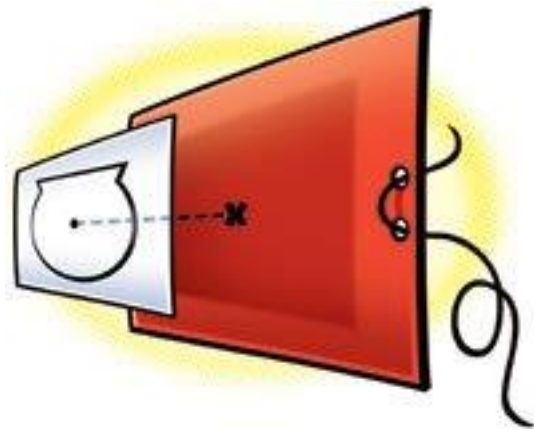
Leave the frozen items in the freezer for a few days. Did you notice any changes?

#### What's Going On:

When water freezes, it expands. When water is left in a garden hose during freezing temperatures, the force of the ice expanding can cause the hose to break open. The same thing can happen with the water pipes in your house. If the water freezes in the pipe, it can break the pipe open.

### FISH IN A BOWL: MAKE A MOVIE

Fool your eyes with this experiment. Using a homemade thaumatrope (THAW-muh-troap), you can combine two pictures into a single image by quickly flipping the pictures back and forth.



#### What You Need:

- small piece of cardboard, about 2 inches by 3 inches
- sharpened pencil or pen to make holes in cardboard
- two pieces of string tape
- two small pieces of paper

#### What You Do:

Cut out a small piece of cardboard and punch holes in each corner. On both sides, write a small "X" in the center of the cardboard.



Cut out two pieces of white paper that are a little smaller than the cardboard piece. Make sure the holes will not be covered up when the paper is placed over the cardboard.

On one piece of paper, draw a fish. On the other, draw a fishbowl. Be sure to draw the fishbowl larger than the fish.

Tape the picture of the fish on one side of the cardboard, so that the fish is directly over the "X".

Tape the fishbowl on the other making sure the bowl is centered on the "X".

Thread one piece of string through the two holes on one side. Thread the other piece of string through the two holes on the other side.





Twist the strings together on each side. Pull the strings as though you are trying to stretch a rubber band. This will make the cardboard twirl. Watch the pictures. Does it look like your fish is in the fishbowl?

More fun: Draw a picture of a bird and a birdcage or anything else you can imagine!

#### What's Going On:

Your eye sees the image of the fish for a short time after it is gone. By that time, the picture of the fishbowl is in sight, and you seem to see both pictures at once. The same thing happens at the movies. If you look at a piece of movie film, you'll see that it is a series of pictures separated by black spaces. These pictures with black spaces in between are flashed on the screen so fast that your eye cannot see the individual pictures or the black spaces.

### MAKE A LAVA LAMP

Here's an easy yet amazing way to make your own "lava lamp".

#### What You Need:

- cooking oil, such as vegetable oil
- cold water (no ice)
- salt water glass
- food coloring

#### What You Do:

Fill the glass about three-quarters full of cold water. Stir in a few drops of food coloring. Can you guess what will happen when you add oil to the water? Will they mix together or separate? Which will be on top?



Add some cooking oil until you have about a half-inch layer of oil on top of the water. Wait until the oil and water have separated into two layers before the next step.

Sprinkle salt on top of the oil. Keep adding salt to see what happens.

#### What's Going On:

The oil is lighter than water, so it floats. The salt is heavier than both the oil and the water, so it sinks. As the salt passes through the oil layer, it picks up blobs of oil, which cling to the grains of salt temporarily and sink to the bottom of the glass. Then the oil breaks free from the salt and floats to the top.



### FUN WITH PAPER CLIPS

See how many paper clips it takes to make a full glass of water overflow.

#### What You Need:

- clear plastic cup
- 100 small metal paper clips

#### What You Do:

Fill the cup to the top with water.

Guess how many paper clips it will take to make the water overflow. Write down your guess.

Carefully drop one paper clip at a time into the cup. Count how many it takes to make the water overflow. Was your guess close?

Look at the cup from the side. The water is bulging upward like a balloon!

More fun: Fill the sink or a dish with water. Carefully lay a small piece of paper on top of the water. See how many paper clips you can put on top of the paper before it sinks. Try using different sizes of paper.

#### What's Going On:

Drops of water stick to each other. That is why the surface of the water bulged when you added the paper clips. Scientists call this surface tension. The surface tension of the water is what held up the floating paper until the weight of the paper clips became too heavy.



## TROOP 805 2014/2015 Outings Activities Calendar

### November (Service/Kamikaze Platypi)

- 5 Miles Easy Hike (11/1 – Sat) – **Yellow Jackets** – J. Garrahan
- Webelos Open House (11/04 – Tue) **P. Alexander**
- Scouting for Food (11/08 – Sat: Distribute Flyers – 11/15 – Sat: Food Pickup) – **OA** – **B. Miyao**
- Mini Golf (11/15 – Sat) – **Kamikaze Platypi** – **P. Alexander**

### December (Easy Holidays/Scorpions)

- CO2 Car Racing (12/6 – Sat) **Dragons** – **P. Alexander**
- Bowling (12/7 – Sun) - **Yellow Jackets** **C. Jasty, G. Natesen**
- Sacramento Tour (12/13 – Sat) – **Scorpions** – **R. Chan, J. Marshall**

### January (Blasting into the New Year/Yellow Jackets)

- New Year – Easy Hike (01/10 – Sat) **Huskies** – **New ASM**
- 30<sup>th</sup> Anniversary CoH (01/06)

### February (Winter Sports/Kamikaze Platypi)

- 10 Mile Bike Ride (Sun 02/08) **Yellow Jackets** – **K. Chan**
- 30<sup>th</sup> Anniversary Party (Sat 02/07)
- Intermediate Snow Camping (Sat 02/14 – Mon 02/16) – **Kamikaze Platypi** – **T. Gary, R. Mahoney**
- Beginner Snow Camping – Snow Shoe (Sun 02/15 – Mon 02/16) – **Honey Badgers** – **K. Screechfield, B. Miyao**

### March (Trek Lightly/Dragons)

- Kiwanis Service – Youth to Youth (Sat 03/07) – **OA** – **N. Matsunaga**
- Shooting Sports Day (Canceled) – **T. Huen**
- 10 Mile Bike Ride (Sat 03/21) – **Lightning** – **T. Gary**
- Scout Skills (Fri 03/27 Sun 03/29) **Wolverines** – **J. Marshall**

### April (Skillz/Wolverines)

- School Service Project (Tue 04/07) – **OA** – **T. Huen**
- Sunol Backpacking & Morgan Territory Backpacking (Sat 04/11 – Sun 04/12) – **BPs** – **K. Screechfield, R. Mahoney, R. Chan and T. Gary**
- 15 Mile Bike Ride (Sat 04/18) – **Huskies** – **TBD**
- Camporee (Fri 04/24 – Sun 04/26) – **Scorpions** – **J. Garrahan and R. Chan**

### May (Water Fun/Lightning)

- 15 Mile Bike Ride (Sat 05/09) – **Dragons** – **S. Kim**
- Art & Wind Festival – Food Booth (Sun 05/24 – Mon 05/25) – **OA** – **E. Laubach**
- Relay for Life (Sat 05/30 – Sun 05/31) – **OA** – **K. Screechfield**
- Pt. Reyes – 10 Mile Backpacking (Sat 05/30 – Sun 05/31) – **BPs** – **T. Gary and R. Chan**

### June (Camping/Huskies)

- Canceled: Fages II (Sat 06/06) – **OA** – **A. Carstensen**
- **Camp Cherry Valley (Sun 06/21 – Sat 06/27)**

### July (Fishing/Radioactive Gummies)

- July 4<sup>th</sup> Parade (Sat 07/04) – **OA** – **S. Evans**
- 25 Mile Bike Ride (Sat 07/11) **Goodmen** – **C. Jasty**
- **Camp Wente (Sun 07/12 – Sat 07/18)**
- Plumas 25 Mile Backpacking (Fri 07/24 – Mon 07/27) **BPs** – **R. Chan**
- Donnor Fishing (Fri 07/24 – Sun 07/26) – **Radioactive Gummy** – **G. Aikin, K. Screechfield**

### August (Science/Dragons)

- Emigrant Wilderness 50 Miler Backpacking (Sat 8/08 – Sat 8/15) – **BPs** – **R. Mahoney, R. Chan**
- 2 x 25 Bike Ride - (Sat 08/22 – Sun 08/23) **Flaming Arrows** - **T. Gary, R. Mahoney**

### September (Rocking it/Dragons)

- 9/11 Memorial Service (09/11) – **OA** – **S. Kim**
- Mt. Diablo Overnighter (Fri 9/18 – Sat 9/19) – **Cobras** – **J. Marshall, B. Miyao**
- Advance Camp – (Sat 09/26) **Dragons** – **S. Kim**

### October (Haunted/Goodmen)

- Black Diamond Mine (Sat 10/10 – Sun 10/11) – **Radioactive Gummy** – **T. Huen**
- USS Hornet (Sat 10/24 – Sun 10/25) – **Goodmen** – **New ASM**
- 50 Mile Bike Ride (Sat 10/24) – **Wolverines** **J. Marshall, R. Chan**

