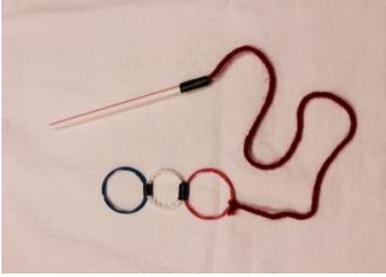


RING AND PIN



The Ring and Pin is a game of skill created and played by Native Americans all across North America. Original versions are composed of metal rings, twigs, bone, and/or sinew. While there are regional differences in design, the objective of the game is the same: to flip an attached target into the air and catch it on the end of a stick or bone.

Supplies:

- Plastic drinking straw
- 3 plastic rings from plastic caps.
 - Each ring should be a different color
- 12 inches string or yarn
- Scissors
- Electrical tape, masking tape, or painter's tape

Play:

- Hold the straw at the taped end.
- Using arm and wrist motions, flip the ring into the air, and catch it by poking the straw through one of the holes.

OH NO! THERE'S A HOLE!



Supplies:

- Cylindrical container
- Netting or mesh from produce (must be large enough to fit over the container)
- Rubber band (large enough to go around the circumference of the container)
- Assortment of non-breakable items (e.g., plastic caps, jingle bells, small blocks, small balls)
- Scissors

Play:

The object of the game is to keep the caps on the net as long as possible. When the caps fall into the container the game is over.

- Each player place her or his cap on the netting.
- Decide the order of players.
- Using the scissors each player takes turns making a cut in the netting.
- Rules:
 - Each player must make a cut in the net when it is her or his turn.
 - Only one cut per player per turn is allowed.
 - Each player decides where to make the cut.
 - Each player decides how large or small to make the cut.

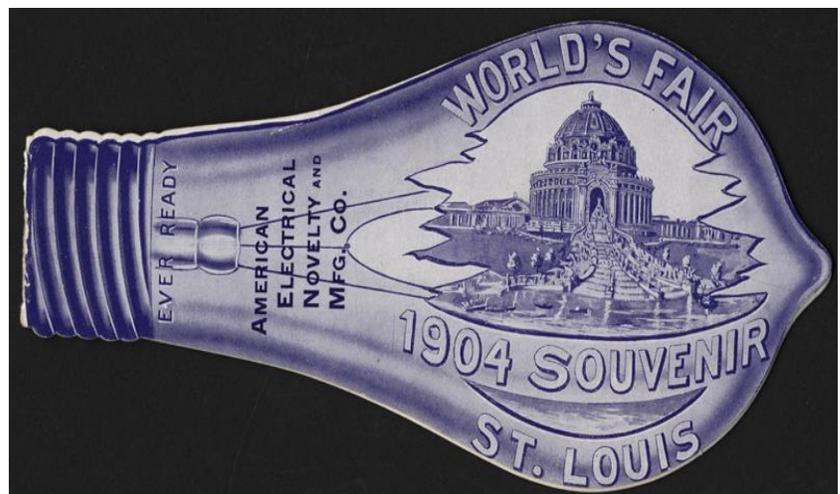
WHAT IS A WORLD'S FAIR?

A world's fair is a gathering of people from many parts of the world, at which they demonstrate their products and their arts, and promote their homelands. This sort of thing has been going on since ancient times, when traders would hold occasional encampments at central crossroads, and entertainers would find a ready, festive-minded audience. The modern string of world's fairs began in the middle of the nineteenth century, when the industrial revolution was flourishing.

WHICH INVENTIONS FIRST APPEARED AT WORLD'S FAIRS?

World's fairs have introduced many products and services to large audiences. The list of "firsts" includes the Colt revolver and the McCormick reaper (London, 1851); the elevator (Dublin, 1853); the sewing machine (Paris, 1855); the calculating machine (London, 1862); the telephone (Philadelphia, 1876); outdoor electric lighting (Paris, 1878); the Eiffel Tower, the gas-powered auto (Paris, 1889); the Ferris wheel (Chicago, 1893); motion pictures (Paris, 1900); controlled flight, the wireless telegraph, the ice-cream cone (St. Louis, 1904); Kodachrome photos, stunt flying (San Francisco, 1915); television (New York, 1939); atomic energy: model of a cyclotron (San Francisco, 1939); computer technology, fax machines (New York, 1964); moon rocks (Osaka, 1970); advances in robotics (Tsukuba, 1985); large-scale outdoor air conditioning (Seville, 1992); new energy-efficient transit, green building techniques (Aichi, 2005; also Shanghai, 2010).

Source: <http://worldsfairs.com/expos-qa/>



SUPPLIES & MATERIALS

Assorted:

- Wheels
- Bicycles
- Toy vehicles

Desk & Locker Leftovers:

- Compass
- Crayons
- Glue
- Glue sticks
- Hand held hole punch
- Markers
- Notebook paper
- Pencils
- Rulers
- Scissors
- Tape

Classroom Materials:

- Blocks
- K'NEX
- Legos
- Play dough
- Mobilo
- Tinker Toys
- Gears
- Marble Run
- Brix Blocks

Community Freebies:

- Fabric & Upholstery sample books
- Metal canisters with lids (that held cookies) from ice cream parlors
- Paint stir/paddle
- Plastic spools
 - Cash register receipt
 - Produce bags
- Plastic buckets from 'big box store' bakery departments
- Plastic hangers from retail stores
- Tennis balls from indoor tennis facilities

Donations:

- Bed sheets
- Clocks
- Sewing machines
- Sewing notions (e.g., zippers)

Low-Cost Materials:

- Aluminum foil
- Balloons
- Balls
- Bamboo skewers
- Bolts
- Brads
- Buckets
- Buttons
- Chenilles or Pipe cleaners
- Chopsticks
- Cotton balls
- Craft sticks
- Felt
- Duct tape
- Googly eyes
- Paint
- Paper (e.g., construction, tissue)
- Paper clips
- Plastic beverage straws
- Plastic cups
- Plastic needles
- Pom poms
- Ribbon
- Rope
- Rubber bands
- Screws
- Springs
- Steel wool
- String
- Tile squares
- Tissue paper
- Toothpicks, round
- Twine
- Washers
- Wooden beads
- Wooden craft sticks
- Yarn

Nature*:

- Acorns
- Bark
- Cork
- Driftwood
- Feathers
- Flowers
- Gravel
- Leaves
- Pebbles
- Pine Needles
- Pinecones
- Sand
- Seeds
- Shells
- Soil
- Straw
- Twigs
- Water
- Wood cookies

*Be mindful of your students' allergies and sensitivities.

Tools:

- Glue gun
- Hammer
- Needle nose pliers
- Paint brushes
- Pliers
- Stapler
- Tweezers

Recyclables:

- Bottle caps
- Boxes
 - Cereal, cracker, granola/breakfast bar
 - Moving
 - Shoe
 - Toothpaste
- Calendars, outdated
- CDs
- Egg cartons, foam only *
- Greeting cards & postcards, used
- Individual serving plastic cups
 - Fruit cups
 - Pudding cups
 - Yogurt cups
- Magazines, outdated
- Metal lids off cans of frozen concentrate
- Netting (from produce bags)
- Newspaper
- Oatmeal tubs
- Paper bags
- Paper tubes
 - Various lengths
 - Various diameters
- Plastic bottles with lids, various sizes
- Plastic caps, various sizes
- Plastic containers with lids, various sizes
- Plastic jugs
- Plastic shopping bags
- Socks (clean)
- Soft plastic caps from jugs
- Spools (e.g., ribbon, thread)
- Foam trays*
- Tabs from cans
- Tins with lids, different sizes and shapes
- T-shirts (clean)

* Be sure to properly clean the recyclables using warm water and antibacterial soap. In addition to washing, wipe foam trays and egg cartons with a commercial bleach cleansing cloth or with a bleach solution of one tablespoon of bleach per quart of water.

BENEFITS OF STEAM & PLAYFUL LEARNING

Attention Development

- Attention regulation
 - Cognitive inhibition
 - Selective attention
 - Sustained attention
- Concentration
- Persistence

Cognitive Development

- Abstract Thinking
- Categorization
- Cause & Effect
- Compare & Contrast
- Creativity
- Curiosity
- Decision making
- Discovery
- Exploration
- Goal setting
- Imagination
- Mastering new concepts
- Memorization
- Patterns & Sequences
- Perspective taking
- Planning
- Problem-solving
- Spatial relationships
- Social cognition
- Strategy development
- Strategy testing
- Understanding of rules & objectives

Fine Motor Development

- Bilateral coordination
- Dexterity
- Hand-eye coordination

Language Development

- Body language
- Communication skills
- Emergent literacy
- Storytelling
- Vocabulary

Gross Motor Development

- Balance
- Body temperature regulation
- Cardio-respiratory endurance
- Cardio-vascular fitness
- Fat reduction
- Foot-eye coordination
- Increased flexibility
- Locomotor skills
- Movement control
- Muscle strength
- Neurological development

Emotional Development

- Attachment
- Anxiety reduction
- Autonomy
- Confidence
- Coping with change
- Emotional knowledge
- Mood elevation
- Pride
- Risk-taking
- Self-confidence
- Self-esteem
- Sense of self
- Understanding of strengths & weaknesses

Social Development

- Conflict resolution
- Control of impulses and aggressive behavior
- Cooperation
- Empathy
- Exploration of social roles
- Exploration of the 'world of work'
- Leadership skill development
- Learning of cultural roles
- Sharing
- Turn-taking
- Understanding boundaries

STEAM Benefits

Science

- Cause & Effect
- Experimentation
- Hypothesis testing
- Problem solving

Technology

- Visual attention
- Spatial skills
- Language development

Art

- Color
- Creativity
- Shape

Engineering

- Physical improbabilities
- Simple machines

Math

- Estimating
- Measurement
- Patterns
- Probability
- Sequencing
- Shapes
- Summation

Teacher Resource Centers

- Leftovers (St. Louis) <http://www.leftoversetc.com/>
- St. Louis Teachers' Recycle Center <http://sltrc.com/>
- SCARCE (Glen Ellyn) www.scarce.org
- The Idea Store (Champaign) <http://the-idea-store.org/>
- The Wasteshed (Chicago) <http://www.thewasteshed.com/>

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