



Central America's Mayan Temples.

Even though most celestial features are far more permanent than terrestrial ones, our point of view is constantly moving, and thus different star charts are necessary to reflect the appearance of the sky overhead at different hours of the night and during different seasons of the year. The center of each chart usually corresponds with the zenith of the sky (the point directly overhead), and is marked with a small cross. The horizon, that line where the sky appears to touch the ground, is the circle bordering each chart.

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## ADVANCEMENT

### CUB SCOUT STARS ADVANCEMENT CEREMONY

*Materials:* Roll of dark-colored craft paper, awl for hole punching, scissors, pencil, constellation map, telescope

*Preparation:* Draw constellations on the craft paper; then punch holes to indicate the outline. Place table lamps behind the paper map so the constellations show up when the lights are out or dimmed. Arrange the telescope anywhere in front of the constellation map.

**CUBMASTER:** Tonight we have not only the constellations shining brightly in our sky (*point to constellation map*), we also have Cub Scout stars to honor. (*Cubmaster looks at audience through telescope.*) I have spotted the new stars in our pack. They are shining brightly with honor and pride. Would the following boys please

come forward with their parents to receive their award or recognition? (*Cubmaster calls the names. Awards are taped to large cutouts of stars.*) As these new stars shine brightly with pride, let us give them a Cub Scout round of applause!

### STAR LEADER RECOGNITION

*Equipment:* Large gold stars with a hole in center; large enough for each boy to poke his head through. Star is frame around face.

(*Each boy, in turn, repeats the following speech:*)

“My star represents our \_\_\_\_\_, Mr. \_\_\_\_\_ and his assistants

(*When all have done this, then all repeat in unison:*)

“On behalf of all Cub Scouts, we wish to say thank you for the leadership you have given our pack.”

## CLOSINGS

### WISHING ON A STAR CLOSING CEREMONY

*Materials:* Glow-in-the-dark stars (found in a dollar store) of all sizes taped to dowels or drinking straws

*Preparation:* Distribute the stars for leaders and parents to hold up. Dim or turn off the lights, then have everyone recite together:

Star light, star bright,  
First star I see tonight,  
I wish I may, I wish I might,  
Have this wish I wish tonight.

Give everyone a few seconds to make a parting wish.

## GUIDING STAR

*Personnel:* Akela and 8 Cub Scouts

*Equipment:* Small campfire; 3 ft. square of blue paper or cardboard with cutouts for the stars of the big dipper and the North Star; 8 small flashlights

*Arrangement:* Akela and the 8 Cubs stand near the campfire with the figure of the Big Dipper and North Star to one side of the fire. Cub Scouts stand behind this figure and light their star when they speak.

**AKELA:** For thousands of years people have grouped the stars together as figures in constellations. This was probably done by the early shepherds as they lay on the grass looking at the sky while tending their sheep. There they could see pictures of heroes, kings, queens, men, maidens and monsters in the stars. The constellation we know best is the Big Dipper.

Taking the stars that form the outer edge of the Big Dipper, sight upward and the bright star you see is the North Star, which, for centuries, has been the guiding star for travelers.

(*The first Cub Scout shines his light through the cutout for the North Star.*)

The North Star remains in the same place all the time. Let the North Star represent our God. Keep your eyes on the North Star. Each star in the Big Dipper can

help you to keep your eyes on the North Star—your guide for living. Then let your light shine that you can help others find the way. Now, each of these Cub Scouts will tell what each star in the Big Dipper represents to him in his quest to find the guiding star.

*(As they speak, each Cub shines his light behind his star.)*

**CUB \*2:** The Holy Bible

**CUB \*3:** My minister/priest/rabbi

**CUB \*4:** My mother and father

**CUB \*5:** The Cub Scout Promise and the Law of the Pack

**CUB \*6:** My den leader

**CUB \*7:** My Cubmaster

**CUB \*8:** My den Chief

**AKELA:** All of these are excellent guides for us to follow on our Cub Scout trail. Let each one help you as you travel onward. Good night.

### AIM FOR THE STARS CLOSING

The words “Aim for the Stars”; have important meaning to Cub Scouts. There have been many before us who have set their sites and lived their lives by Aiming for the Stars. And while they may not have made it on the first try, or the second, or even the third, they eventually do make it.

A Cub Scout, who does his best like our motto says, is bettering himself. Sure, sometimes he may not “hit the stars” but he grows from his trying. He is preparing himself for greater attempts and for great successes.

Remember, not everyone makes

their goals every time, but we all make the world a better place by doing our best and Aiming for the Stars. And isn't that what our real goal is in life?

### AUDIENCE PARTICIPATION

#### THE CREATION OF THE BIG DIPPER

Divide the audience into 3 groups. Assign each group a part of the story to perform when the designated word is read in the story. **BEAR** - Stand and act like a bear while saying “Growl!”

**HUNTERS** - Stand and point to the sky, saying “There it is!”

**ARROWS** - Stand and pretend to draw back on a bow, saying “Whoosh!”

Four **HUNTERS** search for their food at night. A **BEAR** crosses the path of the **HUNTERS**. They shoot **ARROWS** at the **BEAR**, but he escapes and climbs a tall tree. The **HUNTERS** follow the **BEAR** up the tree. Higher and higher the **BEAR** climbs. Higher and higher the **HUNTERS** follow. Occasionally they stop to send **ARROWS** at the **BEAR**, but the **BEAR** does not get hit. When the **BEAR** reaches the top of the tree, he steps off into the sky and the **HUNTERS** follow.

The **BEAR** begins to circle a bright light in the sky. The **HUNTERS**, tired from their climb, put down their **ARROWS** and stretch out behind the **BEAR** to rest. Every night the

**HUNTERS** wake up and follow the **BEAR** on his way around the bright light - the North Star. The **BEAR**, safe from the **ARROWS**, remains there to this day, and the **HUNTERS** are still following.

## GAMES

### FLOATING BALL

*Materials:* Elbow straw, table tennis ball

Bend a straw at a 90-degree angle; place the long end in your mouth with the short end facing upward. Blow steadily through the straw to make a consistent air stream. Set the ball gently in the air stream. The ball should float in the stream. Make sure you don't chase the ball, just let it float on the steady stream. It won't go anywhere if you keep it pointed in one place. Try to land the ball on the tip of the straw.

### CELESTIAL SCAVENGER HUNT

*Setting:* Outdoor location. Divide your pack into teams. Give each team leader a pencil and a paper bag. Have two adults supervise each team while on the hunt; set a time limit of one hour.

This activity is designed to stimulate the boys' imaginations. Give each team a list of “celestial” items (see suggestions below). After one hour, teams report back to the starting point and present what they have found. They take turns showing and telling and

trying to convince the other teams that each item is really what they say it is.

*Suggestions for the scavenger list:*

An extraterrestrial creature, a night light, astronaut food, a piece of meteorite, a big dipper, stardust, Moon boots, a flying saucer, a black hole, Orion's belt, a red giant, Saturn's ring, a boy from Mars, an adult from Venus, a cow that jumped over the Moon, Zeus, a solar reflector, a celestial sphere, Sagittarius's arrow. You may use your own imagination and add to or substitute items in the list.

### SHOOTING STARS

Stand all boys in a line and give **each** a construction paper **star** and half a straw. Each boy **places** **his** star on the floor in front of him. When the signal is given, each boy must **lift up** the star by inhaling on **the straw** and then walk **to** the finish line.. The boys must not touch the stars at all but may touch the straws, If a star drops, the boy must lift it up with the straw only and continue.



### CHAPLAIN'S CORNER

#### PRAYER

"For the Great One who placed the stars in the heavens, we give thanks and praise. Watch over this gathering and keep its purpose true. Remind us of our responsibility to youth and our duty to God and our

country. Keep us strong of faith and keep the values of Scouting shining in our hearts. Amen."

### WHO PACKED YOUR 'CHUTE?

Just recently I came across this article that I thought provided an excellent message for all of us to live by. Charlie Plumb was a jet fighter pilot in Vietnam. After 75 combat missions, his plane was destroyed. Plumb ejected and parachuted and spent six years in a P.O.W. camp.

One day, when Plumb and his wife were sitting in a restaurant, a man at another table came up and said, "You're Plumb! You flew jet fighters from the carrier Kitty Hawk. You were shot down!"

"How in the world did you know that?" asked Plumb. "I packed your parachute," the man replied.

Plumb gasped in surprise and gratitude. The man pumped his hand and said, "I guess it worked!"

Plumb assured him, "It sure did! If your chute hadn't worked, I wouldn't be here today."

Plumb couldn't sleep that night, thinking about that man. Plumb says, "I kept wondering what he might have looked like in a Navy uniform and how many times I might have passed him on the Kitty Hawk not even saying 'Good Morning'. You see, I was a fighter pilot and he was just a sailor."

Plumb thought of the many hours the sailor had spent on a long

wooden table carefully folding the silks of each chute, holding in his hands each time the fate of someone he didn't know.

Plumb, a lecturer now asks his audience, "Who's packing your parachute?"

Everyone has someone who provides what they need to help them make it through the day.

This might be a good time to think about who packed your Parachute! Everyday we have people back stopping us. Today it might have been your spouse; yesterday it might have been a foreman or farm hand. Don't forget to show your appreciation to all those who make you look good.

### RUN-ONS

What kind of star wears sunglasses?

*Don't know, what kind?*  
A movie star!

Have you ever wondered how they put milk in the Milky Way?  
*That's easy - with the Big Dipper!*

Why do people enjoy going to a planetarium?  
*Because they get to see an all-star show!*

What kind of fish lives in outer space?  
*A starfish!*



## SONGS

### THE STARS TONIGHT

*(Tune: Deep in the Heart of Texas)*

The stars tonight are outta sight,  
(clap, clap, clap, clap)  
Here at our Cub pack meeting

The skits Scouts do will amaze you,  
(clap, clap, clap, clap)  
Here at our Cub pack meeting

The songs they sing will laughter  
bring  
(clap, clap, clap, clap)  
Here at our Cub pack meeting

So everyone, come join the fun,  
(clap, clap, clap, clap)  
Here at our Cub pack meeting

### STAR TREKKIN'

Star Trekking, across the universe,  
On the Starship Enterprise, under  
Captain Kirk.  
Star Trekking, across the universe,  
Boldly going forward, 'cause we  
can't find reverse.

Lt. Uhura, report!

Uhura:  
There's Klingons on the starboard  
bow,  
starboard bow, starboard bow.  
There's Klingons on the starboard  
bow,  
starboard bow, Jim.

Analysis, Mr. Spock!

Spock:  
It's life, Jim, but not as we know it,

not as we know it, not as we know  
it.  
It's life, Jim, but not as we know it,  
not as we know it, Captain.

Medical update, Doctor McCoy!

McCoy:  
It's worse than that, he's dead, Jim.  
Dead, Jim. Dead, Jim.  
It's worse than that, he's dead, Jim.  
Dead, Jim, Dead.

Starship Captain, James T. Kirk!

Kirk:  
Ha-ha! We come in peace, shoot to  
kill,  
shoot to kill, shoot to kill.  
We come in peace, shoot to kill,  
shoot to kill, men.

Engineer, Mister Scott!

Scotty:  
Ye canna change the laws of phys-  
ics,  
laws of physics, laws of physics!  
Ye canna change the laws of phys-  
ics,  
laws of physics, yet

[Repeat verses, sing as a round,  
chorus, etc...]

Na..na..na..na..na..Na..na..na  
Na..na..na, Na..na..na  
Na..na..na..na..na..Na..na..na  
Na..na..na, Na

Star Trekking, across the universe,  
On the Starship Enterprise, under  
Captain Kirk!  
Star Trekking, across the universe,  
Boldly going forward, and things  
are getting worse!

### THE STARS TONIGHT

*(Tune: Deep In The Heart Of  
Texas)*

The stars tonight are outta sight,  
(clap, clap, clap, clap)  
Here at our Cub pack meeting

The skits Scouts do will amaze  
you,  
(clap, clap, clap, clap)  
Here at our Cub pack meeting

The songs they sing will laughter  
bring  
(clap, clap, clap, clap)  
Here at our Cub pack meeting

So everyone, come join the fun,  
(clap, clap, clap, clap)  
Here at our Cub pack meeting

### SKITS

#### HOW THE SUN. MOON. STARS GOT INTO THE SKY

Dress up all the boys as Indian  
Braves and assign four of them  
the following parts. Have the rest  
of the boys sit around a  
"campfire" and listen to the story.

*Characters:*

CHIEF Stand with arms folded  
across chest and say "Ugh"  
SUN Cover eyes with hands  
MOON Frame face with hands  
and smile  
STARS Blink rapidly

**NARRATOR:** Long, long ago  
the Indians had no fire and no  
light. They suffered much during  
the cold winter and they had to  
eat food uncooked. They also had  
to live in darkness because there  
was no light.

There was no SUN, MOON, nor STARS in the sky. A great CHIEF kept them locked up in a box. He took great pride in the thought that he alone had light. This great CHIEF had a beautiful daughter of whom he was also proud. She was much beloved by all the Indians of the tribe.

In those days, the raven had the powers of magic. He was a great friend of the Indians and the Indian CHIEF. He wondered how he might make life more comfortable for them.

One day he saw the daughter of the CHIEF come down to the brook for a drink. He had an idea. He would put a magic spell on her. In time, a son was born to the daughter of the CHIEF. The old CHIEF was delighted and as the boy grew, his grandfather became devoted to him. Anything he wanted he could have.

One day he asked the old CHIEF for the box containing the STARS. Reluctantly, the old CHIEF gave it to him. The child played for a while by rolling the box around. Then he released the STARS and flung them into the sky. The Indians were delighted. This was some light, though not quite enough.

After a few days, the child asked for the box containing the MOON. Again the old CHIEF hesitated but finally the boy got what he wanted. Again, after playing awhile with the box, the boy released the MOON and flung it into the sky. The tribe members were overjoyed. But still there was not light enough, and the MOON disappeared for long periods.

Finally, the child asked for the box with the SUN. "No," said the old CHIEF. "I cannot give you that." But the boy wept and pleaded. The old CHIEF could not stand the tears, so he gave the box to him. As soon as he had a chance, the child released the SUN and cast it into the sky.

The joy of the Indians knew no bounds. Here was light enough and heat as well. They ordered a feast of the SUN and all the Indians celebrated it with great jubilation. And the old CHIEF was happy. He had not known the SUN, the MOON and the STARS could mean so much for the comfort and happiness of his people. And for the first time, he too, enjoyed himself.

*Long Rivers Council*

## STAR GAZING

A scout walks to the center of the campfire looking up at the sky, keeping his head and neck very still. Soon he is joined by another scout and then another and so on. Each scout looks around and then begins to look toward the sky. The last scout enters and asked the scout next to him, "what are we looking at. He answers "I don't know." and then that scout asked the next until the question and get to the original scout. The original scout replies: "I don't know. I've got a stiff neck!"



## CRAFTS

### INDOOR CONSTELLATION SIGHTING

*Materials:* Flashlight, pencil, pieces of cardboard about 4 inches by 4 inches in size, pictures of constellations, tape

On a piece of cardboard, trace the outline of the round lens portion of the flashlight. Choose a constellation and draw that within the circle you just traced. Using a sharp pencil point, poke tiny holes where the stars are in your constellation design. Tape the circle over the lens of the flashlight, dim the room lights, and shine your constellation on the wall. Tell the story of your constellation; see if anyone can guess the name of your constellation.

### STARS CENTERPIECE

*Materials:* blue gift bag; 2" deep styrofoam block (*that will fit into bag*); 2 sheets yellow tissue paper (23" x 20"); 1 piece blue net (23" x 20"); 2 - 1/8" Dowel rods (cut into 12, 18 & 24" lengths); 1 large sheet of 1" thick Styrofoam (or styrofoam stars in various sizes); yellow & blue spray paint; yellow & blue curling ribbon

1. Cut gift bag with pinking shears to 5 1/2 " depth.

2. Sandwich blue net between sheets of yellow tissue. Place styrofoam block in center, gather tissue

.& net up around styrofoam block, and place inside gift bag

3. Cut stars from 1" sheet of styrofoam. Spray paint stars and dowel rods.

4. Cut varying length of curling ribbon. Bend center of ribbon over end of dowel rod and push into star between points.

5. Arrange stars in styrofoam block in Bag.

### TWINKLE STAR

Made from individual squares of paper, this star is a fun project that the children can make to decorate. If possible, cover a section of the ceiling with dark blue paper and hang these stars from that dark blue "sky".

*Materials:* white or yellow paper (choose a weight that will fold easily); glitter; string for hanging; spray adhesive; scissors; glue stick

#### *Instructions:*

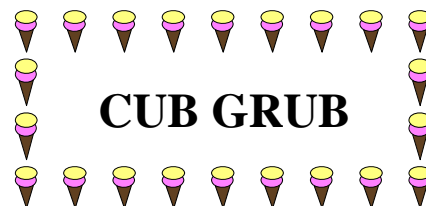
Cut the paper into 3 1/2" squares. You will need 6 squares per star. Fold each square diagonally in half. Unfold and fold the square in half horizontally and then in half vertically, opening the square after each fold. Refold along the diagonal crease forming a triangle (with the right angle at the top). Push the side points toward the top point, allowing the square fold in on itself along the creased lines. Repeat with the other five squares and glue the flat surfaces of each folded square to another to form star. Cover lightly with spray adhesive and sprinkle with glitter. Attach a string to hang the completed star.

### SPACE MOBILE

*Materials:* yellow construction paper; string or yarn; 2 plastic straws; hole; puncher; scissors; pencil; eraser; stapler

#### *Instructions:*

1. Draw 6-8 stars on the yellow construction paper. Each one should be a different shape or size.
  2. When you're finished, ask a parent to help you cut out the shapes. Cut around the outside of the lines and then use an eraser to remove the pencil marks.
  3. Parent Alert: Using the hole puncher, pierce a hole at the top of each star.
  4. Cut a piece of string for each of the stars and tie it around the hole.
- Tip: Vary the length of the string to help your mobile come to life.
5. Parent Alert: Pick up two straws and make the shape of the letter "X" with them. Staple the straws together where the two meet.
  6. Cut and tie a long piece of string to where the staple is and then tie the rest of the strings to one of the four limbs of the X.
  7. Hang your mobile by the long string in the middle and in your room from the ceiling or in a favorite corner somewhere around the house. Now, you can look at the stars anytime you want!



### EDIBLE ROCKETS

*Ingredients:* 4 baby carrots; 1 apple; paring knife; 1 banana;

1 large plate

#### *Instructions:*

1. Peel and cut the banana in half and place it in the middle of your plate. The banana will be the body of your rocket.
2. Parent Alert: Use the paring knife to cut a few apple wedges to place below the body of your rocket. The apples will be your rocket fire.
3. Put two baby carrots on each side of the banana. The carrots will be the wings of the rocket.
4. Once you have all the pieces in place, you're ready for lift off so dig in!

### SPACE SHAKES

*Ingredients:* flavored juice concentrate; Sherbet or ice cream; milk

#### *Directions:*

Put the ingredients listed below in a container with a tight-fitting lid. Shake it up for a frosty diner treat.

Purple Planet: Combine 2 cups raspberry sherbet, 1 cup frozen grape juice concentrate, and 1 cup milk.

Lime Lift-Off: Mix together 3 cups lime sherbet and 2 cups milk.

Double Orange Splash-Down: Add together 2 cups orange sherbet, 1 cup orange juice concentrate, and 1 cup milk.

Take-Off Delight: Cool off by mixing 2 cups vanilla ice cream, 1 cup pineapple-orange juice concentrate, and 1 cup milk. Makes 1 large serving.

## WEBELOS CRAFTSMAN ACTIVITY BADGE

### PAINTBRUSH CLEANER RACK

Base is 1" x 5" x 6"; Side supports are each 1" x 2" x 12"

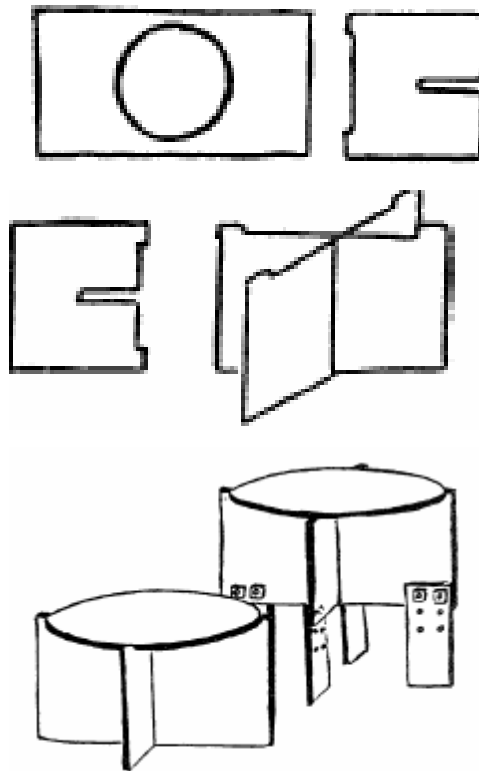
1. Cut a notch in center of each side of base 1-3/4" wide and 3/4" deep.
2. Sand all rough edges.
3. Drill a 1/4" hole in center of each side support, about 3/4" from end.
4. Glue or nail 12" strips into notches in base.
5. Cut a 7" piece of wire coat hanger.
6. Put a 1lb. coffee can on base and fill with solvent. Suspend brushed on wire held by side supports.

### CIRCULAR TABLE

Circular tables are handy in the den meeting room.

Use a circle cutter and cut out a table top 24" diameter. Cut two equal sized pieces of triple-wall cardboard 1 1/2" longer than the diameter of the table top to form base of table. Cross-slot base by cutting a slot in each piece as shown. Slots are 2" or half the length of each piece. Cut 1/2" strip from top of each base support.

Put slotted pieces together and add table top. Top is held in place by extensions of cardboard beyond table top and will not slide off supports. To make an adjustable height on table, add extension to the base; fasten with nuts and bolts. Merely dismantle for easy, flat storage.



### CHECKERS TABLE

Turn your circular table into a chess or checkers table. Use latex paint to paint checkerboard or use two colors of adhesive backed carpet squares and apply to table top. Use 2" holecutter and cut out the checkers.

**Note:** The top can also be held in place by gluing fourths of circle where supports meet under the table.



### DEN ACTIVITIES

1. Have a demonstration of the tools the boys will be using, and how to use them safely.
2. List Tools needed to complete the badge.
3. Select projects to work on and discuss badge requirements.
4. Demonstrate and practice painting, screwing screws and hammering nails.

### FIELD TRIPS

1. Visit a furniture factory, cabinetmaker, lumber yard or saw mill.
2. Visit a tannery, leather goods manufacture or retailer. Tandy Leather Co. is very cooperative with Webelos and Cub Scout dens in helping them find inexpensive projects to do and helping them with lacing and learning to use stamping tools.

## WEBELOS SCIENTIST ACTIVITY BADGE

### OPTICAL ILLUSIONS

Your eyes don't always see things as they really are. You can prove this by some easy demonstrations. With a little preparation, you can put on this demonstration at den or pack meeting.

#### THE FLOATING FINGER TRICK

While looking at a distant object, bring the tips of your forefingers toward each other at eye level, about a foot from your eyes. When your fingers are about an inch apart, you should see a tiny two-tipped finger floating in space between your real ones. Your eyes must be aimed at a distant object and not at your fingers. Each eye has an image of each finger and, since the eyes are looking far away, the images are not in registry. Close one eye at a time and you will see how this is so. Some people will not be able to see the floating finger if one of their eyes tends to suppress abnormally its image.

*The Principle:* Two eyes must aim precisely to localize and identify objects.

#### THE SHRINKING EDGE EFFECT

Make two cutouts in different colors and shapes. Size is not critical, but 6 inches wide and 2 1/2 inches high is a good size. Hold one above the other about an inch apart. Notice which of the two looks larger. Now reverse their positions. Which is larger now? You can

prove the two are the same size by superimposing them, but why does the bottom one always look so much larger? The eye is fooled because the small edge of the upper form is compared to the larger edge of the bottom one, so it appears that the entire figure is bigger.

*The Principle:* Size of objects is partly judged by what is close to them.

#### THE PENDULUM PHENOMENON

Fasten a white disc 3/4 inch in diameter on a 3-foot piece of white thread. Most any small object on a string will do. Have someone hold the thread so the disc can swing like a pendulum. Start the disc swinging in a perfectly straight line and view it from a distance of three feet against a plain wall. Notice how the disc swings in a line like a pendulum. Hold a sunglass lens over one eye only. Any plain sunglass will do. Observe the path of the swinging object again. The movement will no longer be in a line but in a circle. If you switch the dark lens to the other eye, the movement will appear to be in the opposite direction. For example, coming closer to you rather than farther as it swings from right to left.

*The Principle:* You see best if your eyes are as nearly equal as you can get them. Shows the importance for the two eyes to receive similar images.

### MAKING A CLOUD

Equipment needed: a glass gallon jug with a rubber stopper, some wooden matches and a hand pump (to fill footballs, basketballs or a bicycle pump) with an attached pump needle. Drill out the stopper so the pump needle can be inserted through it.

Procedure: Place a cup or less of warm water into the glass gallon jug and shake it up to moisten



the inside of the jug. Place the stopper on the jug and insert the pump needle into the stopper. Pump ten strokes of air into the jug. Quickly light a match, remove the stopper, blow out the match and toss it into the jug while still smoking. Rapidly add three more smoking matches before replacing the stopper. Replace the stopper and pump ten more strokes of air into the jug and remove the stopper.

A weak cloud was initially formed when the air in the jug was compressed and water was caused to evaporate due to the increase in pressure. When the stopper was removed the air in the jug became supersaturated and water condensed. When smoke was added, the carbon from the smoke gave the water a place to condense onto. When the stopper was removed a denser cloud formed because more water vapor condensed.