



CIRQUE MECHANICS: BIRDHOUSE FACTORY

Applause Series Curriculum Guide
May 15-16, 2014



CIVIC CENTER • STONER THEATER • TEMPLE THEATER • COWLES COMMONS



Dear Teachers,

Thank you for joining us for the Applause Series presentation of *Cirque Mechanics' Birdhouse Factory*. Jaw-dropping acts, humor, and creativity take center stage in this original story from one of America's leading cirque companies. The nonverbal tale about workers in a Great Depression era factory works on many levels and is sure to be a memorable way to close out your school year.

We thank you for sharing this very special experience with your students and hope that this study guide helps you connect the performance to your in-classroom curriculum in ways that you find valuable. In the following pages, you will find contextual information about the performance and related subjects, as well as a variety of discussion questions and assessment activities. Some pages are appropriate to reproduce for your students; others are designed more specifically with you, their teacher, in mind. As such, we hope that you are able to "pick and choose" material and ideas from the study guide to meet your class's unique needs.



See you at the theater,

Des Moines Performing Arts Education Team

Support for Des Moines Performing Arts education programs and the Applause Series is provided by:

Alliant Energy, American Enterprise Group, Inc., Bradford and Sally Austin, Bank of America Charitable Foundation, Bravo Greater Des Moines, EMC Insurance Foundation, Hy-Vee, Inc., John Deere, Richard and Deborah McConnell, DuPont Pioneer, Polk County Board of Supervisors, Prairie Meadows, Sammons Financial Group, Sargent Family Foundation, U.S. Bank, Wells Fargo & Co., West Bank, Willis Auto Campus, Windsor Charitable Foundation and more than 500 individual donors.

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This study guide was compiled and written by Yvette Zarod Hermann and edited by Karoline Myers.

ABOUT DES MOINES PERFORMING ARTS



Des Moines Performing Arts is a private, nonprofit organization and is an important part of central Iowa's cultural community. It is recognized nationally for excellence as a performing arts center and is committed to engaging the Midwest in world-class entertainment, education, and cultural activities.

Des Moines Performing Arts presents professional touring productions, including theater direct from Broadway, world-renowned dance companies, family programming, comedy, and concerts.

Education and Community Engagement programs are core to Des Moines Performing Arts' mission as a nonprofit performing arts center.

Public education programs allow audience members and local artists to make meaningful and personal connections to the art they experience on Des Moines Performing Arts' stages. Guest lectures and Q&As with company members allow audiences to explore the inner workings of the performance. In addition, master classes, workshops, and summer camps taught by visiting performers give local actors, dancers, and musicians the chance to increase their skills by working directly with those who know what it takes to succeed on the professional stage.

Through its **K-12 School Programs**, Des Moines Performing Arts strives to ensure that central Iowa students have affordable access to high quality arts experiences as part of their education. More than 50,000 students and educators attend curriculum-connected school matinee performances through the Applause Series annually. In addition, Des Moines Performing Arts sends teaching artists into the schools to provide hands-on workshops and residencies in special opportunities that engage students directly in the creative process. Through its partnership with the John F. Kennedy Center, Des Moines Performing Arts provides teachers with in-depth professional development training on how to use the arts in their classrooms to better impact student learning. The Iowa High School Musical Theater Awards is Des Moines Performing Arts' newest initiative to support the arts in Iowa schools, providing important learning tools and public recognition to celebrate the achievements of students involved in their high school theater programs.

DID YOU KNOW?

More than 350,000 people visit Des Moines Performing Arts venues each year.

Des Moines Performing Arts opened in 1979.

Des Moines Performing Arts has three theater spaces:

- *Civic Center, 2744 seats*
- *Stoner Theater, 200 seats*
- *Temple Theater, 299 seats (located in the Temple for the Performing Arts)*

No seat is more than 155 feet from center stage in the Civic Center.

Cowles Commons, situated just west of the Civic Center, is a community gathering space that is also part of Des Moines Performing Arts. The space features the Crusoe Umbrella sculpture by artist Claes Oldenburg.

As a nonprofit organization, Des Moines Performing Arts depends on donor funding to support facilities, programming, and education programs.

The Applause Series started in 1996. You are joining us for our 18th season of school performances.

GOING TO THE THEATER . . .



YOUR ROLE AS AN AUDIENCE MEMBER

Attending a live performance is a unique and exciting opportunity. Unlike the passive experience of watching a movie, audience members play an important role in every live performance. As they act, sing, dance, or play instruments, the performers on stage are very aware of the audience's mood and level of engagement. Each performance calls for a different response from audience members. Lively bands, musicians, and dancers may desire the audience to focus silently on the stage and applaud only during natural breaks in the performance. Audience members can often take cues from performers on how to respond to the performance appropriately. For example, performers will often pause or bow for applause at a specific time.

As you experience the performance, consider the following questions:

- * What kind of live performance is this (a play, a dance, a concert, etc.)?
- * What is the mood of the performance? Is the subject matter serious or lighthearted?
- * What is the mood of the performers? Are they happy and smiling or somber and reserved?
- * Are the performers encouraging the audience to clap to the music or move to the beat?
- * Are there natural breaks in the performance where applause seems appropriate?

A SPECIAL EXPERIENCE

Seeing a live performance is a very special experience. Although it is not required, many people enjoy dressing up when they attend the theater.

THEATER ETIQUETTE

Here is a checklist of general guidelines to follow when you visit the Civic Center:

- * Leave all food, drinks, and chewing gum at school or on the bus.
- * Cameras, recording devices, and personal listening devices are not permitted in the theater.
- * Turn off and put away all cell phones, pagers, and other electronic devices before the performance begins.
- * Do not text during the performance.
- * Respect the theater. Remember to keep your feet off of the seats and avoid bouncing up and down.
- * When the house lights dim, the performance is about to begin. Please stop talking at this time.
- * **Talk before and after the performance only.** Remember, the theater is designed to amplify sound. Other audience members and the performers on stage can hear your voice!
- * Use the restroom before the performance or wait until the end. If you must leave the theater during the show, make sure the first set of doors closes before you open the second — this will keep unwanted light from spilling into the theater.
- * Appropriate responses such as laughing and applauding are appreciated. Pay attention to the artists on stage — they will let you know what is appropriate.
- * Open your eyes, ears, mind, and heart to the entire experience. Enjoy yourself!

GOING TO THE THEATER information is adapted from the Ordway Center for the Performing Arts study guide materials.

CIVIC CENTER FIELD TRIP INFORMATION FOR TEACHERS



Thank you for choosing the Applause Series with Des Moines Performing Arts. Below are tips for organizing a safe and successful field trip to the Civic Center.

ORGANIZING YOUR FIELD TRIP

- * Please include all students, teachers, and chaperones in your ticket request.
- * After you submit your ticket request, you will receive a confirmation e-mail within five business days. Your **invoice will be attached to the confirmation e-mail.**
- * Payment policies and options are located at the top of the invoice. **Payment (or a purchase order) for your reservation is due four weeks** prior to the date of the performance.
- * Des Moines Performing Arts reserves the right to cancel unpaid reservations after the payment due date.
- * Tickets are not printed for Applause Series shows. Your invoice will serve as the reservation confirmation for your group order.
- * Schedule buses to arrive in downtown Des Moines at least 30 minutes prior to the start of the performance. This will allow time to park, walk to the Civic Center, and be seated in the theater.
- * Performances are approximately 60 minutes unless otherwise noted on the website and printed materials.
- * All school groups with reservations to the show will receive an e-mail notification when the study guide is posted. Please note that study guides are only printed and mailed upon request.

DIRECTIONS AND PARKING

- * Directions: From I-235, take Exit 8A (Downtown Exits) and the ramp toward 3rd Street and 2nd Avenue. Turn onto 3rd Street and head south.
- * Police officers are stationed at the corner of 3rd and Locust Streets and will direct buses to parking areas with hooded meters near the Civic Center. Groups traveling in personal vehicles are responsible for locating their own parking in ramps or metered (non-hooded) spots downtown.
- * Buses will remain parked for the duration of the show. At the conclusion, bus drivers must be available to move their bus if necessary, even if their students are staying at the Civic Center to eat lunch or take a tour.
- * Buses are not generally permitted to drop off or pick up students near the Civic Center. If a bus must return to school during the performance, prior arrangements must be made with Des Moines Performing Arts Education staff.

ARRIVAL TO THE CIVIC CENTER

- * When arriving at the Civic Center, please have an **adult lead your group** for identification and check-in purposes. You may enter the building through the East or West lobbies; a Des Moines Performing Arts staff member may be stationed outside the building to direct you.
- * Des Moines Performing Arts staff will usher groups into the building as quickly as possible. Once inside, you will be directed to the check-in area.
- * Applause seating is not ticketed. Ushers will escort groups to their seats; various seating factors including group size, grade levels, arrival time, and special needs seating requests may be used to assign a group's specific location in the hall.
- * We request that an **adult lead the group into the theater and other adults position themselves throughout the group**; we request this arrangement for supervision purposes, especially in the event that a group must be seated in multiple rows.
- * Please allow ushers to seat your entire group before rearranging seat locations and taking groups to the restroom.
- * As a reminder, children under the age of three are not permitted in the theater for Applause performances.

IN THE THEATER

- * In case of a medical emergency, please notify the nearest usher. A medical assistant is on duty for all Main Hall performances.
- * We ask that adults handle any disruptive behavior in their groups. If the behavior persists, an usher may request your group to exit the theater.
- * Following the performance groups may exit the theater and proceed to their bus(es).
- * If an item is lost at the Civic Center, please see an usher or contact us after the performance at 515.246.2355.

QUESTIONS?

Please contact the Education department at education@desmoinesperformingarts.org or 515.246.2355

Thank you!

VOCABULARY

CIRCUS TERMS

aerial acrobatics: a form of gymnastics performed “in the air” including trapeze, aerial hoops, corde lisse and aerial silks.



image: pinterest.com

Aerialists must possess a high degree of strength, power, flexibility, courage, and grace.



image: acrobatproductions.com

Chinese pole: vertical poles on which circus performers climb, slide down and hold poses. The poles generally 10-30 feet long.

Cirque: “circus” in French



image: cirquepassion.org



image: aerial-skull.tumblr.com

corde lisse (or “smooth rope” in English): a vertically hanging rope with no toe loops for performing aerial acrobatics.

German wheel: (“rhönrad” in German) a metal wheel with hand grips and bars that moves by the power and muscle control of the performer



image: blogs.oberlin.edu

SCIENCE TERMS

Isaac Newton: English physicist who lived from 1642-1727. He is best known for his theory of gravity and his three laws of motion.



image: sirisaacnewton.info



image: pixton.com

Laws of motion: three scientific laws which Isaac Newton discovered concerning the behavior of moving bodies.

These laws are fundamental to classical mechanics.

machine: a human-made system or device made up of fixed and moving parts that perform tasks.



image: vernier.com

mechanics: the branch of physics that studies

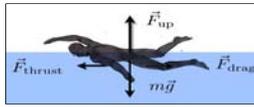
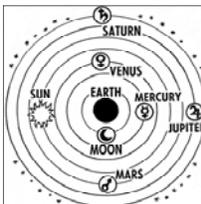


image: wired.com

motion. (A “mechanic” is also a person who uses tools to fix machinery.) Can you guess how both meanings of “mechanics” might apply to *Birdhouse Factory*?



Incorrect Universe!
image: kidzrevolution.blogspot.com

scientific revolution: the discoveries of Kepler, Galileo, Isaac Newton and others during the 17th century. Before the scientific revolution, people thought Earth was the center of the universe and that our moon was a planet.

HISTORY TERMS

assembly line: a manufacturing process in which interchangeable parts are added to a product in a sequential manner to create an end product.



image: efanyc.org



image: edupln.ning.com

factory: a large industrial building where workers manufacture goods or products.

Great Depression: *Birdhouse Factory*



image: blogs.suffolk.edu

takes place in the 1930s, a difficult time when jobs were hard to find and poverty and hunger were common in the United States.

President Franklin D. Roosevelt:



image: learnersonline.com

During the Great Depression years, he wanted to help people and came up with good ideas that kept people working, eating and enjoying their lives. He called it a “New Deal” because it was a new plan for America’s future.



image: newdeal75.org

New Deal: a government program started in 1935 by President FDR that included jobs to help artists continue to paint, sculpt and write about their everyday life.

ABOUT THE PERFORMANCE



Circus acrobatics and mechanical wonders collide to create innovative storytelling. Join the amazing Cirque Mechanics for *Birdhouse Factory*, a nostalgic tale set in a 1930's depression-era widget factory that is transformed by the resourcefulness and creativity of the American worker. You'll experience why *Spectacle Magazine* called Cirque Mechanics "the greatest contribution to the American circus since Cirque du Soleil."

Run Time: Approx. 60 minutes

THE PLOT

This is a simple story of daily life in a "widgets" factory in 1935, where workers are brought together by the most unlikely of events, a bird accidentally injured by the main steam boiler. The accident and caring for the bird brings the workers closer and inspires them to break away from the boredom of the assembly-line mentality and display their true inner talents and abilities. In the process, they use their bodies and machines to build birdhouses in a less efficient but much more joyful and soulful way.

WHAT YOU WILL EXPERIENCE

Birdhouse Factory was inspired in part by the masterful industry murals of Mexican-born artist Diego Rivera, the outrageous illustrations of cartoonist Rube Goldberg and the slap-stick humor of Charlie Chaplin's film *Modern Times*. Notice the colors and textures in the set and costume design. Can you tell this story is taking place during the Great Depression?

Wheels, gears, pipes, spools, industrial light fixtures, wooden walls and metal frameworks create the world of a run-down factory: the H Rosebud Plant. The transformation of this factory will thrill and delight you with highly skilled clowning, comical mime, intense acrobatics and mind-bending contortion artists.

"exceptional, evocative, eye-catching, ear-catching and engrossingly entertaining...Intelligently conceived and expertly executed, *Birdhouse Factory* is, in a word, excellent."
-New York Times

THE SHOW'S ORIGINS

In 2004, Chris Lashua and Aloysia Gavre joined Sandra Feusi, Rex Camphuis, Sam Payne, and Steven Ragatz to work together on the creation of the 30th Anniversary production of the "Pickle Family Circus" produced by the Circus Center of San Francisco. This collaborative production, *Birdhouse Factory*, was the foundation for the show you will see.

Birdhouse Factory has grown and changed over the years, adding new acts and performers.

THEMES

- ◇ Innovation
- ◇ Resourcefulness
- ◇ Interconnectivity
- ◇ Collaboration
- ◇ Success/Failure

ABOUT THE ARTISTS



Cirque Mechanics was founded in 2004 by Boston native and German Wheel artist, Chris Lashua, after the success of his collaborative project with the Circus Center of San Francisco on (the original) *Birdhouse Factory*. Cirque Mechanics quickly became a premiere American circus, with a funny and unique approach to performance, inspiring storytelling and innovative mechanical staging.

Cirque Mechanics, although inspired by modern circus, finds its roots in the mechanical and its heart in the stories of American ingenuity. The shows are gritty and realistic, which is unusual among modern circuses. The stories are wrapped in circus acrobatics, mechanical wonders, engineering magic and a lot of clowning around.

Chris Lashua, Director

In the late 1980s, Chris Lashua was one of the most well-known BMX freestyle riders in the world. He'd been featured in all the major BMX magazines, even on several covers. In a time when nearly all the big name freestyle riders lived in California, Chris had made it to the top from Boston, Massachusetts. Chris's obsession with wheels led him beyond the bicycle to perform inside one wheel: a German Wheel, which is featured in *Birdhouse Factory*.



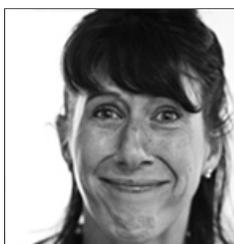
Steven Ragatz, Writer & Artist

Original *Birdhouse Factory* cast member and collaborator, Steven Ragatz has been entertaining audiences with his juggling, physical comedy, stilt walking and general antics for the past three decades. As a ten-year veteran of Cirque du Soleil, Steven has toured throughout North, South and Central America as well as Asia and Europe performing multiple juggling acts as well as an eclectic array of characters.



Aloysia Gavre, Co-Director & Choreographer

An early member of the San Francisco based Pickle Family Circus, Aloysia has been a movement, dance and circus enthusiast most of her life. Aloysia is also co-founder of Cirque School L.A., a place for "anybody with any body" to explore the circus arts.



Sean Riley, Set & Aerial Rigging Designer

Sean Riley is a designer, rigger, and sculptor, living in San Francisco. Concentrating his performance design on site specific and experimental work, Riley creates functional, architectural and lighting installations.



SCIENCE CONNECTIONS: SIMPLE MACHINES



ABOVE: A rudimentary birdhouse lever.

Simple machines are tools that make work easier. They have few or no moving parts. These machines use energy to work. See if you can spot these six simple machines in *Birdhouse Factory*!

WHEEL AND AXLE

The wheel and axle is another simple machine. The axle is a rod that goes through the wheel; this lets the wheel turn. It is easy to move things from place to place with wheels and axles.

LEVER

A lever is a board or bar that rests on a turning point. This turning point is called the fulcrum. An object that a lever moves is called the load. The closer the object is to the fulcrum, the easier it is to move.

PULLEY

This simple machine is made up of a wheel and a rope. The rope fits on the groove of the wheel one part of the rope is attached to the load. When you pull on one side of the pulley, the wheel turns and the load will move. Pulleys let you move loads up, down, or sideways. Pulleys are good for moving objects to hard to reach places. It also makes the work of moving heavy loads a lot easier.



Wheels and axles on the spin cycle.

INCLINED PLANE

Any flat surface that is higher on one end. You can use this machine to move an object to a lower or higher place. Inclined planes make the work of moving things easier. You need less energy and force to move objects with an inclined plane.



Birdhouse pulley system.

WEDGE

A wedge is a simple machine used to push two objects apart. A wedge is made up of two inclined planes. These planes meet and form a sharp edge. Although they are hard to spot in *Birdhouse Factory*, wedges are used to keep the spin cycle from rolling away and to keep the trolley in place. Wedge tools like the hammer are used everyday by our technical staff. Where else have you seen a wedge at work?

SCREW

A screw is a simple machine that is made from another simple machine. It is actually an inclined plane that winds around itself. A screw has ridges and is not smooth like a nail. Some screws are used to lower and raise things. They are also used to hold objects together. Although not visible there are hundreds of screws on the machines, props and other set pieces in *Birdhouse Factory*!

ART CONNECTIONS: ARTISTIC INFLUENCES

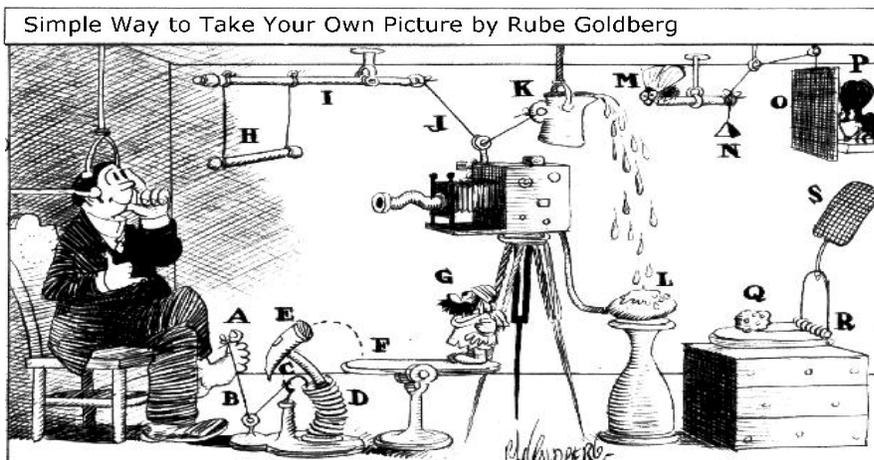


The creators of *Birdhouse Factory* were influenced and inspired by several artists from the 1930s: a muralist, a filmmaker and a cartoonist.

1) Diego Rivera (1886-1957) was a Mexican-born painter who specialized in large, colorful wall murals with pictures of industrial life in America. The colors of the set and lighting and the costume designs in *Birdhouse Factory* echo the color choices and the drawings of clothes in the famous Diego Rivera Detroit industry murals. How would you describe Rivera's color palette?



2) Charlie Chaplin (1889-1977) was a British comedy filmmaker and actor. Charlie Chaplin acted in, directed, scripted, produced, and eventually scored (wrote music for) his own films. In the film *Modern Times*, Chaplin portrays a factory worker of the Great Depression years who finds himself in funny situations with other people and machines as he battles to understand the progress that industry promises. The funny characters of the boss and his helper in *Birdhouse Factory* were modeled after Chaplin's character in the movie *Modern Times*.



3) Rube Goldberg (1883-1970) was a Pulitzer Prize-winning cartoonist, sculptor and author from San Francisco. *Birdhouse Factory* borrows from Rube Goldberg when the "widgets" factory transforms itself into a fun and zany factory for the birds! The way the factory workers move things around the factory (stage floor) is funny and not very efficient, very Rube Goldberg!

PROFESSOR BUTT'S GOES OVER NIAGARA FALLS IN A COLLAPSIBLE ASH-CAN AND HITS UPON AN IDEA FOR A SIMPLE WAY TO TAKE YOUR OWN PICTURE.
WIGGLE BIG TOE (A), PULLING STRINGS (B) AND RAISING HOOK (C), WHICH RELEASES SPRING (D) AND CAUSES HAMMER (E) TO STRIKE PLATFORM (F) AND CATAPULT ARABIAN MIDGET (G) TO TRAPEZE (H). WEIGHT OF ARAB CAUSES BAR (I) TO TILT AND PULL CORD (J), WHICH UPSETS PITCHER OF SYRUP (K) - SYRUP DRIES ON CAMERA-BULB (L) ATTRACTING HUNGRY FLY (M) WHICH SWOOPS DOWN, ALLOWING WEIGHTED END OF BAR (N) TO LIFT SCREEN (O) WHICH HAS BEEN SHUTTING OFF VISION OF MOUSE (P). MOUSE SEES CHEESE (Q) AND JUMPS. TRAP (R) SNAPS, CAUSING SWATTER (S) TO SWAT FLY THEREBY SQUEEZING BULB & TAKING PICTURE. IF PICTURE IS NO GOOD DON'T BLAME IT ON INVENTION. IT'S THE WAY YOU LOOK.

HISTORY CONNECTIONS: THE GREAT DEPRESSION



Birdhouse Factory takes place during an important period in our country's history, a difficult time when jobs were hard to find and poverty and hunger were common. This period of time in the 1930s, after the stock market crash of 1929, was known as the Great Depression.

LIFE DURING THE DEPRESSION

The Great Depression changed everyday life for Americans. Many people lost their jobs and could no longer afford their houses or food. Thousands left their homes in search of work elsewhere.

Even during those hard years people did the best they could to live their lives and be happy. Movies, radio, parlor games and board games were popular. Young people danced to the big bands and many people liked to read mystery novels.

THE WPA

In 1935, the Works Progress Administration was formed by President Franklin D. Roosevelt as part of his "New Deal" to return America to prosperity. The WPA provided training and jobs for ordinary Americans become construction workers or riveters to build roads, bridges and dams. The WPA also employed artists to create music, visual art (for the public, like a mural), and educational theatre.

riveter: a worker who inserts and hammers rivets (metal fasteners with a large head on one end that are used to connect metal plates)



Hoover Dam (originally Boulder Dam) was built at the height of the Great Depression, employing a total of 21,000 men during its five years of construction.



The Riveter, Shahn Fine Arts, 1938. Beh Shahn's theme was that human beings and their talents were as important to preserve as natural resources.

PRE-SHOW EXPLORATION ACTIVITIES, pg. 1

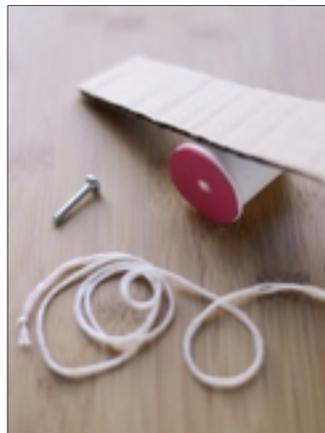
1) CREATE YOUR OWN MACHINE

Goal: Students will learn about and practice constructing simple machines. Students will learn to recognize simple machines when they see them at work in the *Birdhouse Factory* production and in life.

Explanation: Students will use everyday household items and work in teams to design, create and name their own simple machine.

Materials:

- ◇ A timer
- ◇ Identical (or not!) sets of ordinary materials, one for each group. Items could include bottle caps, straws, rulers, paperclips, plastic lids, pencils, cardboard scraps, paper cups, scissors, a piece of string, etc.
- ◇ Simple Machine handout, page 9



Activity:

1. Provide students the handout Simple Machines on page 9.
2. Discuss why these machines might be called “simple” and lead students to hypothesize about other types of machines.
3. Divide students into “design teams” of three or four students. They will compete for the title of “best machine” in two timed activities. They must use their time and materials wisely, because there are no “extras.”
4. Create a quick rubric with the class that includes machine and presentation criteria. (Hint: Keep it simple. Criteria could be: machine name 25%, machine design 25%, evidence of collaboration 25% and presentation with introduction, body and conclusion 25%.) This allows for assessment and immediate feedback during presentations.
5. Tell students: In Phase 1, they will collaborate to invent and design their machine. Phase 1 is ten minutes (or whatever you deem appropriate). In Phase 2, each group will construct a prototype and

prepare a demonstration for the class. Encourage creativity but lay out the following requirements:

- ◇ The machine must have a purpose.
 - ◇ Each member of the team has to have a hand in both the construction and the presentation.
6. Practice round: Have students race to name their group and then send a representative to report their team name and pick up materials so they can begin Phase 1.
 7. Run students through Phases 1 and 2. Be strict with time! Field questions from groups. They will ask if they can add additional materials or if they can use their bodies as part of the machines. You determine what is best for your goals.
 7. Assign a presentation order randomly and introduce each group by their group name before they present their simple machine.
 8. Enjoy the inventiveness and creativity of your students. Encourage the class to assess each other's inventions and presentations using the criteria you set forth in the class rubric.

Follow-up Questions:

1. Do you wish the time was allocated differently in this assignment? Why or why not? What was the pressure level for you?
2. What was your group's most successful moment? Where there any difficulties with working together? Without naming names, what were the difficulties?
3. Did your group use negotiation skills to get through the project? How?
4. What was your favorite invention? Why? What was your favorite presentation? Why?
5. What examples of simple machines can you find in this classroom? In school? At home?
6. What simple machines do we use daily to help us work?

PRE-SHOW EXPLORATION ACTIVITIES, pg. 2

2) VISUAL ART INSPIRES ACTION WORDS

Goal: To preview images that inspired the look and feel of *Birdhouse Factory*; to critically respond to a work of art and to work collaboratively to discern themes and impact.

Explanation: In this guided activity, students will write haiku using words inspired by a Diego Rivera mural.

Materials:

- ◇ “North Wall” image from Diego Rivera’s *Detroit Industry* fresco cycle found on page 15
- ◇ Projector or other way to share the image with students
- ◇ Chalkboard or chart paper to collect student responses and create a word wall with 2 columns
- ◇ Paper and writing utensils

Activity:

1. Project image found on page 15 for students to see.
2. Collect responses from every person in the class: What do you notice about this image? (Record every answer, even if it has already been shared by another student. This way students can begin to see common ideas.)
3. Ask students to write down at least two or three strong action words that they see embodied in the images. (Ideas: labor, pull, stoke, burn...)
4. Have students share out some of the verbs they wrote down. Collect them on a word wall. (For younger students, check to make sure each word is a verb by creating the infinitive: “Is it possible to _____?”)
5. Next, ask students: “What does this image remind you of?” (Record every answer again.)
6. Ask students if this second list is mostly action words/verbs, or some other part of speech.
7. Have a student add all nouns (from questions 2 and 5) to another column on the word wall.
8. Challenge students to write three haiku. Each haiku must contain one of the verbs and one of the nouns from the word wall. Students can write about any topic they like.

⇒ Haiku: a three line poem with the structure:
5 syllables // 7 syllables // 5 syllable

9. After providing time to write, invite volunteers to share at least one of their haiku.

Follow-up Questions:

1. Were you surprised by some of the action words that your classmates saw in the images? Were they the same or different from the ones that you saw?
2. How do action words make our writing stronger?
3. Did having ideas for action words and nouns make it easier or harder to write your haiku? Why or why not?
4. Does your haiku “go” with the mural, or do you think is it totally different?

After the Show:

1. Did the look of *Birdhouse Factory* remind you of the *Detroit Industry* image we viewed? If so, how?

ABOUT THE DETROIT INDUSTRY MURALS

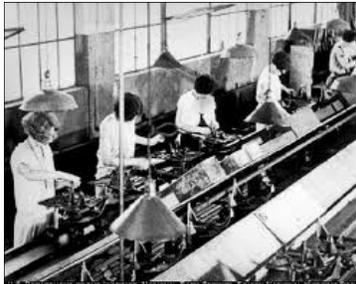
The Detroit Industry Murals are a series of frescoes by Mexican artist Diego Rivera, consisting of twenty-seven panels depicting industry at the Ford Motor Company. The frescoes were painted over the course of eleven months in 1932-1933 and were a tribute to the city’s manufacturing base and labor force of the 1930s. They are considered the finest example of Mexican mural art in the United States, and the artist thought it the best work of his career.

The two main panels depict laborers working at Ford Motor Company’s River Rouge Plant. Other panels depict advances in various scientific fields, such as medicine and new technology. The series of murals was not without controversy, as the contrasted the beneficial and harmful results of industry.

PRE-SHOW EXPLORATION ACTIVITIES, pg. 3

3) GREAT DEPRESSION ASSEMBLY LINE

Goal: To develop an understanding of the collaborative work and engineering that goes into creating an efficient manufacturing process; to understand the concept of an assembly line prior to seeing *Birdhouse Factory*



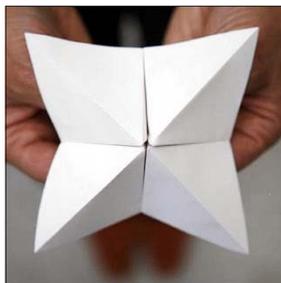
Explanation: Students will form their own assembly line and try to create ten identical items from their manufacturing process.

Materials:

- ◇ Paper
- ◇ Safety scissors
- ◇ Markers
- ◇ Your imagination

Activity:

1. Before class, create a “prototype” product that students will manufacture. (You can follow directions to make something fairly complex, like the origami fortune-teller or it can be as simple as a piece of paper folded a certain way, stapled, taped, paper-clipped, and written on.)
2. Adapt for younger students by pre-cutting paper and adding challenges as appropriate. Ensure that there are at least five distinctive steps to creating the prototype. Call this manufactured object a “widget.”
3. Divide students into groups of 5-6. Designate a “foreman” who is responsible for presenting the quality of their final product.
4. Show students the prototype: a “widget.”



Click the image above for online directions on how to make an origami fortune teller.

5. Give each student group 5 minutes to determine who will complete what step in the manufacturing process. Have each group complete one test prototype and the foreman check its accuracy against the class prototype. Mark each successful test prototype with a large checkmark.
6. Have the class estimate how long they think it will take to make ten more. Once all groups agree, start the timer.
7. Notice how each group positions themselves in relation to each other, whether they are sitting and standing, and whether or not the foreman helps manufacture. Take notes on the differences you notice between the groups.
8. When time is up, each foreman presents their products for the rest of the class to visually inspect. Award a check mark and ten points for each product that visually matches the class prototype.

Follow-up Questions:

1. What was this process like for you personally?
2. Did your group succeed in creating a consistent product? Why or why not?
3. What kinds of things in real life are made this way?
4. Would you like to work in an assembly line? Why or why not?
5. What are the benefits to working this way? The disadvantages?

Post-Activity:

For fun, share with the class a clip from the factory scene in Charlie Chaplin's *Modern Times*. First his character suffers in an assembly line, then is pulled off the factory floor to test a “Feeding Machine” prototype for his boss. (You can end the clip at 8 minutes, when Chaplin's character is injured by the machine trying to feed him corn.)



IMAGE: DIEGO RIVERA DETROIT INDUSTRY FRESCO (For activity on page 13)



A close up of a small portion of the *Detroit Industry*, North Wall by Diego M. Rivera (Mexican, 1886-1957). Detroit Institute of the Arts.

POST-SHOW DISCUSSION AND ASSESSMENT

DISCUSSION

The Art Form

1. Have you ever been to a circus before? How was the Cirque Mechanics show similar to the circus? How was it different?
2. Describe the different tricks and feats that you saw. Which one surprised you the most?
3. What tools did the performers use to tell the story of the show? How was their manner of storytelling similar or different to other ways we find stories, such as in books, film, television, plays, etc.?

Performance Components

1. How did the lighting add to the show?
2. How did the costumes help to express the ideas or moods of the setting?
3. How did the music add to the show? Did you have a favorite sound in the performance or a least favorite sound? Why?
4. What types of mechanical things did you see during the performance. How do you think they worked?

Themes and Connections

1. Cirque Mechanics were inspired by several different artists when creating their show. Who inspires you? How?
2. If you were an influential artist, what kind would you be? A painter? A muralist? A sculptor? A composer? A musician? A writer? A singer? A cartoonist? An actor? A playwright? Something else?
3. What themes did you see in the performance? What specifically did you see that led you to that conclusion?
4. If you had to give the show a different title, what would you call it? Why?
5. Did anything during the performance remind you of a previous experience you've had?

1) WRITE A LETTER

Goal: To reflect on the performance experience and to practice writing skills.

Explanation: In this activity, students will write a letter about their experience to Des Moines Performing Arts education donors whose support keeps Applause Series tickets accessibly priced for school groups.

Activity:

1. After attending the performance, discuss the experience with your students. Use the following discussion questions to guide the conversation:

- ◇ What was the show about?
- ◇ What parts of the show were most exciting?
- ◇ Which character did you enjoy the most? Why?
- ◇ What did the characters learn?

2. Next, invite students to write a letter to Des Moines Performing Arts donors about their theater experience.

Example letter starter:

Dear Des Moines Performing Arts Donors,
Thank you for helping my class go to the Civic Center to see *Cirque Mechanics: Birdhouse Factory*.
My favorite part of the show was...
While watching the show I felt... because ...
I have drawn a picture of the scene when...
This experience was special because ...

3. Mail the letters to:

Des Moines Performing Arts
Attn: Education Department
221 Walnut Street
Des Moines, IA 50309

Follow-up Questions:

1. What did you include in your letter? Why did you want to share that particular idea?
2. What specific details did you include in your letter to show that you have been to see a performance? Why are specific details important to include in a thank you letter?

POST-SHOW DISCUSSION AND ASSESSMENT, pg. 2

2) DESIGN A RUBE GOLDBERG-INSPIRED CONTRAPTION

Goal: To practice problem-solving and creativity

Explanation: Students will create the most interesting, convoluted and inefficient machine to accomplish the simple task of zipping a zipper.

Activity:

1. Discuss the work of Rube Goldberg and orient students to the very strange task at hand: to be inefficient.
2. Ask students to work individually to figure out a highly creative, multiple-step process to zip up a zipper. This can be for homework or in class. Suggest they may want to first describe it in text then illustrate each step in order. Some students may prefer to illustrate first, and allow them to make that discovery.
3. Group students into pairs or threes, with the mission of combining the best elements of each design into a single contraption, still with the goal of zipping a zipper. Be prepared to answer the question: "Does this have to actually be doable in this classroom?"
4. Ask each group to demonstrate (or narrate) their Rube Goldberg machine.
5. Activity could be extended to try to build a class machine. Machine could include all members of the class doing a small part, or each voice in the class narrating a step in the process.

Follow-up Questions:

1. What was the easiest part of this activity for you? The hardest?
2. What was the most fun?
3. What did you learn about working in groups?
4. Would you like to submit our machines to the Rube Goldberg contest?

RUBE GOLDBERG CONTEST

www.rubegoldberg.com/Contest?page=faq

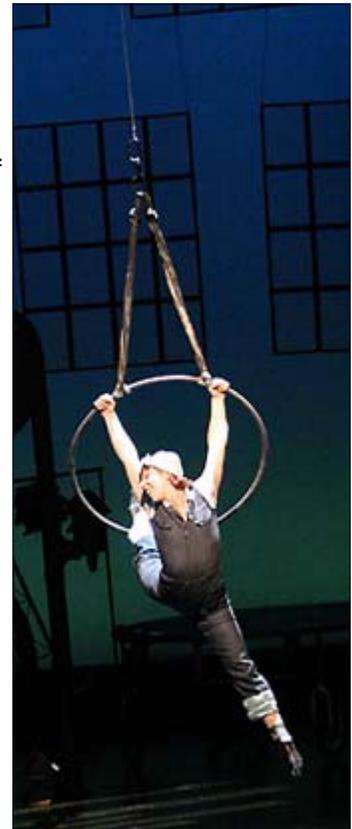
3) WRITE A REVIEW

Goal: To reflect on the performance experience and to practice writing skills.

Explanation: In this activity, students will write a review of the performance

Activity:

1. Ask students to imagine that they are a critic for the school newspaper. They are going to write a review of the *Cirque Mechanics Birdhouse Factory* performance to inform others about what they experienced.
2. They should describe with detail: what they saw; what they heard; how the performance made them feel; what the performance reminded them of; and what their favorite part was and why. They should also include a description of colors, costumes, set design and two specific performances.
3. Remind students that they must paint a picture of the experience with their words so that others who did not see the performance can imagine it as vividly as possible.
4. Have students draw an illustration of a scene from the show to accompany the review.



Follow-up Questions:

1. What did you include in your review? Why did you want to share that particular idea?

RESOURCES AND SOURCES



MORE ABOUT THE ARTISTS:

- ◇ Chris Lashua, Director:
<http://xgames.espn.go.com/bmx/article/6155319/80s-flatland-pro-chris-lashua>
- ◇ Aloysia Gavre, Co-Director/
Choreographer:
<http://www.cirqueschoola.com/>
- ◇ Steven Ragatz, Writer/Artist:
<http://www.stevenragatz.com/>
- ◇ Sean Riley, Set Designer /
Aerial Rigging Designer
[Gravity Design Inc.](http://www.gravitydesigninc.com/)

CLASSROOM RESOURCES:

- Charlie Chaplin—Official Website. www.Charliechaplin.Com
Learn more about artist Charlie Chaplin, his life, and works.
- “The Compound Machine.” Edheads.
http://www.edheads.org/activities/odd_machine/index.shtml
Learn about how forces and simple machines can work together to create the Compound Machine in this interactive game.
- MoMa: Diego Rivera.
<http://www.moma.org/interactives/exhibitions/2011/rivera/intro.php>
Spanish and English version of a tour through Diego Rivera’s residency with the Museum of Modern Art in New York City in 1931.
- Rube Goldberg. www.rubegoldberg.com
Learn more about Rube Goldberg and view a gallery of his invention illustrations.
- “Simple Machines.” Edheads.
<http://www.edheads.org/activities/simple-machines/index.shtml>
Learn about simple and compound machines in this interactive game.
- The Virtual Diego Rivera Web Museum. <http://www.diegorivera.com>
The official site of muralist Diego Rivera’s estate, with full biography and images.

STUDY GUIDE SOURCES:

- Birdhouse Factory* Study Guide by Cirque Mechanics
- Cirque Mechanics Official Website. <http://www.cirquemechanics.com/>
- “Diego M. Rivera, Detroit Industry.” Detroit Institute of Arts.
<http://www.dia.org/art/rivera-court.aspx>