- If you are viewing this course as a recorded course after the live webinar, you can use the scroll bar at the bottom of the player window to pause and navigate the course.
- This handout is for reference only. Non-essential images have been removed for your convenience. Any links included in the handout are current at the time of the live webinar, but are subject to change and may not be current at a later date.

Recycle Bin Bonanza: Move and Learn with Recyclables

Amy M Schlessman, PT, DPT, DHS

About Me

CONTINUED

Objectives

Upon completion of this course, you will be able to:

- Describe least three benefits of physical activity for children and adolescents.
- List at least three general exercise principles for children and adolescents.
- Identify the link between physical activity and learning (including recent research) for children and adolescents.
- Outline at least three creative physical activities combined with academic concepts and recyclables into a variety of pediatric settings

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CONTINUED

Recycling

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What is recycling?

- Recycling is the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products.
- https://www.epa.gov/recycle/recycling-basics.
- Sustainable Materials Management (SMM) refers to the use and reuse of materials in the most productive and sustainable way across their entire life cycle.

Benefits of recycling

- Reduces the amount of waste sent to landfills and incinerators
- Conserves natural resources such as timber, water and minerals
- Increases economic security by tapping a domestic source of materials
- Prevents pollution by reducing the need to collect new raw materials
- Saves energy
- Supports American manufacturing and conserves valuable resources
- Helps create jobs in the recycling and manufacturing industries in the United States
- https://www.epa.gov/recycle/recycling-basics.

CONTINUED

Recycling facts

- The national recycling rate has increased over the past 30 years (more than tripled)
- The current recycling rate is 34%. https://americarecyclesday.org/
- Recycling just 10 plastic bottles saves enough energy to power a laptop for more than 25 hours https://www.epa.gov/recycle/recycling-basics

CONTINUED

How Does Your State Stack-Up?

- One of the best ways to improve United States recycling statistics is to start at the state level and filter down to the community level amd home level.
- The more responsibility taken at lower levels in the recycling chain, the better the national outcome will be.
- Increasing interest is a great way to get recycling programs started in communities.
- https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/advancing-sustainable-materials-management-0#USState

CONTINUED

Books alone fall short

- Study of the content and use of children's literature to teach about recycling
  - 20 children's books were examined
  - Results: although the books can be useful for providing basic information they fall short in asking children to think critically about recycling
- Christenson 2009

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CONTINUED

Raising consciousness

- Raising consciousness about the environment and learning ways to care for our planet are important for all citizens of the world.
- Children are receptive to learning new concepts; thus an ideal time to teach lessons about the environment.
- This project focused on teaching preschool children about metamorphosis, plant growth, recycling and littering. (n=18)
  - **Project- actively engaging lessons**
- Pre and post-test was given; for all concepts taught, the children's knowledge increased.
- Witt and Kimple 2008

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CONTINUED

Enhance curricular activities

- The curricula for young children rarely provide specific teaching about how to conserve earth's resources.
- Adults need to help children early in life become aware of and actively involved in ecologically sensitive and sound practices.
- Interviews with children (N=41) (4- 12 y.o.): knowledge of 'Going green', 'Recycling' and 'How they could help the earth'.
- Results: With increasing age and cognitive maturity, children's responses showed a marked change toward more awareness of, and more feelings of responsibility toward, conserving earth's resources.
- Suggestion: for teachers to enhance curricular activities that will engage youngsters in earth-friendly understandings and activities.

Honig and Mennerich 2013

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CONTINUED

Recycling and Physical Activity

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Objective 1-3

- Describe least three benefits of physical activity for children and adolescents.
- List at least three general exercise principles for children and adolescents.
- Identify the link between physical activity and learning (including recent research) for children and adolescents.

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Benefits of Physical Activity

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CONTINUED

Benefits of Physical Activity

- Improves:
  - participation in activities
  - sense of well being
  - Improves academic readiness
- Increases and maintains:
  - heart and lung efficiency
  - strength, flexibility, mobility, and coordination
  - bone structure and strength

- http://www.cdc.gov/physicalactivity/everyone/health/index.html

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CONTINUED

Benefits of Physical Activity

- Helps control:
  - weight
- Decreases:
  - risks of many chronic diseases (i.e. heart disease, diabetes)
  - anxiety, depression

- http://www.cdc.gov/physicalactivity/everyone/health/index.html

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CONTINUED

General Exercise Principles

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CONTINUED

Exercise principles for children

- **60 minutes or more of physical activity each day.**
  - 3 types:
    - Aerobic activity
    - Muscle strengthening
    - Bone Strengthening

http://www.cdc.gov/physicalactivity/everyone/guidelines/children.html

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CONTINUED

Exercise principles for children

- **Aerobic activity**:
  - **Moderate-intensity** aerobic activity: DAILY
    - Brisk walking
    - Active recreation (hiking, skateboarding)
    - Bicycle riding
  - **Vigorous-intensity** activity: at least 3 days per week
    - Active games involving running and chasing, such as tag
    - Jumping rope
    - Martial arts, such as karate
    - Running
    - Sports (Basketball, swimming, gymnastics)

- http://www.cdc.gov/physicalactivity/everyone/guidelines/children.html

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CONTINUED

Exercise principles for children

- **Muscle strengthening activities:** at least 3 days per week as part of the 60 or more minutes.
  - Games such as tug of war
  - Modified push-ups (with knees on the floor)
  - Resistance exercises using body weight or resistance bands
  - Rope or tree climbing
  - Sit-ups
  - Swinging on playground equipment/bars
  - Gymnastics

http://www.cdc.gov/physicalactivity/everyone/guidelines/children.html

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CONTINUED

Exercise principles for children

- **Bone strengthening activities**: at least 3 days per week as part of the 60 or more minutes.
  - Games such as hop-scotch
  - Hopping, skipping, jumping
  - Jumping rope
  - Running
  - Sports such as gymnastics, basketball, volleyball, tennis

http://www.cdc.gov/physicalactivity/everyone/guidelines/children.html

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CONTINUED

Why Combine Learning with Physical Activity?

The link between physical activity and learning

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CONTINUED

Recent Research

- A meta-analysis of 59 studies from 1947 to 2009
  - Physical activity has a significant and positive effect on academic achievement and cognitive outcomes
  - Aerobic exercise had the greatest effect Fedewa and Soyeon 2011
- Systematic review of 28 studies (most betw, 2010-2015):
  - Effectiveness of school-based physical activity interventions on academic achievement, especially cognitive performance Mura et al 2015
- More studies:
  - Participation in physical activity: associated with increased academic achievement Castelli et al 2007; Chomitz et al 2009; Coe et al 2006; Roberts et al 2010, Singh et al 2012, Pontifex et al 2013, Lees and Hopkins 2013, Becker et al 2014, Ardoy et al 2014, Esteban-Cornejo et al 2015.
  - Classroom-based high-intensity interval activity improves off-task behavior Ma et al 2014

CONTINUED

Recent Research:

- A meta-analysis of 59 studies from 1947 to 2009
  - Physical activity has a significant and positive effect on academic achievement and cognitive outcomes
  - Aerobic exercise had the greatest effect Fedewa and Soyeon 2011
- More studies: Castelli et al 2007; Chomitz et al 2009; Coe et al 2006; Roberts et al 2010
  - Participation in physical activity: associated with increased academic achievement

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CONTINUED

Recent Research:

- **Participation in physical activity**:
- 1) increased school achievement
- 2) better cognitive control and memory task performance
- 3) more adaptive and efficient brain function

Chaddock, Voss, Kramer 2012; Chaddock, Pontifex, Hillman 2011

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CONTINUED

Recycle Bin Bonanza

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Objective 4

- Outline at least three creative physical activities combined with academic concepts and recyclables into a variety of pediatric settings

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CONTINUED

Safety Is A Priority

- Not all exercise is suitable for everyone. These activities are not intended as a substitute for the specific advice of a physician or a physical therapist. Consulting with a physician or physical therapist prior to beginning any exercise program is recommended.
- Amy Schlessman and Kid Dynamics, LLC, are not responsible for any injury that may occur during any activity as recommended in this course.
- Adult supervision is recommended for all activities in this course. The adult(s) supervising each activity are responsible for determining the skill level and appropriateness of each activity for each child. The adult(s) supervising each activity are also responsible for adapting each activity according to the individual needs of the child(ren).
- Children need to be reminded of safety rules before and during all activities in this course.

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CONTINUED

Materials

- CONTAINERS
- 2 liter bottles
- Drink and water bottles (all sizes)
- Yogurt containers
- Small plastic tubs and lids (margarine, cottage cheese, sour cream, etc.)
- Large plastic containers and lids (whipped cream, sherbet, ice cream, etc.)
- Milk cartons
- Coffee cans (plastic and metal)
- Bottle caps (milk, sports drinks)

- PAPER
- Solid color paper (brown paper grocery bags or construction paper)
- Scrap paper
- Newspaper

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CONTINUED

Materials

- CYLINDERS
- Mailing tubes
- Wrapping paper tubes
- Paper towel tubes
- Toilet paper tubes
- Cylindrical containers (oatmeal container, potato chip tube, etc.)

- CUBES & RECTANGLES
- Printer paper boxes
- Shoe boxes
- Tissue boxes (cube-shaped and rectangular)
- Cardboard jewelry boxes
- Food boxes (cereal, tea, fruit snacks, granola bars, etc.)
- Pizza box (clean, no grease)
- Toothpaste boxes (small and large)

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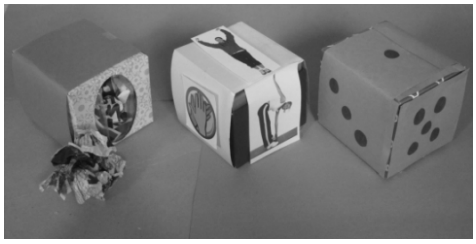
CONTINUED

Starter Kit: Action Cube



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CONTINUED

Starter Kit: Action Cube

- Blank-sided dice
-
- You will need
- Cube shaped tissue boxes (As many as you like; the more you have, the fewer times you'll need to change the content of the sides of the dice)
- Newspaper
- Cardboard from a cereal box or similar box
- Solid color paper (construction paper or brown paper bags)
- A 4" x 6" photo album with plastic pages that can be cut out of the album – 6 pages needed per die
- Scissors
- Tape

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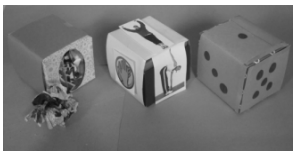
CONTINUED

Starter Kit: Action Cube



- Preparation
- Fill the tissue box with crumpled newspaper balls.
- Cover the opening to the box with a piece of cardboard cut from a cereal box.
- Tape the cardboard piece to the opening of the box.
- Cover the box with solid color paper.

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CONTINUED

Starter Kit: Action Cube

- Preparation
- Cut out 6 pages from the photo album.
- Tape one photo album page to each side of the box. These photo album pages allow the content cards to be quickly changed in and out, maximizing time and minimizing storage space.
- Slip one card into each photo album page on each side of the box.

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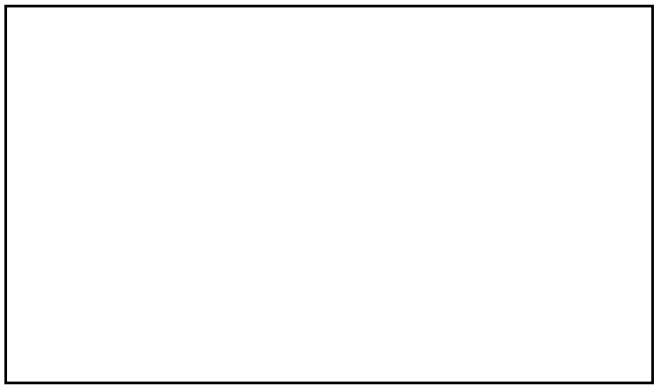
Starter Kit: Action Cube



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CONTINUED

Starter Kit: Super Sock Ball

- Super Sock Ball
- Roll a clean sock from the toes toward the top of the sock. When you get to near the top of the sock, turn the last 2" inside out to secure the rest of the sock in a ball shape. For a bigger ball, use two socks.

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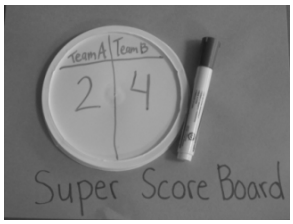
CONTINUED

Starter Kit: Super Score Board



- Super Scoreboard
- Circular plastic container lid
- Dry erase marker
- Small felt square or an unmatched sock as an eraser

- Tip: Use a hole punch to make two holes on opposite sides of the lid. Tie a 16" piece of yarn in each hole. To one piece, attach the eraser; to the other, attach the marker.

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CONTINUED

Other Items

- OTHER ITEMS

- Tape (masking tape or painter's tape)
- Party hats
- Adhesive backed Velcro dots or strips
- Pencils, pens, or markers to customize content
- Scissors
- Small picture frame album (4"x6" with at least 24 pages)
- Ruler and/or tape measure
- Stopwatch
- Timers (Visuals timers- Hourglass, make your own sand timer, etc)

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CONTINUED

Bottle Bowling

- 10 plastic bottles, **You will need**
- all of the same size (2 Liter bottles work well for a large space; 16-20 ounce bottles work better for smaller spaces)
- Object that rolls: Coffee cans, roll of tape, a ball, or cylindrical container (ex. oatmeal container) (1 per player)
- Cereal box or 2 granola bar boxes (score cards)
- Pencil
- Markers
- Scissors
- Tape
- Plastic measuring cups
- Water, dry rice, dry beans, or sand to add weight to bottles
- Optional:
- 10 Academic question cards
- 10 Physical activity cards
- Physical activity dice
- 10 Number cards

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CONTINUED

Bottle Bowling

- Preparation:
- Pins
  - Remove the labels from ten plastic bottles
  - Add water, dry rice, dry beans, or sand to each bottle to weigh them down and make it easier to stand them up when resetting the pins.
  - Math tip: Measure and/or weigh the contents added to each bottle or bowling "ball".
- Bowling Ball
  - Each player selects a bowling "ball", choosing from coffee cans, a roll of tape, a ball, or cylindrical container. If needed, add weight to the coffee cans or cylindrical containers to make it easier to knock the pins over.
- Score cards
  - Cut cereal box or granola bar boxes into index card size score cards.

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CONTINUED

Bottle Bowling

- Bowl, recording the score on the score cards for each turn/frame.
  - *For official bowling rules, visit: www.pba.com/Resources/Bowling101
- For younger children or simpler scoring, only record the number of pins knocked over for each turn/frame. At the end of play, add up the total number of pins knocked over by each player.
- Twists:
  - Academic cards
  - Physical activity cards

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CONTINUED

Table Tennis

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CONTINUED

Table Tennis

- **You will need:**
- -Paddles (2): hard plastic lid (example: thick circular plastic lid (plastic coffee lid), foil pie plate)
- -Ping Pong ball: examples: ping pong ball, crumpled paper ball or mismatched sock ball (2 Clean mismatched socks folded into a ball)
- -Table: a large box or a table
- -Tape (example: masking tape, painters tape)
- -Net: small cardboard items taped together (example: travel toothpaste boxes, paper towel rolls, jewelry boxes, small cereal boxes, etc)
- -Timer: electronic timer or homemade sand timer
- -Scoreboard
- -Containers of various sizes: tissue boxes, shoe boxes, large plastic tubs (examples: whipped topping)
- 2 action cubes

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CONTINUED

Table Tennis

- Activity #1: Table Tennis
- Option #1: Play with a ping pong ball.
- Option #2: Play with a crumpled paper ball,
- hitting the ball back and forth in the air without letting the ball touch the table.

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CONTINUED

Table Tennis

- Activity #2: Table Tennis and Teaching
- Hit the ball the same as in Activity #1, Option #1 or Option #2. Instead of hitting the ball between 2 players, attempt to hit the ball into the correct container to answer an academic question. Or say When asked a question, answer the question by hitting the ball into the corresponding containers to answer (i.e. when did X in the story happening….beginning middle or ends, etc

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CONTINUED

Table Tennis

- Activity #3: Timed Table Tennis
- Roll 1 or 2 dice and complete a math problem (example: identify the number or perform an addition, subtraction, multiplication or division problem). Then, play tennis for that number of seconds or minutes. Keep track of the time with a clock or timer.

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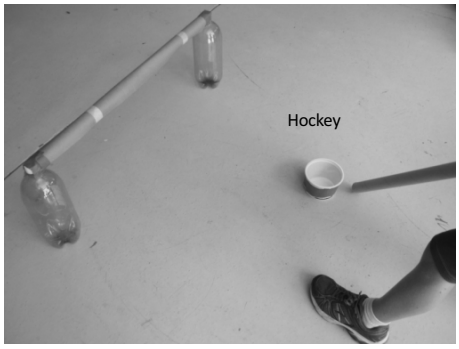
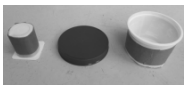
Hockey



49

Hockey



- **You will need:**
- -Hockey sticks: paper towel rolls, wrapping paper tubes, or mailing tubes
- -Hockey puck: small wide plastic container (example: margarine or soft cheese spread) or small thick plastic lid (minimum storage!) (Activity #1: 1 puck, Activity #2: 8-10 pucks) or lids (hard plastic-economy/wholesale pretzel/cracker/snack, coffee lid, ice cream lid)
- -Goal: 2 goals for Activity #1 and 3, 2-4 goals for Activity #2.
- Option #1: 2 Liter Bottles (2), paper towel roll or wrapping paper tube (1), tape. (Tip: fill liters with a little water to weight down if needed)
- Option #2: large shoe box or printer paper box turn on it's side or upside down with a goal cut out of one side
- -Timer: electronic timer or sand timer

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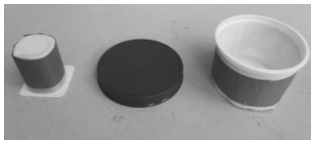
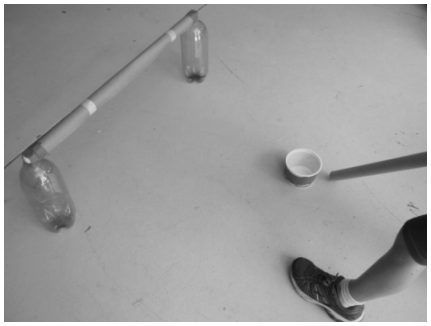
Hockey

- Activity #1: Hockey





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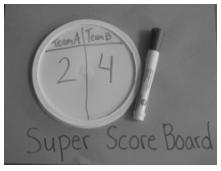
Hockey

- **Activity #2: Learn By Heart Hockey (like table tennis activity #2)**
- Attempt to hit the puck into the correct goal to answer an academic question. Or say When asked a question, answer the question by hitting the puck into the corresponding goal to answer.
- Option #1: With one player: Place an academic answer on each goal (example: red/blue; true/false, A B C D, yes /no)
- Option #2: With teams. Same as Option #1 except one player from each teams challenge each other to answer the same question at same time, the first one to answer the question correctly by hitting puck into goal, scores a point.



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CONTINUED

Hockey

- Activity #3: Hop to it Hockey
- Roll 1 or 2 dice and complete a math problem (example: identify the number or perform an addition, subtraction, multiplication or division problem). Then, play hokey for that number of seconds or minutes. Keep track of the time with a clock or timer.
-
- Storage tip: 1) stack the containers together for condensed storage. 2) Use the lids for optimal storage).

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CONTINUED

Stack and Stick

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CONTINUED

Stack and Stick

- **You will need:**
- -Small boxes (examples: trial toothpaste box, tea boxes, cardboard jewelry boxes)
- -Velcro
- -Building Surface: Foam board or pizza box or poster board or
- -Paper to cover boxes

- Preparation:
- Cover the boxes with solid colored paper. Place the hard side of velcro on the board Measure the building surface. Place the soft side of Velcro on the boxes.

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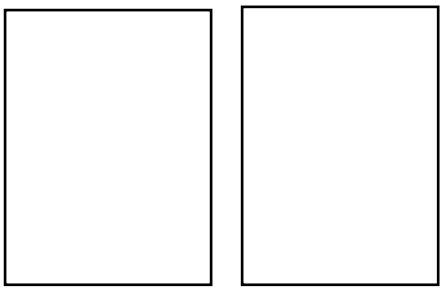
CONTINUED

Stack and Stick

- Activity #1: Stack and Stick
- Build a stack or tower on the building surface.



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CONTINUED

Stack and Stick

- Activity #2: Stack and Stick the Facts
- Option #1: Place academic content on each box. Build a stack or tower on the building surface to answer a question. (example: stack rhyming words, counting by 2s, patters, sequence a story, build a house)
- Option #2: Use the building surface as a large graph.

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CONTINUED

Stack and Stick

- Activity #3: Stack, Stick, and Squat
- Place a physical activity on each box. Build a stack or tower on the building surface, performing the action of each chosen box.

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CONTINUED

Croquet

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CONTINUED

Croquet

- **You will need:**
- -Mallet: tape, small plastic tub with lid and paper towel rolls, wrapping paper tubes, or mailing tubes. Cut a hole in plastic lid, place cardboard tube in the hole and secure with tape.
- -Ball: crumpled pieces of paper (secure with tape for reinforcement)
- -Wicket:
  - Option #1: 2 Liter Bottles (2), paper towel roll or wrapping paper tube (1), tape
  - Option #2: large shoe box or printer paper box turned upside down with a cut out on both sides
- (Tip: using cardboard "targets" of various sizes is conducive to stacking inside each other for minimal storage space)
- -Timer: electronic timer or homemade sand timer
- -Scoreboard
- -Action dice (2) (Activity #3)

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CONTINUED

Croquet

- Activity #1:
- Tips:
- Cooperative play
- Outdoors (play in grass with a short wide cup

Or plastic bottle as the “ball”

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CONTINUED

Croquet

- Activity #2: Croquet Knowledge Display:
- Attempt to hit the ball into the correct wicket to answer an academic question.
- Option #1: With one player
- Option #2: With teams.

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CONTINUED

Croquet

- Activity #3: Walk This Way Croquet
- Different animal pictures on each wicket.
- Do the corresponding animal action after the ball is hit through the wicket

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CONTINUED

Stack and Crash

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CONTINUED

Stack and Crash

- **You will need:**
- -Boxes (of various sizes, tea boxes are a favorite)
- Tip: can be a floor or table top activity (small boxes for a table top activity, large boxes for a floor activity
- -Eco-crasher: small plastic container with lid (weighted with scrap paper), crumpled paper ball, foil ball, plastic lid (as a Frisbee), mismatched sock ball (2 Clean mismatched socks folded into a ball)

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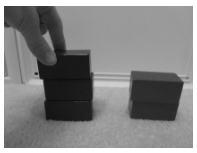
CONTINUED

Stack and Crash



- Activity #1: Stack and Crash
- Stack the boxes on the floor or a box or small table. Crash the tower using an Eco-crasher
- Measure the throwing distance with a standard (example: ruler) or non standard (example: toilet paper tube) measuring tool.
- Have more than one crashing stations, with one child assigned to be the crasher and another child or two to be the stackers. Then switch.
- Think: small box/block twist:
  - add academics onto small blocks and large Legos too!

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CONTINUED

Stack and Crash

- Activity #2: Stack and Crash Bash
- Place academic content on the boxes to sort or group (examples: stack #s by 1s, 2s, 5s, 10s; stack largest to smallest on top; stack rhyming words; stack in patterns; stack in sequence of events in story or life cycle of animal; stack all the countries in the western hemisphere in Tower A and the eastern hemisphere in Tower B, etc). Bonus: Race to stack the tower with a timer.
- Bonus: Assign a # to each block, as a point value and add the total number. Stack a tower and graph the number of blocks crashed for each turn.
- Tip: Once the academic task is completed, crash the tower(s) with a crasher

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CONTINUED

Stack and Crash

- Activity #3: Stack and Crash In A Flash
- Perform the activity the same as in Activity #1.
- -Variations for tower stacking: Instead of standing, try squatting, tall kneeling or half kneeling.
- -Variations for crashing: crash the tower with various body parts.
- -Place the desired academic activity on the outside of the box. On the inside, bottom, or back of the box place an action card. Once the tower is crashed, roll the Action Dice Number Die, and perform each action the number of times rolled.
- -Once the towers are assembled, count the number of blocks used to build the tower, roll the action die and perform the action that number of times

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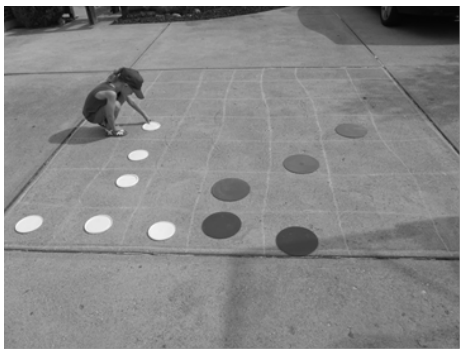
Four in a Row



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Four in a Row

- **You will need:**
- -Game pieces: Plastic container lids in 2 different colors
- -Game board
  - Indoors: painters tape and nonskid area rug carpet
  - Outdoors: sidewalk chalk
  - Go vertical: piece of carboard (i.e. large cereal box, top of large pizza box lid, etc), painters tape, Velcro dots.

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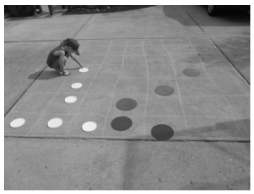
Four in a Row



- Activity #1: Four in a Row
  - Attempt to place four game pieces in a row.
- Activity #2: What You Know Four in a Row
  - Place an academic question to answer or an academic item to identify on each game piece. When a player plays that piece, the player answers the question on the game piece.
- Activity #3: Go Go Go Four in a Row
  - Place a physical activity card on each game piece. When a player plays that piece, the player performs the action on the game piece. Take it Outside: Create a game board with side walk chalk.

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Super Sorting Fun

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Super Sorting Fun

- **You will need:**
-
- -2-4 containers: Tall cylindrical containers with the lid (example: oatmeal container, chip container) or card board boxes (example: cereal box, shoe box, rectangular tissue box)
- -Caps (example: milk caps and/or sports drink caps)
- example: pictures of classmates, sort boys versus girls, ie who is here/absent or class and family surveys by voting whose favorite food is one type of food versus another….who likes X) (favorite ice cream: chocolate chip or cookies and cream or Do you do X? yes or no…….. do you do X in the morning or evening (i.e. ;pick out your clothes for the day….), numbers, words, etc
- *Promotes choice making and graphing/charting

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Super Sorting Fun

- -Preparation:
- 1. Cut a slot, large enough to fit the caps, in each cardboard box or cylindrical container's lid.
- 2. Using the caps, trace circles on thin cardboard or thicker paper. Cut the circles out. Place one circle in the inside of each cap.
- Tip: The thin cardboard or thicker paper will stay inside the cap due to the twisting plastic grooves of the inside of the cap. Circles can be easily taken in and out of the caps to change the targeted theme/content. (This is perfect for working with a handful of children of different ages or skill level).

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Super Sorting Fun

- -Preparation:




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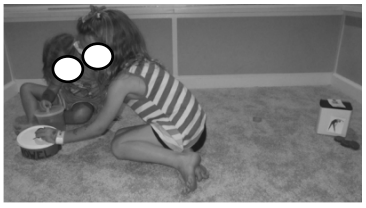
Super Sorting Fun

- Activity #1: Super Sorting Fun: Making Matches
- Place a picture, photograph, academic content or physical activity on each circle and place inside each cap. Adhere a matching card to a cylindrical container or cardboard box. (example: inside the caps have a circle, rectangle, or a triangle and place a circle, rectangle, or a triangle on each container or texture matching with a small piece of the following textures inside a cap and trimming the slot of the containers- great textures to use are: wavy (corrugated cardboard), bumpy (bubble wrap), and smooth (foil or nothing placed inside cap)

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Super Sorting Fun

- Activity #2: Super Sorting Fun: Making Groupings
- Place a picture, photograph, academic content or physical activity on each circle and place inside each cap. Adhere a grouping card to a cylindrical container or cardboard box. (example: sort by color, shape, rhyming words, located in the northern hemisphere versus the southern hemisphere, etc.)
- Hint: Place the containers on the floor to promote squatting, kneeling and all 4s to place the caps in ther container. Another option, place the container on the wall with Velcro strips or a shelf to promote squatting to retrieve the caps from the floor and reaching to place the caps in the containers on a wall.

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Super Sorting Fun

Hint: If the slot in the box or container is too challenging, try sorting into containers with a large opening

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Tic Tac Toe

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Tic Tac Toe

- **You will need:**
- -Boxes (9) (example: cube shaped tissue boxes or shoe boxes) (For an outdoor game, or for a gymnasium large printer paper boxes works great)
- -Tosser- 5 of one color and 5 of another color (examples: milk, juice or sports drink bottle caps; crumpled balls of scrap paper, small plastic lids)
- -Tape
- Preparation: picture
- Place the boxes on the floor. Line the boxes up on the floor, 3 rows of 3 boxes, connecting to forms a tic tac toe grid. Tape the boxes together. Place the tic tac toe grid on the floor or tape it upright to a wall. Add an academic question and/or a physical activity to each box.

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CONTINUED

Tic Tac Toe

- Tic Tac Toe: Activity #1 :
- When each player takes a turn, toss the tosser into a box on the tic tac toe grid.
- Hint: Perfect for home, recess or the classroom!
- Hint: Play table top, on floor, on an incline, Vertical, it sitting, standing, on an exercise ball or scooter!

Extra math challenge: Choose a distance to toss to the tic tac toe grid. Measure the distance with a ruler or a non standard unit of measurement (example: small box or paper towel tube). Mark the throwing line with a piece of tape.

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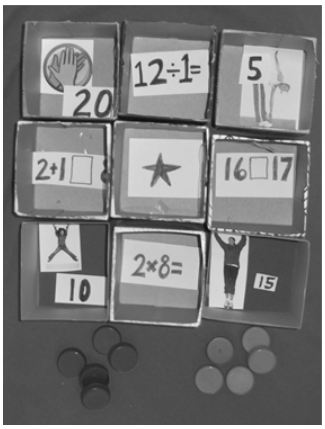
Tic Tac Toe

- Tic Tac Toe: Activity #2 :
- When each player tosses the tosser into a box on the tic tac toe grid, the player answers the question or performs the physical activity in the box. Once the game is complete, rearrange or add new academic questions and /or physical activity cards to each box.



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Miniature Golf

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Miniature Golf

- **You will need:**
-
- -Golf clubs: Cardboard tubes (paper towel tubes, wrapping paper tubes, mailing tubes) and tape
- -Golf Ball: Mismatched sock ball (2 Clean mismatched socks folded into a ball), crumpled paper ball (use tape if needed to reinforce the ball)
- -Course Obstacles: Cylinders, plastic tubs, plastic bottles, milk cartons, plastic caps, shoeboxes, cardboard boxes (tip: turn box upside down and cut a "hole"), paper towel rolls, coffee cans, pizza boxes
- -Holes: Plastic tubs, shoeboxes, tissue boxes, other cardboard boxes
- -Hole marker: Cardboard flag
- -Score cards: Cardboard boxes cut into index card size

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Miniature Golf

- Activity #1: Miniature Golf

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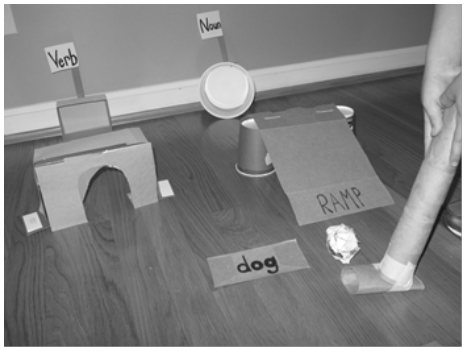
Miniature Golf

- Activity #2: Putt and Problem Solve
- Set up 2 flags per hole. Each player is asked a question at each hole. Aim for the correct answer hole (by identifying the academic item/correct answer)



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Miniature Golf

- Activity #3: Get Up and Go Golf
- Place an action on each flag/hole.
- Option #1: Count how many swings it takes for the ball to land in the hole. After the ball lands in the hole, perform the action that number of times.
- Option #2: After the ball lands in the hole, perform the action the number of times that corresponds with the hole number (example: hole #2, jump 2 times).

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Ring Toss

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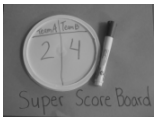
Ring Toss

- **You will need:**
- -Base: paper towel tubes and a card board box (examples: pizza box, cereal box, or shoe box) or an empty CD holder. Or a large plastic container with lid and a paper towel tubes
- -Rings: Rings cut out of cardboard or rolls of newspaper taped together
- -Timer: electronic timer or sand timer
- -Scoreboard
- -Action dice (2) (Activity #3)



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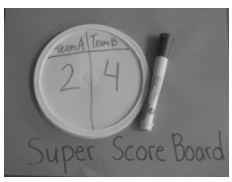
Ring Toss

- Activity #1: Ring Toss
- Extra math tip: number the tubes with different numbers, add up the points, highest score wins!



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Ring Toss

- Activity #2: Remember It Ring Toss
- Attempt to toss the ring onto the correct "pole" to answer an academic question.
- Option #1: With one player: Place an academic answer on each goal (example: red/blue; true/false, A B C D, yes /no)
- Option #2: With teams (each team will need different color rings). Same as Option #1 except one player from each team challenges each other to answer the same question at same time, the first one to answer the question correctly by landing the ring on the base scores a point.
- Option #3: Practicing sorting

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Ring Toss

- Activity #3: Ring Toss Aerobics
- Place a number on each ring. Place an action on each tube and an action on the floor surrounding the tube (for an action for the "missed" tosses.) Toss the rings and performed the action on the corresponding tube the number of times that appears on the ring. Count the number of missed rings, add the numbers on each "missed" ring, perform the action on the floor that number of times.
- Tip: Extra challenge by placing the base further away or make different size rings and try to stack largest to smallest.

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Two Liter Limbo

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Two Liter Limbo

- **<u>You will need:</u>**
- -2 liter bottles (2)
- -Wrapping paper tube (3)
- -Tape
- -Pencil
- -Ruler or non standard unit of measurement (example: paper towel tube)

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Two Liter Limbo

- Activity:
- Tape a wrapping paper tube to the top of each 2 liter. Then loosely tape the third 2 liter across the top of the 2 liters, connecting the two. Be prepared to measure and move this horizontal bar up and down throughout the game. With the pencil, mark the lowest height each participant can limbo and write the name beside the pencil mark. At the end of the game measure the markings.
- Bonus: Instead of using a wrapping paper tube for the top bar of the limbo, make a paper link chain from scrap paper,

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Colossal Cardboard Puzzles

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Colossal Cardboard Puzzles

- **You will need:**
- -A large piece of cardboard (example: cut from a large cereal box)
- -Use the printed side of the cardboard as the puzzle picture or cover the printed side of the cardboard and attach the picture of choice (example: a child's portrait, a favorite photograph, child draws a picture or attach a picture related to the academic content such as a picture of a habitat)
- -Glue or tape
- -Scissors
- -Physical activity and/or academic content cards
-
- Preparation:
- -Cut the picture into puzzle pieces, determining the complexity based of the age and skill level of the chills
- -On the back of each puzzle piece, attached a physical activity or an academic question.
- Storage Tip: store the puzzle in a large cereal box or pizza box

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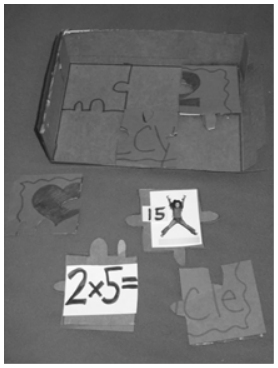
Colossal Cardboard Puzzles

- Activity: Colossal Cardboard Puzzles:
- This activity can be performed with 1 child or with a group in relays. Pick a puzzle piece, perform the action or answer the academic question on the back of the puzzle piece, attach the puzzle piece to the puzzle. Build the puzzle on the floor, on a box or table, or on the wall.
- Tip: Simplify the puzzle by:
- (1) Cutting a puzzle with less pieces
- (2) Including a puzzle template on another piece of cardboard by tracing the puzzle pieces or take a picture of the puzzle picture prior to cutting it, print the picture and attach it to another piece of cardboard.



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Whiz By Zip Line

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Whiz By Zip Line

- **You will need:**
- -Individual pack oatmeal box
- -Yarn (2 pieces 8-12” length & one piece 8-15’ length)
- -Paper towel tube
- -Hole punch
- -Stopwatch
- Tuck in or remove the opening flaps of the box.
- Punch 2 holes in both sides of the box.
- Tie each piece of yarn from one side of the box to the other. Hang the box on the paper towel tube and tape the yarn to the top of the paper towel tube.
- Feed the long piece of yarn through the paper towel tube. Add a stuffed animal to the box.

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Whiz By Zip Line

- Activity #1:
- Tie one side of the yarn to a sturdy location several feet higher than the other side of the yarn or have 1 person hold each side
- Instruct an adult or another child to hold the lower side close to the ground, pulling the yarn tautly.
- Hold the box at top of the yarn, Using a stopwatch, calculate how fast the stuffed animals travels down the zip line.
- Compare various stuffed animal's times or challenge the same stuffed animal to improve the original time.
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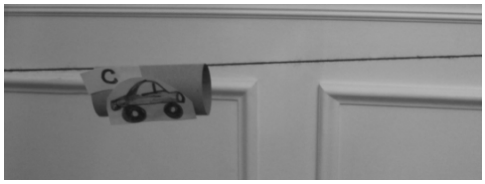
Whiz By Zip Line



- Activity #2:Transportation Game: This activity is perfect for discussing transportation. (example: Decorate the box as a plane or submarine)
- -Attach various transportation vehicles to paper towel tubes. Feed a long piece of yarn (8-15' length) through the paper towel tube. Or attach the vehicles to oatmeal boxes (follow the steps in Activity #1).
- -Drive cars back and forth on yarn, transporting X to boxes set up on both ends of the yarn (make boxes look like stores) (example: airplane travels airport to airport; school bus travels home to school.
- Bonus: The yarn can be held up high for down low, giving children various ways to move while transporting the vehicles (example: walk forwards, walk backwards, squat and walk, tiptoe walking, crawl, scoot, slither on stomach.
- An adult can ask a question and the child(ren) can transport the answer to the other side.

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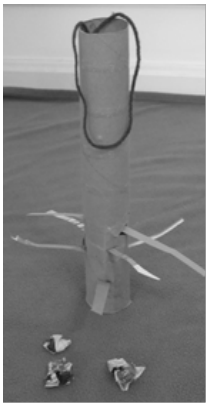
Piñata Power



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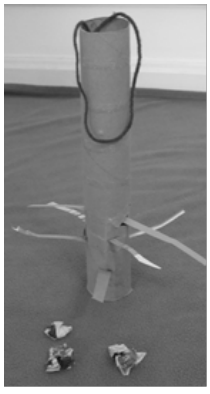
Piñata Power

- Preparation Activity #1:
- **You will need:**
- -Paper towel tube
- -Piñata ribbons: strips of scrap paper and thin card board (example: cereal boxes) cut 1/2”-1” width
- -Yarn and a hole punch
- -Prizes for inside the piñata: stickers, non tangible rewards (example: coupon for 3 minutes of free choice, academics cards and/or physical activities on small strips of paper folded several times
- -Scissors



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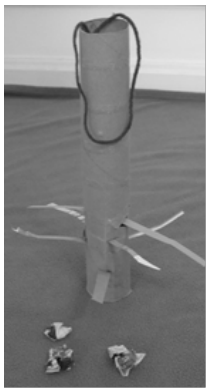
Piñata Power

- Activity #1:
- Option #1: take turns pulling one strip of paper or cardboard out of the piñata at a time, attempting to release the contents of the piñata. Extra Challenge: Have the participants attempt to hit the piñata with eyes closed or eyes covered (example: scarf).
- After the piñata contents fall to the ground, participants pick up the prizes. If prizes are folded strips of paper containing academic content or physical activities, participants then perform the physical activities or answer the academic question on each prize he or she retrieved.



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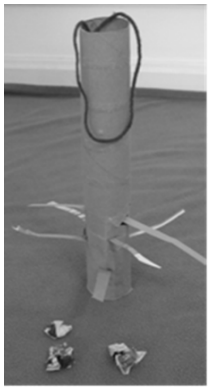
Piñata Power

- Activity #1:
- Option #2:
- Preparation: Include an physical activity or an academic question on each strip
- Take turns pulling one strip of paper or cardboard out of the piñata at a time, attempting to release the contents of the piñata. Participants either perform the physical activity or answer the academic question on each strip that he or she pulls.
- Extra Challenge: Have the participants attempt to hit the piñata with eyes closed or eyes covered (example: scarf).
- After the piñata contents fall to the ground, participants pick up the prizes.



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Piñata Power

- **Activity #2:**
- **You will need:**
- -Newspaper
- -Paper shopping bag with handles (quickest option) or paper grocery bag with yarn and a hole punch
- -Wrapping paper tube or mailing tube or pool noodle
- -Prizes for inside the piñata: stickers, non tangible rewards (example: coupon for 3 minutes of free choice, academics cards and/or physical activities on index cards of small cardboard pieces

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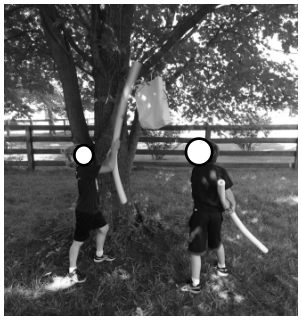
CONTINUED

Piñata Power

- **Activity #2:**
- Take turns attempting to break open the piñata by hitting the piñata with the wrapping paper tube or mailing tube. Extra Challenge: Have the participants attempt to hit the piñata with eyes closed or eyes covered (example: scarf).
- After the piñata breaks and the contents fall to the ground. Participants pick up the prizes. If prize cards of academic content or physical activities are being used, participants then perform the physical activities or answer the academic question on each prize he or she retrieved.



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Call to Action

America Recycles Day
https://americarecyclesday.org/
https://www.kab.org/our-programs/america-recycles-day

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America Recycles Day

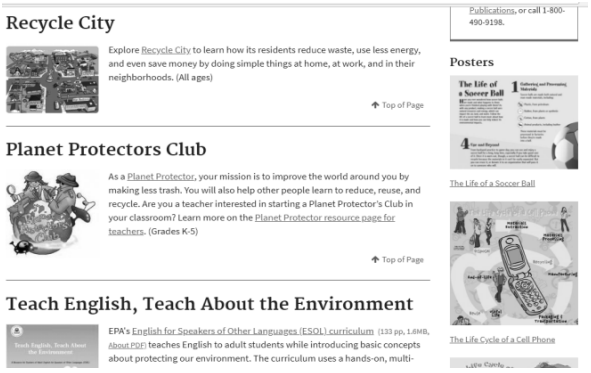
- November 15
- A day to raise awareness about recycling and the purchasing of recycled products
- Started in 1997
- A Keep America Beautiful national initiative
- The only nationally-recognized day dedicated to promoting and celebrating recycling in the US
- Thousands of events are held across the US to raise awareness about the importance of recycling
- Join an event or host an event
- https://americarecyclesday.org/
- https://www.kab.org/our-programs/america-recycles-day

CONTINUED

Reduce, Reuse, Recycle Resources for Students and Educators

- https://www.epa.gov/recycle/reduce-reuse-recycle-resources-students-and-educators
- On this page:
- Recycle City
- Planet Protectors Club
- Teach English, Teach About the Environment
- Science Fair Fun
- Learning By Doing: Students Take Greening to the Community
- The Quest for Less: Activities and Resources for Teaching K-8
- Tools to Reduce Waste in Schools
- Pack a Waste Free Lunch

Reduce, Reuse, Recycle Resources for Students and Educators
https://www.epa.gov/recycle/reduce-reuse-recycle-resources-students-and-educators



Recycle City

Explore Recycle City to learn how its residents reduce waste, use less energy, and even save money by doing simple things at home, at work, and in their neighborhoods. (All ages)

Top of Page

Planet Protectors Club

As a Planet Protector, your mission is to improve the world around you by making less trash. You will also help other people learn to reduce, reuse, and recycle. Are you a teacher interested in starting a Planet Protector's Club in your classroom? Learn more on the Planet Protector resource page for teachers. (Grades K-5)

Top of Page

Teach English, Teach About the Environment

EPA's English for Speakers of Other Languages (ESOL) curriculum (133 pp, 1.6MB, About PDF) teaches English to adult students while introducing basic concepts about protecting our environment. The curriculum uses a hands-on, multi-

Publications, or call 1-800-490-9198.

Posters

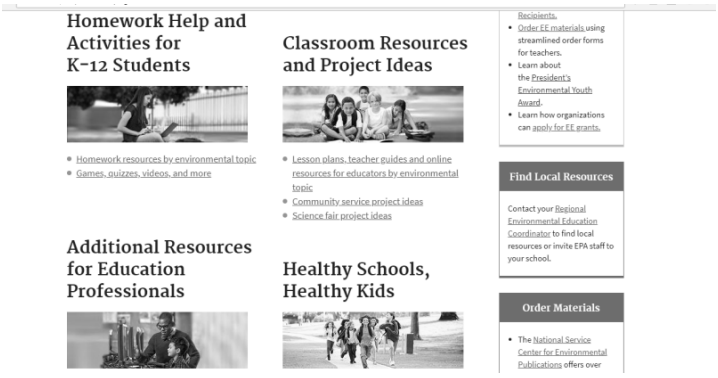
The Life of a Soccer Ball

The Life Cycle of a Cell Phone

Reduce, Reuse, Recycle Resources for Students and Educators

- **Classroom Activities**
  https://www.epa.gov/new-bedford-harbor/environmental-education-resources-teachers-and-students

Learning and Teaching about the Environment https://www.epa.gov/students



President's Environmental Youth Award https://www.epa.gov/education/presidents-environmental-youth-award

- Since 1971
- Recognizes outstanding environmental projects by K-12 youth
  - Projects to promote environmental awareness
- Program promotes awareness of our natural resources and encourages positive community involvement
- Who can apply? Individuals K-12, school classes (K-12), summer camps, public interest groups, and youth organizations

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