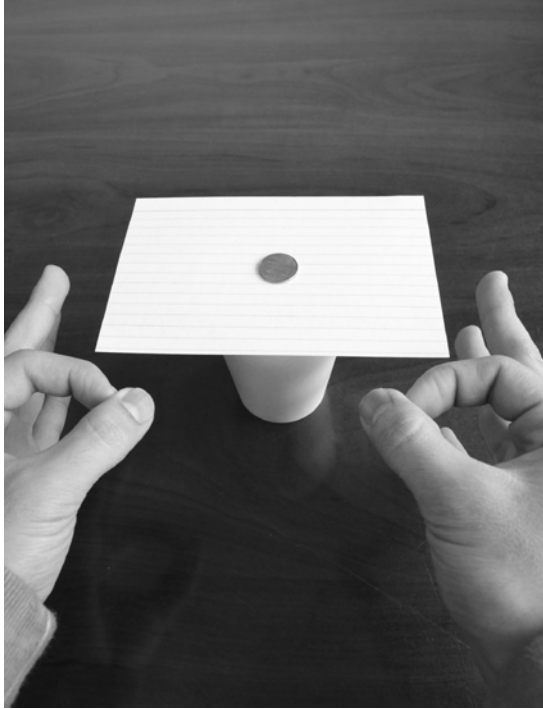
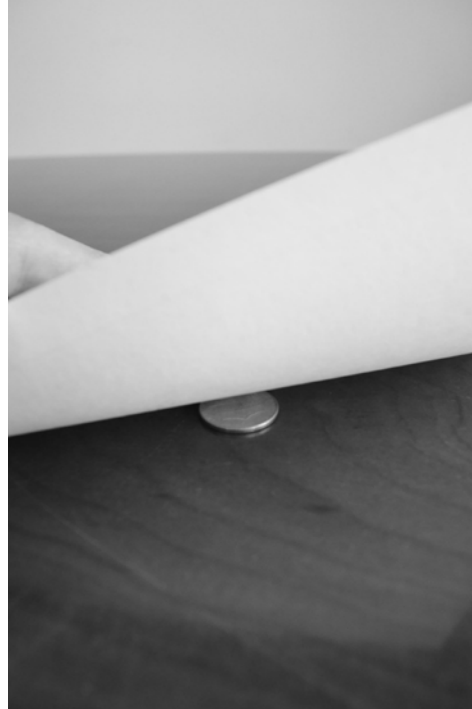


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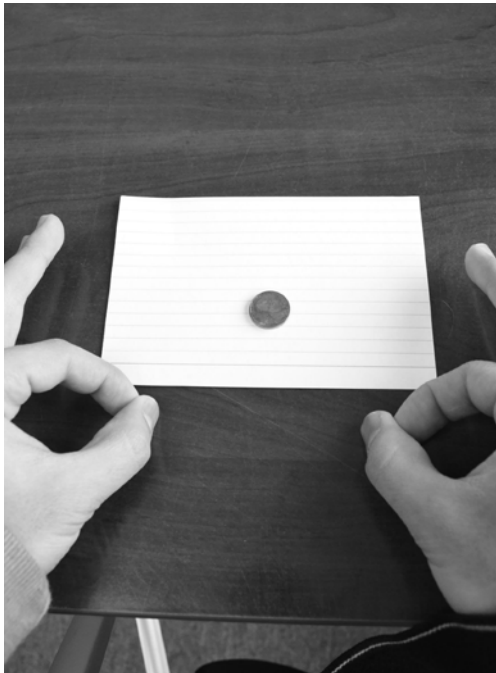
CLASS 1



1) Act. 3, Coin Tricks: Place the index card over the mouth of the cup and place one penny in the middle of the index card. Place one hand at each bottom corner of the index card and flick the card straight forward. The penny should fall into the cup.



2) Act. 3, Coin Tricks: Set the cup aside and place one penny on the table (ideally near the edge of the table), then place the index card over the penny so that one of the long edges hangs slightly off the edge of the table.



3) Act. 3, Coin Tricks: Stack the other two pennies directly above the penny underneath the index card. Flick the index card forward as before.



4) Act. 3, Coin Tricks: Make a stack of 6 pennies. Swipe the bottom penny out from the stack by striking it using a jumbo paper clip.

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CLASS 1 (cont.)



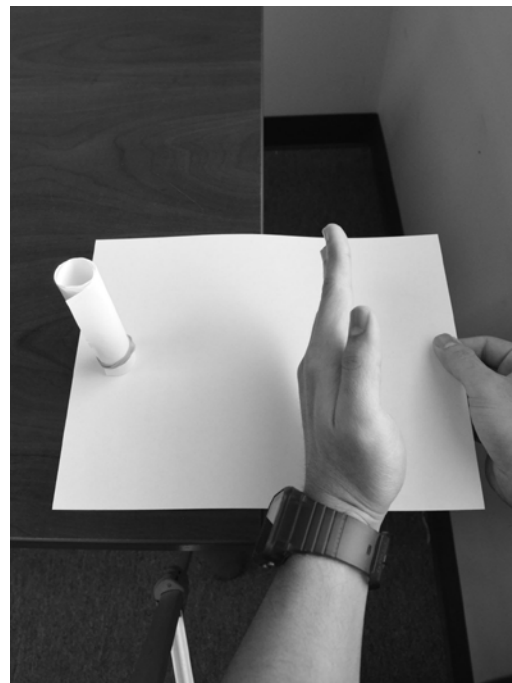
5) Act. 3, Coin Tricks: Lift one arm up and back so the elbow is pointing straight forward. Balance a penny on the top of the elbow, cup the palm, and quickly swing the hand down to catch the penny as it falls.



6) Act. 4, Pie Pan & Tablecloth Trick: Set up tower according to curriculum diagram. Chop the small aluminum pie pan sideways so that the paper ball falls into the cup.



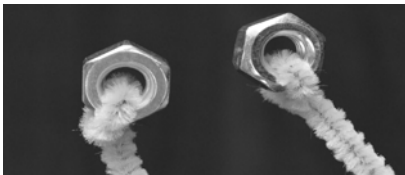
7) Act. 4, Pie Pan & Tablecloth Trick: Lay paper flat on table with half hanging off the edge. Rubber band paper tube towards the bottom. Place marble inside banded tube on top of paper sheet.



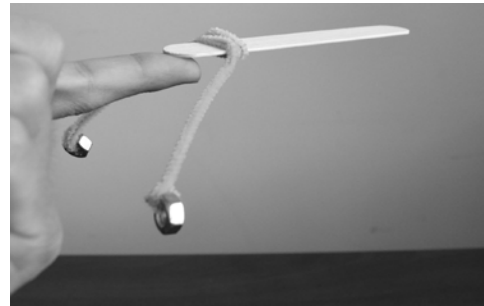
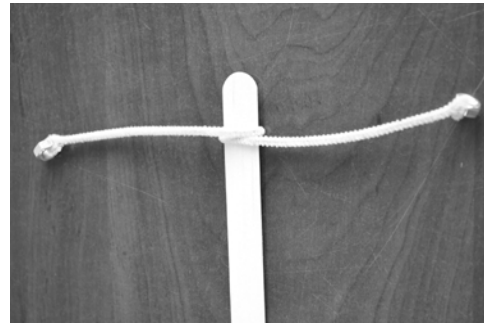
8) Act. 4, Pie Pan & Tablecloth Trick: Hold the hanging edge of the paper with one hand and karate chop the paper with the other. The tube should remain standing.

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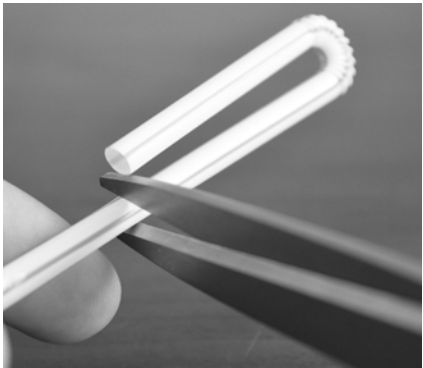
CLASS 2



1) **Act. 2, Tightrope Balancer:** Bottom photo: Wrap each end of the pipe cleaner around a metal nut. Top photo: Put the popsicle stick directly on the midpoint of the pipe cleaner.



2) **Act. 2, Tightrope Balancer:** Top photo: Wrap each pipe cleaner “arm” one full rotation around the popsicle stick. Bottom photo: Create a “Y” shape with the pipe cleaner arms and the popsicle stick, so that the popsicle stick balances on a fingertip.



3) **Act. 3, Cartesian Diver:** Top photo: Cut the long side of the straw so there’s an equal length of straw on both sides of the bend. Bottom photo: Wrap a rubber band around the straw openings to create the diver.



4) **Act. 3, Cartesian Diver:** Add paper clips to the rubber band until the top of the diver barely floats above the surface of the water in the cup.

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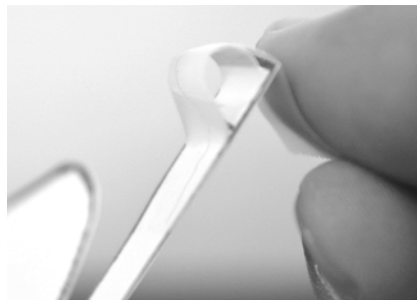
CLASS 2 (cont.)



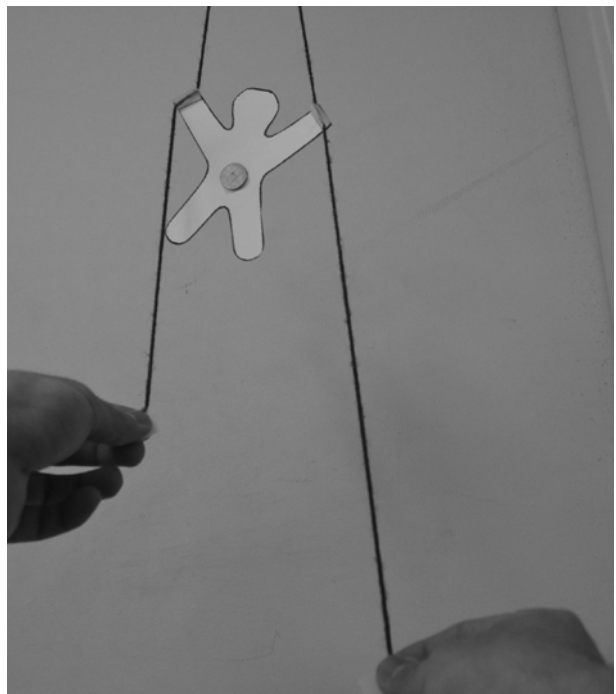
5) **Act. 3, Cartesian Diver:** Pour water from the 20oz cup to top off the water in the bottle. (The diver is inside the bottle, and the bottle is sitting in the roasting pan to avoid a mess.)



6) **Act. 3, Cartesian Diver:** When the bottle is squeezed, the diver should sink to the bottom. The diver should float back to the top when the sides of the bottle are released.



7) **Act. 4, Climbing Creature:** Top photo: Tape a 1" straw piece sideways on each "hand" without taping over the straw openings. Bottom photo: Fully assembled climbing creature.



8) **Act. 4, Climbing Creature:** Pull one end of the yarn, then the other, to make the creature climb up the yarn.

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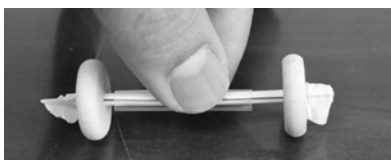
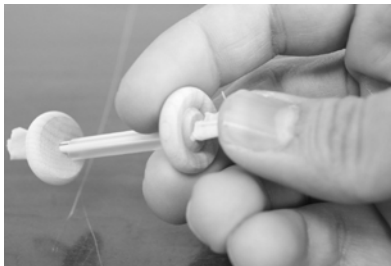
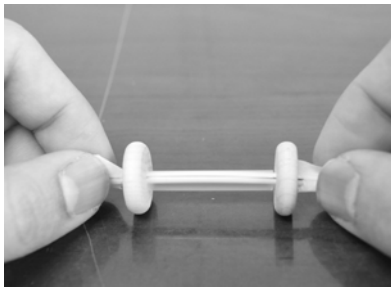
CLASS 3



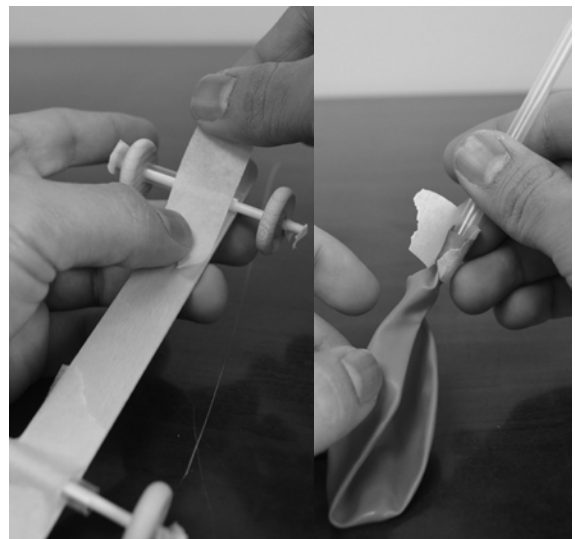
1) Act. 2, Newton's Cradle: Hold the foam track to form a loop.



2) Act. 2, Newton's Cradle: While one student holds the center marble still, have another release marbles from above on one side of the track so that they hit the center marble.



3) Act. 3, The Wheels on the Bus Go: Top photo: Hold the two ends of the stir stick to roll the wheels together. Middle photo: Tape the wheels to the masking tape at the end of the stir sticks. Bottom photo: Hold the wheels by the clear straw piece to roll the wheels in sync.



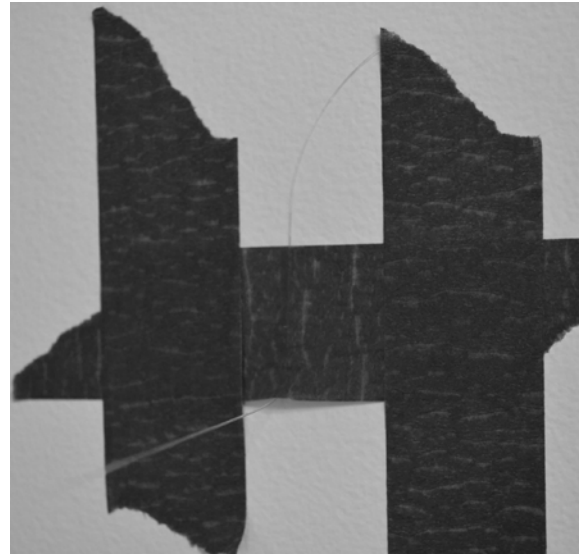
4) Act. 4, Balloon Racer: Left photo: Tape the 1" straw pieces onto the jumbo popsicle stick to create a basic car. Right photo: Then, tape the balloon neck around a half piece of straw.

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CLASS 3 (cont.)



5) **Act. 4, Balloon Racer:** Blow up the balloon through the straw, then place a finger over the straw opening to keep the balloon inflated. Release to watch the racer go!



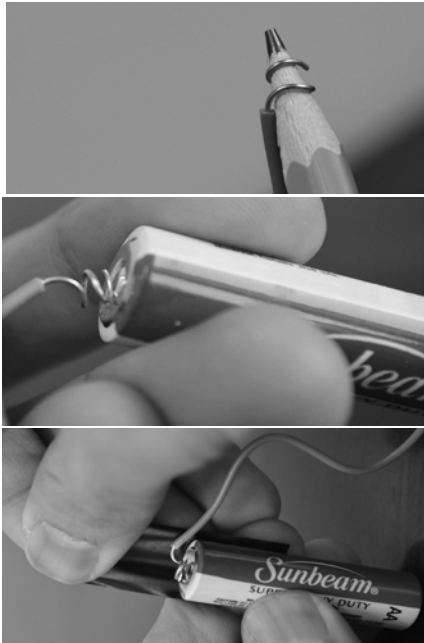
6) **Act. 5, Balloon Rocket:** Place one piece of painter's tape perpendicular to the fishing line. Place two pieces of tape parallel to the line (one on each side of the line).



7) **Act. 5, Balloon Rocket:** Attach the balloon to the half-straw piece on the fishing line with two pieces of painter's tape. Pinch the balloon neck shut until ready to let the balloon rocket fly along the fishing line.

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CLASS 4



1) Act. 2, Circuit Flashlight: Top photo: Wrap one end of the wire around a pencil tip to make a small coil. Middle photo: place the coil on the (-) terminal of the battery. Bottom photo: Tape the coil in place by stretching a piece of electrical tape over it.



2) Act. 2, Circuit Flashlight: Wrap the other end of the wire around the grooves in the metal base of the mini lightbulb.



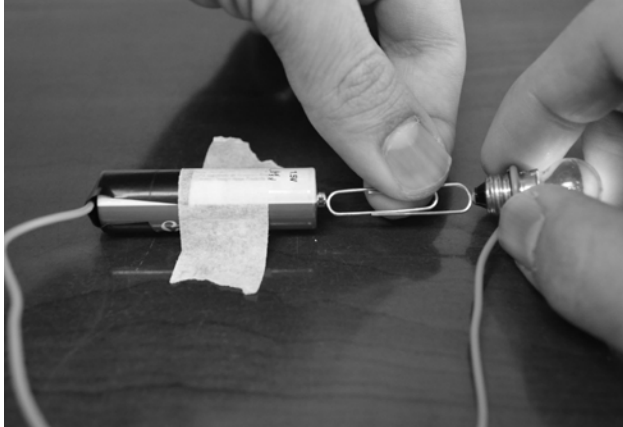
3) Act. 2, Circuit Flashlight: To complete the circuit touch the base of the lightbulb to the (+) nub of the battery.



4) Act. 2, Circuit Flashlight: To complete the circuit touch the base of the lightbulb to the (+) nub of the battery.

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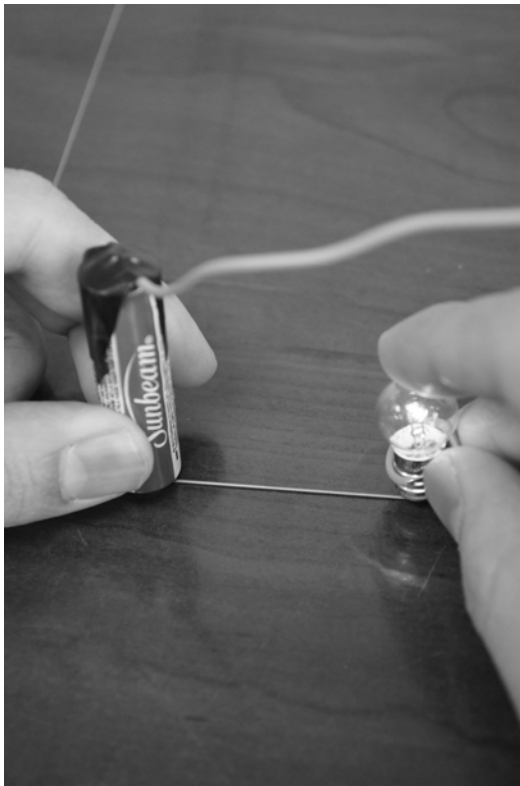
CLASS 4 (cont.)



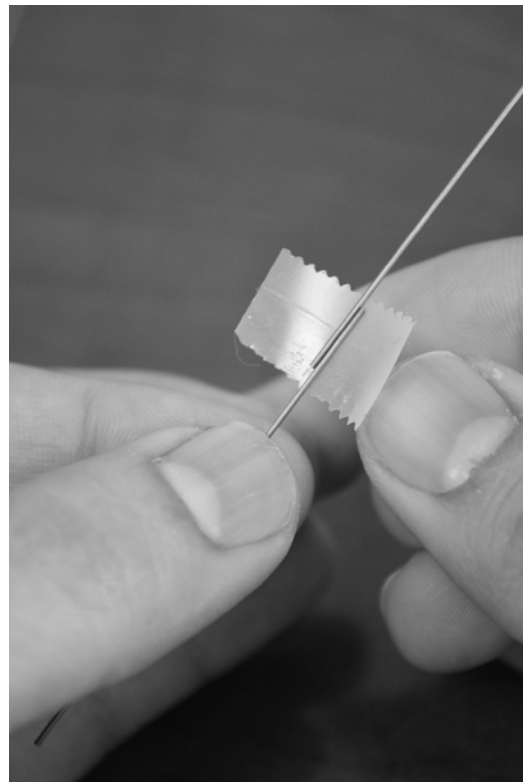
5) Act. 3, Conductors & Resistors: Using the circuit flashlight, tape the battery down on the table. Place the test object (ex: paperclip) between the (+) nub of the battery and the bottom of the light bulb.



6) Act. 4, Pencil Lead Dimmer: Detach the wire spring from the (-) terminal and tape it to the (+) end of the battery.



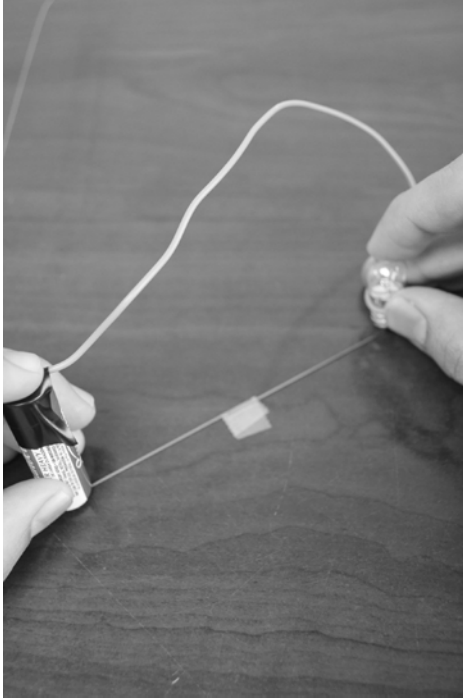
7) Act. 4, Pencil Lead Dimmer: With the pencil lead flat on the table, rest the (-) battery terminal on the lead while touching the base of the lightbulb to different sections of the lead.



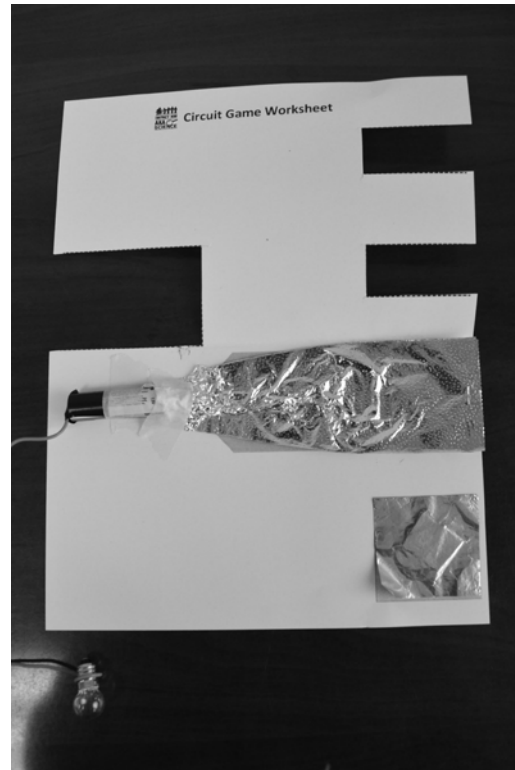
8) Act. 4, Pencil Lead Dimmer: Overlap the ends of two pieces of lead and tape them together.

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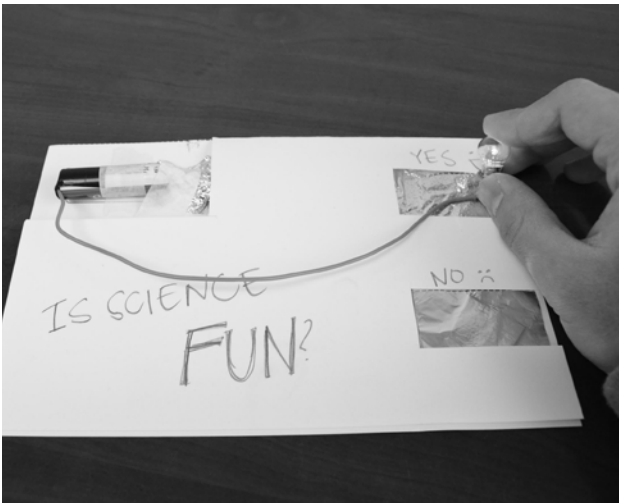
CLASS 4 (cont.)



9) Act. 4, Pencil Lead Dimmer: Repeat completing the circuit with the double-length piece of lead. As you move the lightbulb closer to the battery along the lead track, it should become brighter.



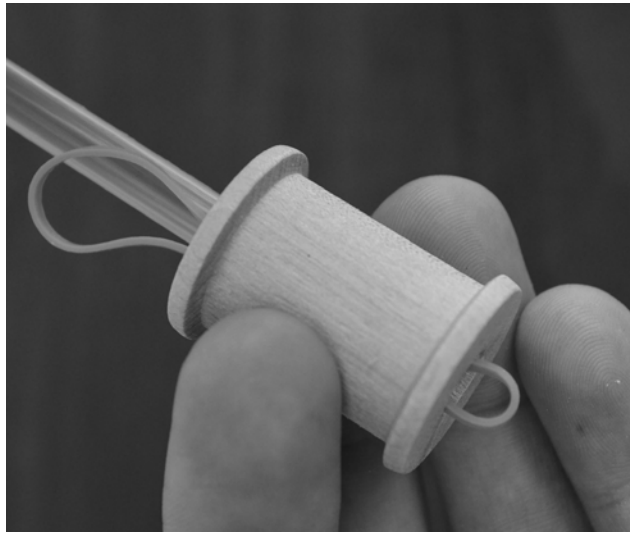
10) Act. 5, Circuit Game Show: Tape the foil rectangles in place on the prepared circuit game worksheet. Scrunch the end of the long foil rectangle around the (+) end of the battery, and tape the battery down on the sheet with the coiled end of the wire electrical-taped to the battery.



11) Act. 5, Circuit Game Show: Fold the worksheet in half and touch the bottom of the lightbulb to each of the exposed foil squares. The bulb should light up when in contact with the top square, but not the bottom square.

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CLASS 5



1) Act. 2, Spool Racer: Thread the rubber band through the center of the spool, using a straw to push it through until it comes through out of the other side.



2) Act. 2, Spool Racer: After putting the straw through one of the rubber band loops so that it doesn't fall back into the spool, insert a penny into the rubber band loop on one side of the spool, and tape both down to the spool.



3) Act. 2, Spool Racer: Thread a washer onto the loose end of the rubber band loop, with the flattest side of the washer against the spool. Then, slide the mini popsicle stick through the rubber band loop. Wind the washer 10-15 times and place the racer on the floor to watch it go!



4) Act. 3, Drag-Racing Cups: Make a hole in the bottom of both paper coffee cups.

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CLASS 5 (cont.)



5) Act. 3, Drag-Racing Cups: Tape both cups together bottom-to-bottom, with the holes lined up, and thread the rubber band chain through the holes in the cups.



6) Act. 3, Drag-Racing Cups: Finished product from the washer-bead-straw side after following the instruction steps in the curriculum.



7) Act. 3, Drag-Racing Cups: Finished product from the paper clip side after following the instruction steps in the curriculum.



8) Act. 4, Zoom Bead: Thread both pieces of fishing line through the center of the wooden bead. Fold a piece of tape on each of the four ends of the fishing line.

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CLASS 5 (cont.)

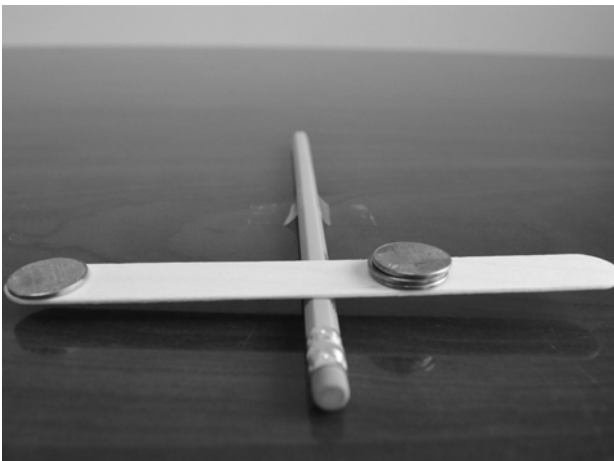


9) **Act. 4, Zoom Bead:** Holding the two taped ends on the same side of the bead, pull hands apart to make the bead move forward.

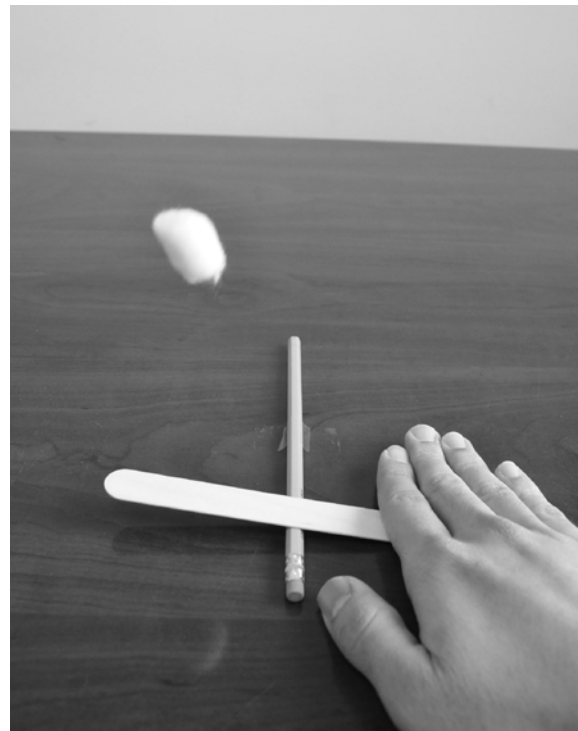


10) **Act. 4, Zoom Bead:** Stand with the fishing line taugt with a partner. Shoot the bead back and forth along the fishing line by separating hands to make the bead move forward, and closing hands to allow the bead to travel back.

CLASS 6



1) **Act. 2, Levers:** Tape down a pencil, and place a jumbo popsicle stick perpendicularly across it. Place a stack of three pennies on one side of the popsicle stick near to the pencil. Balance the lever by placing a fourth penny on the far opposite side of the popsicle stick.



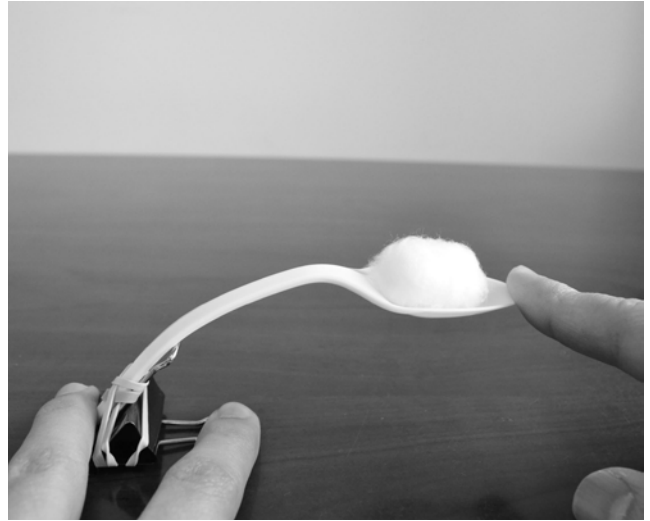
2) **Act. 3, Lever Launch:** Using the same popsicle stick and taped-down pencil from the last activity, place a cotton ball on one side of the popsicle stick. Push down on the opposite side of the popsicle stick to launch the cotton ball into the air.

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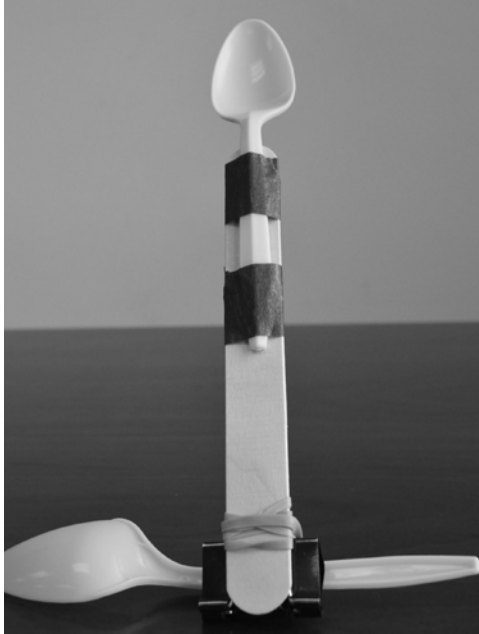
CLASS 6 (cont.)



3) Act. 4, Cotton Ball Catapult: Center the back of the spoon on the binder clip, and attach with a rubber band in a criss-cross pattern.



4) Act. 4, Cotton Ball Catapult: Place a cotton ball in the spoon and, while holding down the binder clip with one hand, bend back the spoon with the other. Release the spoon to launch the cotton ball.



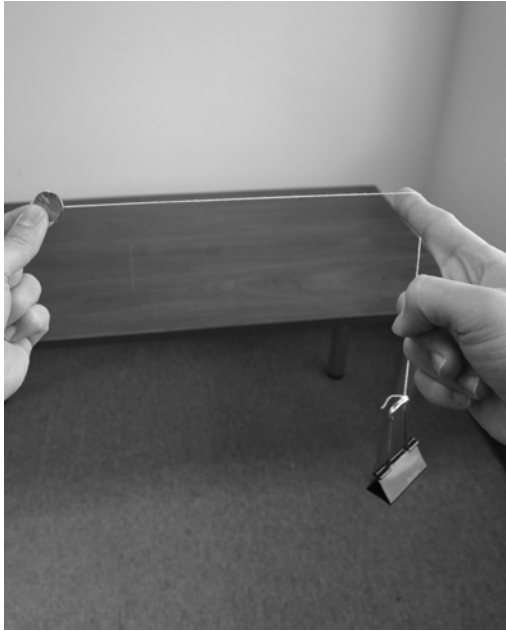
5) Act. 4, Cotton Ball Catapult: An example of a modified catapult. Make sure that, with any modification, the spoon is very well secured to the popsicle stick/binder clip.



6) Act. 5, Pendulum Drop: Tape the penny to one end of the string and tie the other end of the string to the metal parts of the binder clip.

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CLASS 6 (cont.)

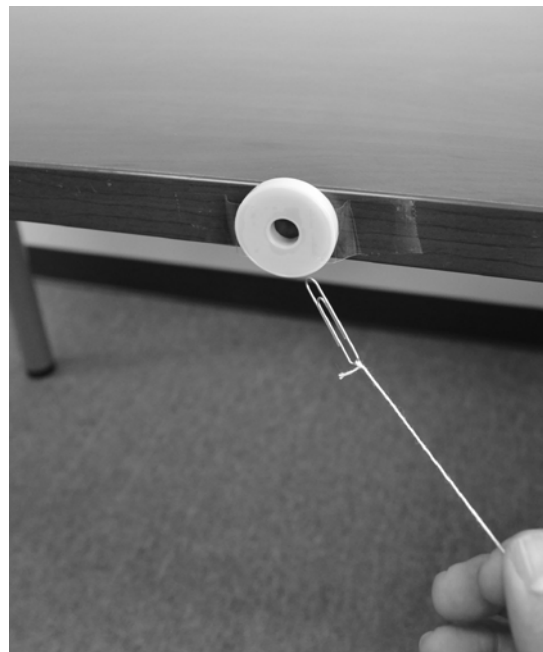


7) Act. 5, Pendulum Drop: Hold the penny in one hand and let the string drape over your other finger. Release the penny and it should wrap around your finger.

CLASS 7



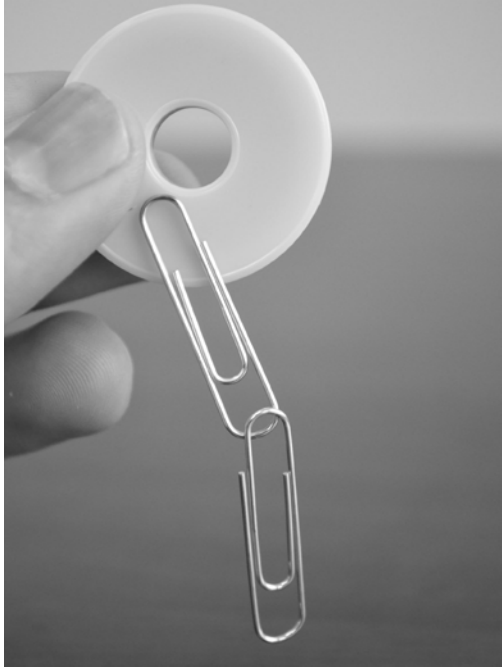
1) Act. 2, Floating on Air: Stack two ring magnets on a pencil so one floats above the other.



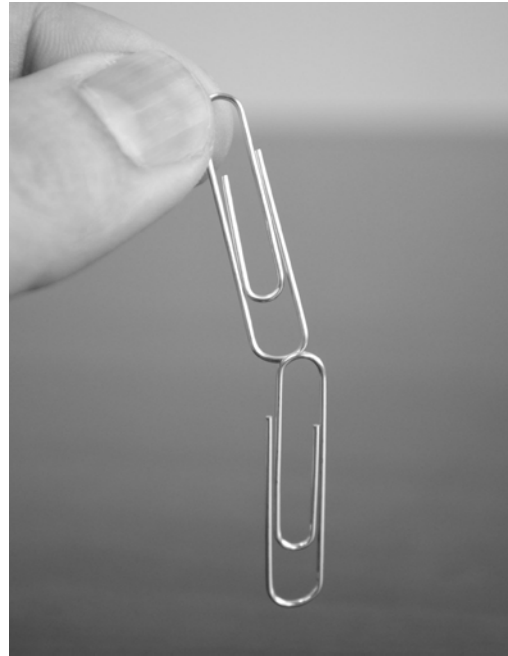
2) Act. 2, Floating on Air: Tape a magnet to the edge of a table (scotch tape is pictured above instead of masking/painter's for visibility of the magnet). Tie a paperclip to a piece of string. The paperclip will levitate when held near the magnet (within the magnetic field).

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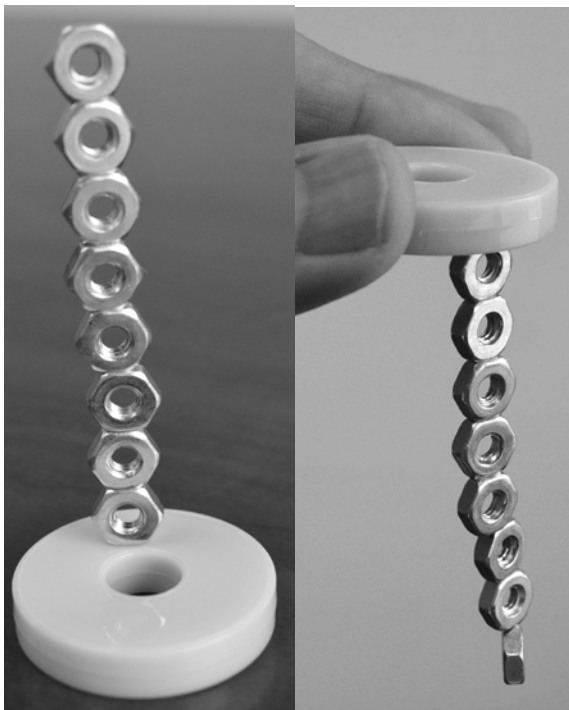
CLASS 7 (cont.)



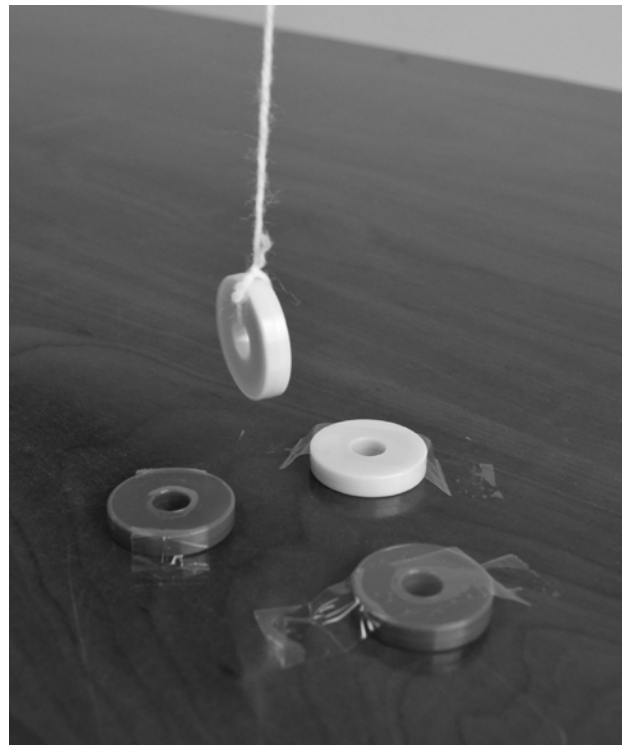
3) Act. 3, Magnet Chain & Stack: Stick a paperclip to the magnet. Touch an additional paperclip to the bottom end of the one already attached to the magnet. The new paperclip should stick to the magnetized paperclip.



4) Act. 3, Magnet Chain & Stack: Slip the paperclip chain from the magnet. The second paperclip should remain attached to the first.



5) Act. 3, Magnet Chain & Stack: Stack small, metal nuts upwards or downwards on a magnet.



6) Act. 4, Swinging Magnet: Tape three magnets in a triangle formation on the table surface (scotch tape is pictured above instead of masking/painter's for visibility of the magnet). Tie a fourth magnet to the end of a string. Dangle the magnet on the string about the triangle of taped-down magnets.

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CLASS 7 (cont.)



6) Act. 4, Centripetal Force: Use a pencil to poke two small holes directly across from each other near the rim of a paper cup.



7) Act. 4, Centripetal Force: Thread the yarn through the holes in the paper cup and tie the two ends into a knot.



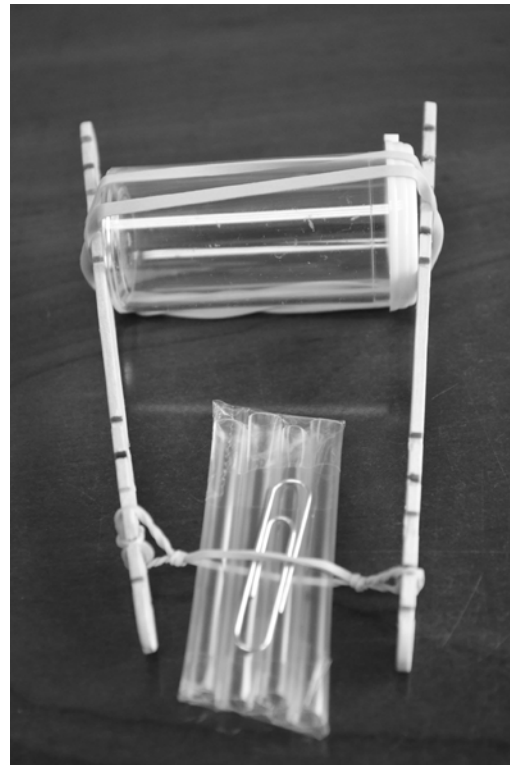
8) Act. 4, Centripetal Force: Place pennies into the cup and swing the cup around by the yarn handle. If the cup is swung with enough force in a smooth circle, the pennies should stay inside the cup.

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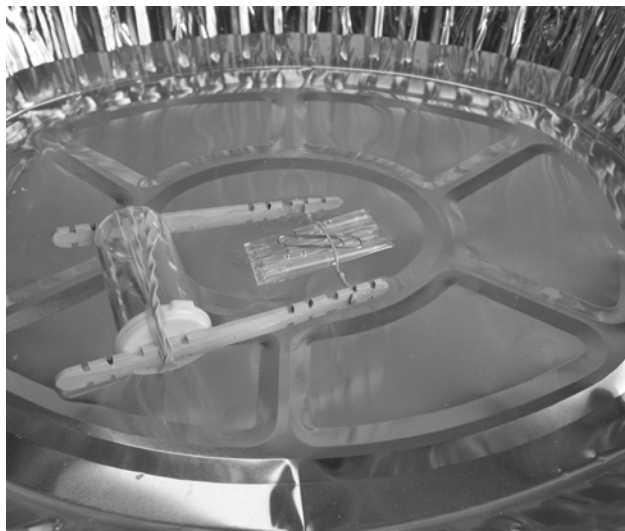
CLASS 8



1) Act. 2, Rolling on the River: Create a "straw paddle" by taping together four 2in straw pieces, then taping across the tops and bottoms of the straws.



2) Act. 2, Rolling on the River: Finished "boat". Note that the paper clip is inserted between the rubber band and the top of the "straw paddle".



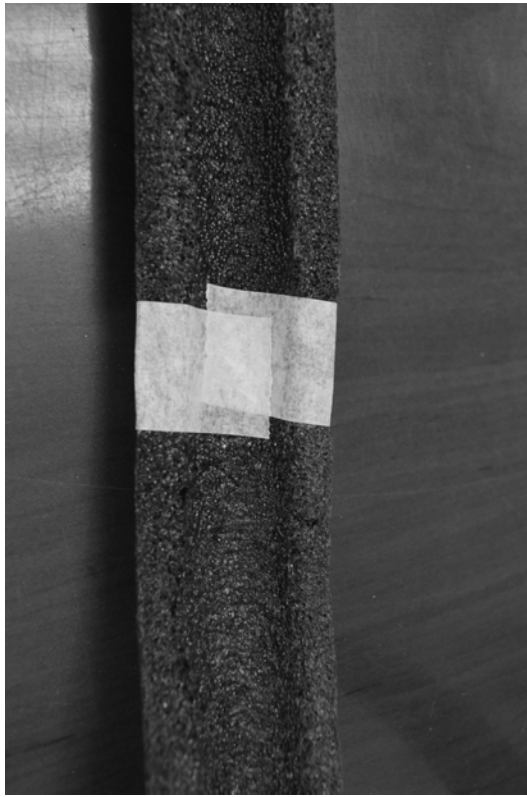
3) Act. 2, Rolling on the River: Place finished boat into the aluminum pan with water. Wind the "straw paddle" and release it to allow the boat to move through the water.



4) Act. 3, Marble Coaster: Create a steep starting ramp by taping one section of grooved track from a wall to a table.

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CLASS 8 (cont.)



5) Act. 3, Marble Coaster: Connect a second piece of track to the first by smoothly taping the junction.



7) Act. 3, Marble Coaster: Example of a turn.



6) Act. 3, Marble Coaster: Example of a loop.



6) Act. 3, Marble Coaster: Example of a jump.