



Young Audiences of Massachusetts  
Experience. Understand. Create. Connect.



Imagination Kit  
&  
Study Guide



*Who is Leland Faulkner? From an early age, Leland was exposed to a wide range of ethnic cultures. Born in Afghanistan to American Indian parents, one of his earliest memories is being placed on the foot of a gargoyle in the ruins of ancient Persepolis. He spent seven years on the coast of Tanzania, East Africa, has traveled to Asia and Europe, and credits the global community with stimulating his love for theatre. His exploration of the moving image and theatre has led him into mime, magic and myth as he has sought new and intriguing ways of expressing idea and story. Beginning with movement theatre and evolving through new vaudeville and performance art, Leland was trained in the old world tradition of master and apprentice. He is a professionally trained film maker, mime, actor, and director. Leland studied with a variety of distinguished teachers including Tony Montanaro, Jacques Lecoq, and theatre masters from Italy and Japan.*

*Leland received a Bachelor of Arts degree in film making from the Brooks Institute, in Santa Barbara, California, and continues to work on film and media projects. On the performance level, Leland has been a touring artist for over twenty years. He has performed throughout the United States, and has taught and performed at theatre festivals, in cultural exchange programs, for corporate sponsors, in commercial work, in theaters and schools.*

#### *About the Performance*

*With a vision dedicated to the necessity of make-believe and the ability of theatre to be a universal art Leland continually searches for entertaining and meaningful theatre. His theatre productions have gained acclaim both at home and abroad. Paper becomes filled with movement and mystery, as origami butterflies appear to dance and multiply, or shadows seem imbued with a life of their own in an astonishing exploration of light manipulated with just a pair of hands.*

*His creative theatre, provides a unique entertaining event that gives audiences a new look at ancient arts. By presenting material that allows the spectator to enter into dreams with the actor, Leland Faulkner's World of Wonder enables his audiences to walk away with visions of their own.*

### **Preparatory and Follow up Activities**

This simple teacher guide including a bibliography has been compiled and provided to you in order to enhance Leland's appearance at your school, and to afford you the opportunity to bring some of the program right into your classroom.

Teachers are permitted to copy all or parts of this guide for their classroom use. We hope that you will do so and have many new and enlightening experiences with your students.

### **The Imagination Kit.**

I have put together some simple materials you can use to jumpstart kid's imaginations. I love to tell stories, perform magic, and create art. Theatre lets me do all that, because it is a special art form requiring many talents. Theatre is mostly about imagination, perception, vision, and communication, and these abilities are useful throughout many situations in life. Here are some ideas to get you started. Feel free to add your own insights and techniques. Don't expect too much from first attempts, but if you warm to the process slowly you will surely achieve many successes, and you may even surprise yourself

### **Acting and Storytelling**



Art and stories are how we remembered who we were as people before writing, film, or television. Culture was passed orally and visually through song, story, and artistic works. Songs were one way of remembering long stories that would be hard to remember otherwise. Cave drawings were an early visual form for communicating events and experiences to others, many of these cave pictures or pictographs tell a story about events that happened long ago.

Make your own story come to life by using improvisation. Imagine you are around a fire sitting at the mouth of a cave long ago. Start by putting everyone in a circle and choosing one person to start the story. Say, "Once there was a... ?" Encourage them to fill in the blank and use movement as they tell the tale to make it come to life. As soon as the person who starts hesitates, the teacher then focuses on the next person in the circle.

Teachers can prompt the person by saying, "and then what happened?" to the next person in the circle. Continue until you have gone all the way around, prompting the last person to finish the story, or the teacher can complete the tale, thus bringing the story to its conclusion. Don't preplan the outcome, it can be very surprising what comes up, and it can be very fun and revealing as well.

### **Shadows and Literature**

Read the following poem to your class, and ask them what they saw in their imagination as it was being read. Make it mysterious, and surprising, and exciting. Consider reading it in a darkened room with a single light source off to one side of the page, so shadows are cast on the wall as it is read. This activity brings both literature, and theatre into one shared space.

**Shadow**  
*By Blaise Cendrars*

The eye has no shadow.

All the children of the Moon and of the Sun, the Earth, the Water, the Air, the Fire own no shadow.

Shadow itself has no shadow.

Shadow lives in the forest. It goes forth at night to prowl around the fires. It even likes to mingle with the dancers. Thus it is both prowler and dancer.

Shadow is mute. It never speaks. It listens. It comes sliding right up behind the storyteller. Then when the last fire is out it goes back to the forest.

Shadow does not sleep. It is always watching. If you open your eyes in your sleep, Shadow is there. It has already stolen back like a thief, and now it is spying on you.

The eye has no shadow, but it sees Shadow stirring the embers until the log on the hearth crumbles without a sound and falls to ash. Ash has no shadow either. That's why Shadow is blind, for its eyes are two small heaps of ash. And so, when all the fires are out, Shadow is blind. It does not see a thing. It staggers about arms stretched out, trying to grab, to hang on. Body dragging, it runs, it starts to fall. Bent in two like a beggar it reaches for a perch, a prop. But it does not cry out, and calls no one. It has no voice.

On its nightly path it often gets bumped, gets torn, trips again and again, and each time sprawls its full length on the ground. But it does not cry out, it has no voice. Shadow falls.

They say also that it is the mother of all that crawls, of all that squirms. For as soon as the sun comes up, here are the shadow people, breaking loose, unwinding, stretching stirring, branching out, teeming, like snakes

scorpions and worms. That's why a person keeps an eye on his shadow when he wakes up, and takes care not to step on it when he gets up. It could sting or bite him! But Shadow says nothing. It has no voice.

Shadow is frightening, but there is no need to fear. It is not death. That's clear because it is there every morning and never says a thing, while death when it comes cries out. Besides, Shadow never asks for a thing. It has no hunger. Even so, watch out! For though Shadow has no voice, like the echo, it casts a spell over you, for good or bad, it is a Trickster and it laughs behind your back. It mocks you and makes a fool of you. Here it is in a mask.

In the daytime Shadow is full of life. It waves with the grasses, curls up at the foot of trees, races with the animals at their swiftest, nestles behind the elephant's ear, perches on a stone, swims along with the fish. It follows man everywhere, even to war.

Shadow is always Shadow. It needs no ornament, no tattoo. The zebra's shadow has no stripes. Shadow is magic. You had better not look at it too closely. For is it to the left, or the right, before or behind, above or below? At noon, Shadow is everywhere. In the evening, Shadow spreads out; not a hole that it does not fill, not a hump, not a mound that it does not double! It even sticks to your footprints. It lies down on the footpaths. It chokes all the roads. No one can pass, for no one can push it aside, it is so heavy. Yes, Shadow is heavy when night falls. Neither the eagle nor the vulture can raise it. In vain they try to soar into the air. Their shadow flops this way and that, like a clumsy bat,

and crashes so heavily to the ground, that they, the mighty birds of the heavens, fall after it, worn out. No one can fight Shadow.

Go home, build a fire. Behold once more, Shadow! What is Shadow? In the crackling coals, is it the spark? Light up! The spark has no shadow. The eye has no shadow, but Shadow is in the eye. It is the pupil! Every breath stirs it to life. It is a game. A dance.

---

This wonderful poem shows how shadows inspire the poet's words to evoke images. Ask students to create their own poems about shadows, and have them create silhouette art to illustrate their poem..

When you are done, make a book of this story, with your own drawings to make a visual and written archive of the tale you have just created. Originality is the most rewarding part of any art.

Here is a story I wrote and made an animated film about. I wrote it to celebrate my memories of growing up in Africa. You can request a copy of this film by emailing me at [leland@lelandfaulkner.com](mailto:leland@lelandfaulkner.com).



The Sky God's Dance  
**By Leland Faulkner**

After a time, the people were scattered all over the world. They were surrounded by mystery. They wanted to know who it was that made them, but the name was lost from memory. They could hear it whispered among the animals, but the language was too wild for human ears. The people sensed a meaning in the beating drum, saw a spirit in the dancing shadows, and as they listened to the stories, they would begin to dream. It was through dreaming that they remembered the Sky God's Dance.

It was the Sky God that made the stars, made them out of sparks from a great fire. That fire is the Sun. It was the Sky God that made the Earth, the Moon, trees, plants, animals, insects, and all the secret places where life is. The Sky God made everything that moves.

The Sky God decided that someone should help with the work, and so the Sky God made Man. The Sky God blew the breath of life into him, and no sooner was First Man alive, than he began to move, to dance. First Man felt that his feet would touch the stars.

After a full day of being alive, First Man was tired, so he stretched his length out on the earth and fell asleep. The rhythm of the Sky God's heart still played in his ears, and the Sky God's song echoed on his tongue. First Man dreamt about these things, as he lay in the light of the Sky God's fire.

The Sky God had enjoyed the dancing of First Man, and felt First Man should have a companion. So the Sky God reached down into the earth, and gave the breath of life again. When her heart began to beat, First Woman danced with the joy of being alive. Man and Woman were dancing together.

The Sky God loved their dancing, and wanting to see more, made many people live with a single breath. They were scattered all over the world. That is why the world must dance, because all living things, great and small, are filled with the spirit of life.

One day all the people will dream-dance together and remember the name of the Sky God. Until that day they will remain scattered, throughout the Earth, by the one who made them.

When you feel you must dance, remember this story, for you are dancing to show your joy at being alive, you are doing the Sky God's Dance.

## THE ORIGINS AND DEVELOPMENT OF THE ART OF MIME

Before the human voice developed, gestures served not only to communicate but also to aid in the development of vocal sounds. Later they were incorporated in the first forms of written language of, for example, the Egyptians, the Aztecs, and in the pictographic writings of the Hebrews. Gestures and expressive movement were also utilized in ancient religious dances and ceremonies. And from the ancient ceremonies in China, Japan, India, and Egypt emerged the actor, who was at once a dancer, singer, and mime.

The art of mime developed into several distinct categories, but it was rarely separated from dance and speaking theatre. Only among the Romans did it disengage from dance and speech to give birth to pantomime. Roman pantomime consisted of short, improvised, burlesque scenes and depicted current events and themes of love, adultery, and mocking of the gods.

After the fall of the Roman Empire, entertainers who inherited the Greco-Roman mime traditions sang, danced, imitated, and performed acrobatics at the courts and at private banquets throughout Europe. And despite the ups and downs of their fortune, strolling jongleurs and mimes never abandoned the ancient mime traditions.

During the 17th and 18th centuries, allegorical and mythological, pageant- type ballet-pantomimes were performed at the courts and in the theatres of Europe. The traditional dumb show in the 18th- and 19th-century French and English melodramas, as well as the Elizabethan dumb shows, were also called pantomimes. When staged in the English music halls at Christmas, they were called harlequinades. By the end of the 19th century, English Christmas pantomimes such as Cinderella and Jack and the Beanstalk contained spectacular scenic effects and popular music hall interludes with dialogue, acrobatics, singing, and dancing in which Clown had replaced Harlequin and Pierrot. And even though these Christmas pantomimes had almost no mime or dumb show and contained mostly dialogue, singing, and dancing, they were still called pantomimes or dumb shows because they included some element, however remote, of miming's technique and art. In nineteenth-century England and America, pantomime was incorporated into circus acts.

Meanwhile, in France, Gaspard Debureau had immortalized the silent Pierrot pantomimes, which we today call pantomime blanche because of the whiteface the artist wears. His Pierrot, though inspired by the lazy, mischievous valet Pedrolino of the commedia dell'arte, soon became an essentially French character. He changed Pierrot from a cynical, grotesque rogue into a poetic fellow

and brought a personal expression to the fantasy, acrobatics, melodrama, and spectacular staging that characterized 19th-century pantomimes.

Mime also returned to the forefront in 1923, when Jacques Copeau founded his acting school, where miming with a mask and doing exercises helped the actor find greater corporeal expressivity. Convinced that the human body alone suffices to dress a bare stage the exercises were developed into a code of corporeal mime.

By the mid-20th century, Paris was the place for mimes to be. It was here that several great masters gave new life to the mime art, as well as merged it with other forms. Through Bip and style pantomimes this art became known to the world. The global training method fused the art of the clown and the buffoon, juggling, acrobatics, spoken text, dance, plastic arts, and all of life with body movement. His movement expression, based on the observation of natural movement, opened up new directions for physical theatre.

Three main schools of mime developed in Europe that had worldwide repercussions. The more commonly whitefaced, illusion pantomime portrayed concrete emotions and situations by means of conventional gestures, creating the illusion of something there which in reality is not. Corporeal mimes rejected this form to express abstract and universal ideas and emotions through codified movements of the entire body. Those in movement theatre combined acting, dance, and clowning with movement. However, in the 1980s, even the whiteface, illusion pantomimists and corporeal mimes began expanding in many new directions. Instead of limiting themselves to silent expression and classical pantomime or codified mime technique, they experimented freely with texts and the use of voice. Some mimes wrote their own texts, as did the Greek mime-authors, integrating the mime-actor's art with the author's. They also included props, costumes, masks, lighting effects, and music. Mime in the postmodern era thus incorporated so many new elements that it was no longer referred to exclusively as mime. It was called mime-dance, mime-clowning, mime-puppetry, New Vaudeville, etc. And if it contained movement expression along with other elements, it was loosely alluded to as physical or movement theatre.

Twentieth century verbal theatre also explored the use of physical expression (mime in a broader sense) to create a more complete or total form of theatre. This not only allowed the actor to challenge his/her own creative resources but drew the spectator into a fuller sensory experience, reestablishing the theatre as spectacle and giving free vent to the development of a fertile, richer, and more visual theatre.

*The above article is excerpted from the book From the Greek Mimes to Marcel Marceau and Beyond: Mimes, Actors, Pierrots and Clowns: A Chronicle of the Many Visages of Mime in the Theatre by Annette Lust.*

## **Shadows and Science**



Talk about shadows, what are they?

- Where do they come from?
- Are they useful in any way?

Using a single light source as backlight, hang a sheet or paper in a doorway see if you can make the shadow in the picture above.

- Two students step into the frame and change the way they look before stepping into the light. Have the students guess which one it is.



- What is the light source?
- How is the shadow similar to the object you used to make it? How is it different?
- How can you change the size of your shadow?
- How can you change the shape of your shadow?
- How can you change the position of your shadow?
- Hold up ordinary objects, and cast the shadow, see if you can fool the viewers as to what the object is.
- Trace your body shadow, and your profile. Everyone is unique.

### **Changing Shadows During the Day**

While students are aware that day and night occur, they may not yet understand that these changes happen because the Earth rotates once every twenty-four hours. Day occurs when our side of the Earth faces the Sun and night occurs when our part faces away. As the day progresses, the Sun appears to follow a path from its rising in the east to its setting in the west. One way to record the Sun's path is to track the shadow cast by a stationary stick. By repeating the experiment periodically over the course of several months, the effect of the time of year on the Sun's path also should be observed. (These two activities are identical, except for the size of the group.) Important points to understand include:

- The Sun appears to move across the sky due to the rotation of the Earth about its axis.
- The Sun's path for a certain day is determined by the location of the observer on the Earth.
- Climbers standing at the peak of the highest mountain on earth at sunset make the longest shadow in the world, a shadow that can stretch for miles?

### **Tracking Sun Shadows (Large Group)**

For this activity, first find some open outdoor space - preferably in the school yard - that can be used every day. Be sure to choose a spot unobstructed by trees or tall buildings which would shade this area early or late in the day. When working with older students, it may be preferable to have them work in small groups to record their own Sun shadows (see small group activity below). The small group activity also may lend itself more naturally to long-term observations. If long-term observations are to be made, be sure to record the height of the shadowstick and to use the same one each time. The height will be very important for the activity "Measuring the Earth's Tilt" in Topic 5.



*Note: Classes which start observations early in September should be able to include the autumnal equinox (around September 21) in their observations. On the equinox, the shadow ends from the shadow stick will all lie on a straight line. Additionally, an early start allows for the refinement of observing techniques before cold winters arrive to northerly climes.*



**Be sure to remind students that  
looking at the Sun can cause permanent eye damage-  
Never look directly at the Sun!**

Possible questions to consider and discuss: What are some differences between day and night? Where does the Sun rise? Where does it set? Where is the Sun at noon? At midday?

Note: Due to daylight savings time, the sun may not reach its highest point in the sky until nearly 1:30PM depending on the time of year and your location within your time zone!

**Materials:** yardstick; large coffee can of soil or stones; large, flat sheet of cardboard or heavy paper (at least 2' x 3'); marker; and compass.

- 1. Begin early on a sunny day and plan to make periodic measurements throughout the day.
- 2. Having selected a suitable spot, use a compass to determine North, East, South, and West. Place the recording sheet of cardboard or heavy paper on level ground such that the edges are aligned with the compass directions. Place the yardstick upright in the large coffee can filled with soil or stones and put this at the center of the southern edge of the recording sheet.
- 3. Mark the direction of magnetic North on the recording sheet. Make sure the students do not move the cardboard, but, just in case, mark the outline of the recording sheet on the pavement with chalk and the outline of the can with a marker, so that their positions may be checked. If permitted, it may be helpful to outline the chart, or its corners, on to the pavement with spray paint so that observations can be repeated from day to day and week to week.
- 4. Mark the line and tip of the shadow cast by the yardstick with a marker and record the time of the observation. Ask students to predict where the shadow will fall after a certain time interval, such as 15 minutes or an hour. Each student or group of students can mark the place they predict with a small stone or popsicle sticks. When the chosen interval has passed, mark the new shadow position with a marker. The class can check their markers against the actual position.
- 5. Throughout the course of the day, periodically (every hour or half hour) record the movement of the shadow of the yardstick by marking the line and tip of the shadow.



### **Analysis:**

After a day of recording, connect the shadow ends recorded near noon time with a line. At Midday, the Sun is at its highest in the sky, and therefore corresponds to the shortest shadow. At this time, the Sun is due South, and so the shadow of the stick points toward the Earth's North Pole. Mark this North-South line. (If not measured, the locations of the noon and midday shadows can be estimated from the positions of shadows marked at nearby times.)

Compare the North-South line marked by the midday shadow with that marked with the compass. Do they agree? Discuss the difference between True and Magnetic North. A compass is simply attracted by the magnetic force. Demonstrate how a nearby magnet can easily fool the compass. Try making it point South by placing a magnet to its south!

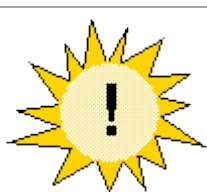
If a computer is available, the length of each shadow could be measured and entered, along with its time, into a spreadsheet or graphing program (like AppleWorks, Excel, or Cricket Graph). The computer could make a graph relating the shadow length to the time of each observation. The data for each day could be saved and compared to later days. Even without a computer, a simple graph could be made by hand.

### **Discussion:**

Discuss observations of shadow lengths. Questions might include: How do shadow lengths change during the day? Why do they change? Is there a pattern to where the shadows fall and their lengths? Why is there a pattern? Is the Sun directly overhead at any time? Why is the shortest shadow around noon? Why does the shortest shadow point North? Why doesn't it point in the same direction as the magnetic compass?

### **Tracking Sun Shadows (Small Group)**

*This activity duplicates the large group activity above but on a smaller scale; it may be done by groups of 2 to 4 students. The analysis and discussion will be similar to that done for the large group.*



**Be sure to remind students that  
looking at the Sun can cause permanent eye damage-  
Never look directly at the Sun!**

**Materials** (per group): short drinking straws; modeling clay; 9"x12" oaktag; large rock or brick; clear acetate as used with an overhead projector (if not available, use plain paper or tracing paper); compass; crayons and markers.

- 1. Begin early on a sunny day and plan to make periodic measurements throughout the day.
- 2. Have each group mount a straw vertically in clay at the center of the oaktag and outline the clay with a marker.
- 3. Make sure each group has selected an appropriate spot for observing, and be certain the oaktag is anchored with a large rock or brick to prevent it from blowing away (don't let the anchor block the Sun!) Have each group trace the outline of its oaktag on the ground with chalk and mark magnetic north on the oaktag and the ground to insure that the oaktag is identically placed for each measurement. Mark the position and tip of the shadow of the straw at regular intervals throughout the day, noting the time of each observation.
- 4. At the end of the day, remove the straw and clay and mark the location of the bottom of the straw on the oaktag with a marker. Place a plastic sheet over the oaktag and copy the markings with a felt-tip marker. Date the plastic sheet and the oaktag. Save these to compare with later recordings.

Pose the question, "Did you know nighttime is an enormous shadow?"

### **Day and Night on the Spinning Globe**

In the previous activity, students saw how shadows changed during a day. This activity uses a globe and indoor light source to create a classroom model showing day and night on a spinning Earth.

*This activity requires a darkened room.*

**Materials:** Earth globe with string attached to North Pole; strong focused light source (such as an overhead projector, a flashlight, or a slide projector); golf tees; small figurines; fun tack or similar material.

- 1. Hang the globe from the ceiling, low enough to be reached easily. Shine the light source directly at the globe from the side. The light source must be large enough to illuminate the entire Earth. If you use an overhead projector, you can cut out the "extra" light by placing a sheet of paper on the glass with a hole cut out of its center. While the Earth is actually tilted in its orbit, this is a complication which will not be dealt with until the next chapter on the seasons.
- 2. Attach a small figurine to the globe at your location with fun tack. Slowly turn the globe so that the figurine "sees" the Sun rise in the east and set in the west. Now attach a second figurine to another part of the globe. Does the Sun rise earlier or later in this new location? Are the figurines always both in light or both in darkness? Or can one be in light while the other is in darkness? What if the two figurines were on opposite sides of the Earth?
- 3. Attach a golf tee to the globe at your latitude. Again, slowly turn the globe eastward and notice the fan-like shadow pattern which the golf tee casts. Is it similar to the pattern cast by the shadow stick in the previous activities? Note that the shortest shadow points towards the North Pole.
- 4. Attach three golf tees to the globe at various latitudes along the same meridian of longitude. One should be on the equator, one should approximate your latitude, and one should be near the poles. Ask three students to each observe one of the golf tees. As the globe slowly spins, ask the students to call out their golf tee- "top", "middle", or "bottom"- as they cross the day-night boundary. Also, be sure to observe the midday shadows and to note in which direction they point.

### Discussion:

How do we know if we're spinning the globe in the right direction? Where does the Sun rise if we were standing on the globe? Where does it really rise? Set? What if we spun the globe in the other direction? Would this also match our observations? It is only by such comparisons with observations that we can verify our models. Are the golf tee shadows longer or shorter at the equator? What about at noon, when the Sun is highest in the sky? Is there any shadow at the equator? What about at your latitude? Where do all the shortest shadows point? Does the pattern made by the golf tee reasonably match that made by the shadow stick of the previous activities? Might a spinning earth, then, not be a reasonable model for the passage of day and night? What if the Earth didn't rotate? What if the North Pole were pointed towards the Sun? Where would it be day and night? Would all locations still have both day and night?

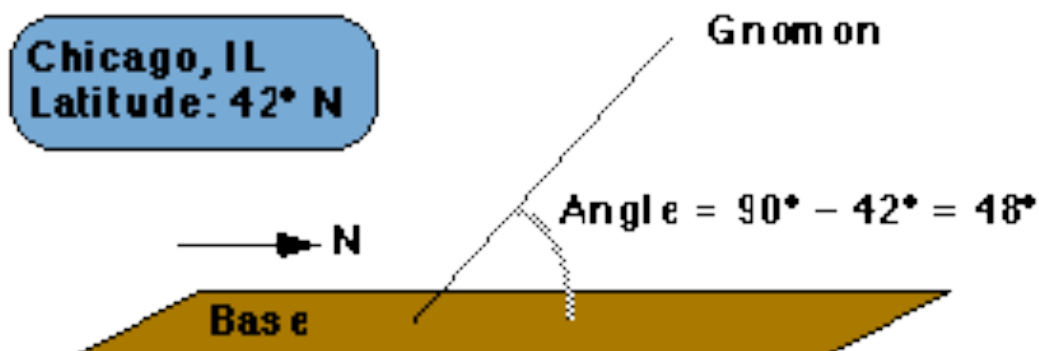
Can you think of any other ways to test this model of a spinning Earth? Maybe shadow stick patterns from schools at other latitudes could be compared to yours. Are they consistent with the differences seen on the spinning globe? Have the students observed any complications which our model does not account for?

Our concept of time is related to shadow. Here is an activity that uses a sundial on the ground outside.

### Building and Using a Sundial

*This activity is most appropriate for grades 4-6.*

A sundial is a device to measure time by the sun. It is made of two parts: a gnomon (NO-men) and a base. The gnomon casts a shadow on the base, a flat surface with markings indicating each hour. On a



properly constructed sundial, the shadow of the Sun moves equal distances each hour. A sundial with a vertical gnomon will work perfectly at the North Pole because there the shadows cast will move equal distances each hour. But as one moves farther from the North Pole, the motion of the shadows varies more.

When you made the shadow stick measurements, you may have noticed that shadows separated by equal time intervals were rarely separated by the same distance. One solution to this problem is to tilt the gnomon so it is aligned as it would be if it were vertical at the North Pole (i.e. parallel with the Earth's axis). Knowing your latitude is all that is necessary to find the correct angle to tilt your gnomon. Since the latitude of the North Pole is  $90^\circ$  (N), just subtract your latitude from  $90^\circ$  to find the angle to tilt the gnomon (refer to the table of latitudes of major U.S. cities). The gnomon should point towards North .

You may want to repeat the shadow stick measurements in Topic 2 at the same time as the sundial measurements to see the difference of a vertical stick and one tilted to match your latitude. Instead of tilting a stick, we will use the "tilted" edge of a triangle for our sundial gnomon.

**Materials:** scissors, enclosed cut-outs, protractor, oaktag (or other heavy paper), popsicle sticks, graph paper.

- 1. Make a gnomon pattern like the example we've included. Refer to the latitude table to determine the correct angle to mark -  $45^\circ$  is marked as an example. Cut out the gnomon from this pattern.
- 2. Fold pattern along the dashed line so that the flaps A and B are on either side of the gnomon. These flaps will allow the gnomon to stand on its own.
- 3. Tape a sheet of graph paper over the oaktag.
- 4. Tape the gnomon to the middle of the sheet of graph paper on the oaktag. If the gnomon remains floppy, then tape a popsicle stick to it to provide support.
- 5. Start early in the morning. Place the sundial outdoors, with the gnomon pointing North. Record the outline of the gnomon's shadow and record the time next to it. Repeat this process each hour. See if the students notice a pattern in the movement of the shadow.

### **Discussion:**

Count how many squares the shadow moves each hour. Compare how the triangle gnomon measures the hours compared to how the vertical shadow stick measures the hours. In which direction did the shadow appear to move? What if the sundial were in the Southern Hemisphere? Did you ever wonder why clocks run "clockwise"? Before mechanical clocks, people used sundials, which, as we have seen, run clockwise in the Northern hemisphere.

Before the establishment of the standard time zones we know (Eastern, Central, Mountain, and Pacific for the continental U.S.), each city kept its own time based on the observations of the Sun. We have seen how to find midday. Try keeping your own time based on your observations of the Sun by setting noon to midday. How close to the "standard" time are you? Where else on the globe should have the same "local" time as you? Are there any advantages to keeping your own solar time? What about disadvantages? Why might we have standardized on time zones?

What else can you discover about shadows?

### **Paper, Origami, and Papiroflexia**

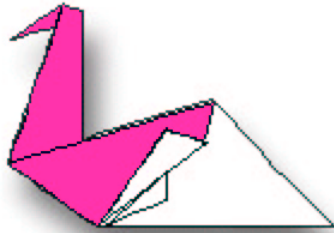
Paper has influence the development of humankind in amazing ways. Most modern civilization would not exist without the invention of paper. Although paper is used in recording and sharing information it is also a visual tool for artists, and architects. In the first century AD paper was

invented in China and ever since people have been folding it into various shapes. While the Chinese were the first to craft objects from paper, the Japanese have integrated paper folding into their culture.

Paper is very important to the people of Japan. In fact the Japanese word for paper “kami” is a homonym for the Japanese word for god. Ori means folding and gami(kami) is paper, thus origami means paper folding. Paper is used in architecture, rituals and through out the Shinto religion in Japan. The designs of origami were traditionally passed down through oral tradition from mother to daughter. The designs that were kept were very simple until the appearance of written instructions in 1797.

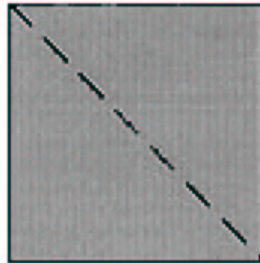
The Moors in Spain also developed paper folding. Since the Muslim religion prohibits representational figures, the Moors created very interesting and unique geometric designs. When the Moors left Spain the art of paper folding stayed, eventually developing to papiroflexia. The ancient art of paper folding continues to evolve today. New designs and methods are always being invented, proving that not only is origami a historical and cultural phenomenon but also a living and viable art form.

### **Easy Origami Swan**

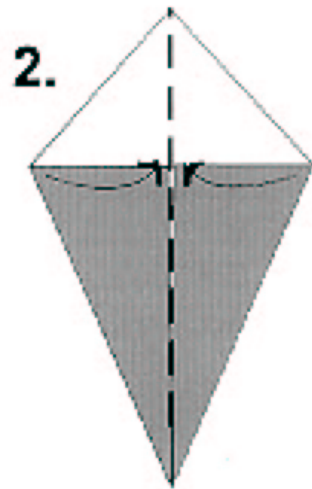


### **Follow These Simple Steps to Make a Beautiful Swan**

**1.**

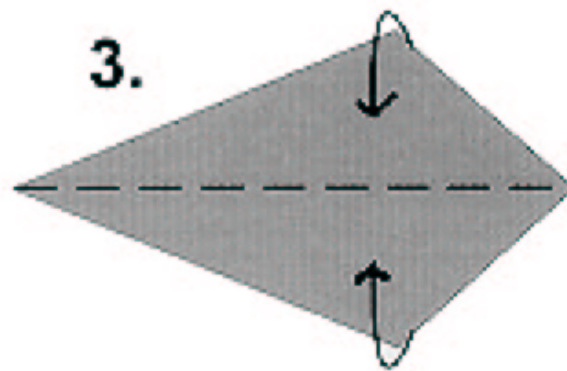


1. Start with a square piece of paper. Fold in half diagonally and crease. Turn over.

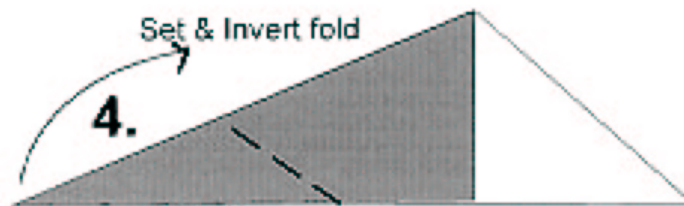


2. Fold corners to center line and crease.

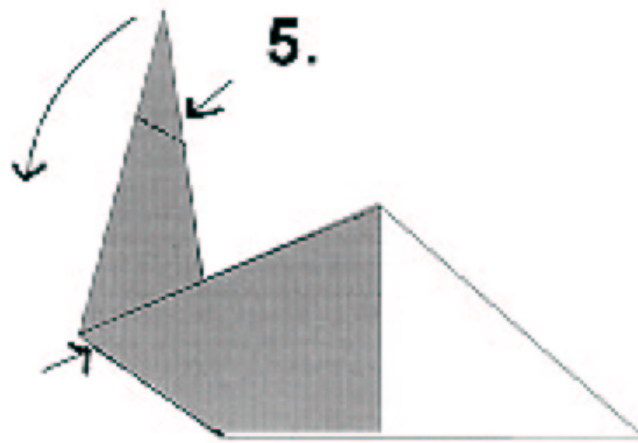
Turn over.



3. Fold in half along center crease so solid edges are together.

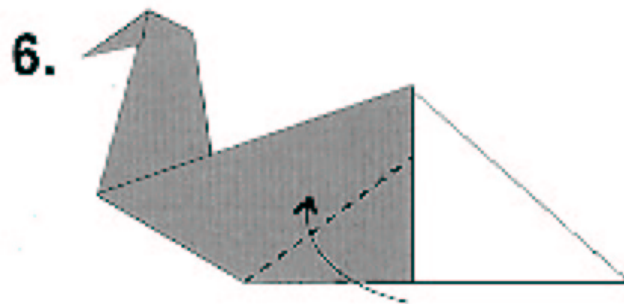


4. Fold narrow point upward at 90-degree angle to form neck and crease.  
Invert fold so neck is inside body.

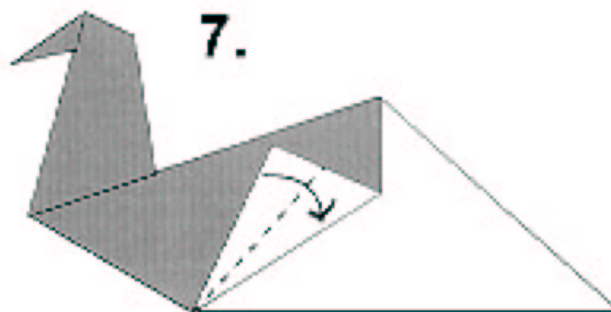


5. Fold point downward to form head and crease.

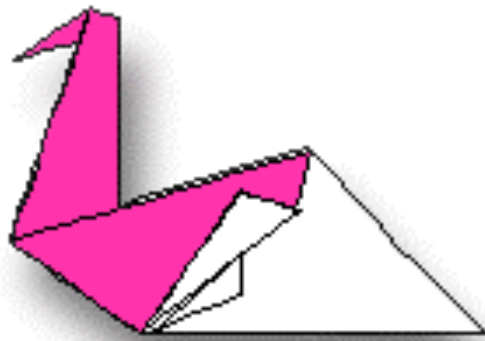
Invert fold so head is inside neck.



6. Fold up flap to form wing.



7. Fold half of flap back down.



Beautiful!



Color Me!

# Leland Faulkner



## ***THINK ABOUT IT!***

Talking with your teacher, friends, and family about a performance after attending the theater is part of the experience. When you share what you saw and felt you learn more about the performance. You can now compare ideas and ask questions and find out how to learn even more. Here are some ideas to think about:

1. What did you see in the performance that you are curious to learn more about? Why?

Activities:

- 1 Pretend that you are a reporter and write a review of Leland Faulkner's *World of Wonder*. What did you like, what didn't you like? Be descriptive and use adjectives.
- 2 Faulkner's performance contains many folktales. Folktales are stories that are passed from generation to generation through song, dance and storytelling. Pick an event from your life that you would like to share with your class and express it dramatically, using techniques that you saw in Faulkner's performance.

## ***ATTENDING THE THEATER***

***What is expected of student audiences at the performance:***

- Enter the auditorium quietly and take seats immediately
- Show courtesy to the artist and other guests at all times;
- Demonstrate appreciation for the artist's work by applauding at the appropriate times;
- Refrain from making unnecessary noise or movements;
- Relate any information acquired from the pre-matinee discussion to the new information gained from the matinee.

***What you can expect of your experience in a performing arts theater:***

A theater is a charged space, full of energy and anticipation. When the house lights (the lights that illuminate the audience seating) go down, the excitement level goes up! Theaters are designed so that the voices of the singers and actors and the music of the musicians can be heard. But this also means that any sound in the audience: whispering, rustling of papers, speaking and moving about, can be heard by other audience members and by the performers. Distractions like these upset everyone's concentration and can spoil a performance.

The performers on stage show respect for their art form and for the audience by doing their very best work. The audience shows respect for the performers by watching attentively. Applause is the best way for audience members to share their enthusiasm and to show their appreciation for the performers. Applaud at the end of a performance! Sometimes the audience will clap during a performance, as after a featured solo. Audience members may feel like laughing if the action on stage is funny, crying if the action is sad, or sighing if something is seen or heard that is beautiful. Appreciation can be shown in many different ways, depending upon the art form and the culture(s) of the people in the audience. While the audience at a dance performance will sit quietly, other types of performance invite audience participation.

## Bibliography

Adler, Irving and Ruth. *Shadows*. New York: The John Day Co.. 1968.

Simple explanations of what shadows are. how. and when they exist. Information covers varied

Buila Clyde Robert. *What Makes a Shadow?* New York: Scholastic Book Services, 1968.

Easy to understand explanation of what is a shadow, how to change its size, darkness and

Cochran, Louise. *Shadow Puppets in Color*. Boston, Mass.: Plays, Inc.  
1975. Traditional plays from many cultures. (Grades 6-8)

Gardner, Robert, and Webster, David. *Shadow Science*. Garden City. New York: Doubleday & Co. Inc. 1976.

A collection of experiments. Puzzles. tricks and games involving shadows with over one hundred black and white photographs showing how fascinating and useful shadows can be

Gasiorowicz, Nina. *The Mime Alphabet Book*. New York: Lerner 1974.

Joyce. Hope. *Me and My Shadows*. San Diego: Joy-Co Press, 1981.

Kipnis, Claude. *The Mime Book*. Harper & Row, 1974.

Lynch-Watson. Janet. *The Shadow Puppet Book*. New York: Sterling Publishing Co.. Inc., 1980.

Tells how to make various shadow puppets and create a screen plus scenery for performance.  
Also included are plays. a brief history of shadow puppets. and the tradition of shadow

Mendoza, George, and Rao, Prasanna. *Shadowplay*. New York, Chicago. and San Francisco: Holt, Rinehart and Winston, 1974.

Photographs of shadow images together with photographs showing how the images are made using fingers and hands. (Grades K-6)

Reiniger, Lotte. *Shadow Puppets. Shadow Theatres & Shadow Films*, Boston: Plays Inc..  
1975. An excellent book covering history and techniques by this German master.

Spolin, Viola. *Improvisation For The Theatre*. NW University Press  
1976. Recognized *classic* of theatre games for instructors.

Kenneway, Ezic. Complete Origami. New York: St. Martin's Press, 1987.

Milbourne, Christopher. The Illustrated History of

There are many books on magic available through your library resources, far too many to list here.  
Explore. learn. and have fun!

Dear Parent,

Today your child attended a multi-cultural theatre program by Mr. Leland Faulkner, a master of visual theatre. Mr. Faulkner has traveled around the world and integrates that international experience in his performance. He captured the children's imagination through shadowplay, illusion, and characters from around the world. Ask your child to tell you about this uniquely creative presentation!

Special thanks to those who sponsored and supported this program in our school.

Dear Parent,

Today your child attended a multi-cultural theatre program by Mr. Leland Faulkner, a master of visual theatre. Mr. Faulkner has traveled around the world and integrates that international experience in his performance. He captured the children's imagination through shadowplay, illusion, and characters from around the world. Ask your child to tell you about this uniquely creative presentation!

Special thanks to those who sponsored and supported this program in our school.

Dear Parent,

Today your child attended a multi-cultural theatre program by Mr. Leland Faulkner, a master of visual theatre. Mr. Faulkner has traveled around the world and integrates that international experience in his performance. He captured the children's imagination through shadowplay, illusion, and characters from around the world. Ask your child to tell you about this uniquely creative presentation!

Special thanks to those who sponsored and supported this program in our school.

Dear Parent,

Today your child attended a multi-cultural theatre program by Mr. Leland Faulkner, a master of visual theatre. Mr. Faulkner has traveled around the world and integrates that international experience in his performance. He captured the children's imagination through shadowplay, illusion, and characters from around the world. Ask your child to tell you about this uniquely creative presentation!

Special thanks to those who sponsored and supported this program in our school.