

Think Like a Crow Challenges

Challenge 1

Goal: Retrieve a piece of looseleaf paper that is taped to the ceiling. Students cannot touch the paper with their hands.

Items Needed:

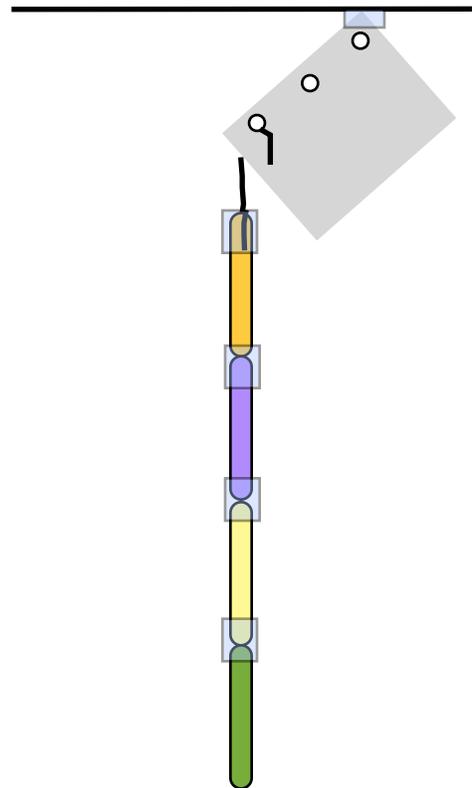
- Tape
- Paper clips
- Markers, highlighters, or pens

How to Solve It:

- Stack several markers, highlighters, or pens end to end. (Tape them together for support if they do not have interlocking caps.)
- Uncurl a paper clip so that it forms a hook shape.
- Tape the paper clip hook to the end of the marker/highlighter/pen stack.
- Use this tool to hook one of the holes in the looseleaf paper. Then pull down the piece of paper.

CAUTION!

Be careful when taping the looseleaf paper to the ceiling. Neither teachers nor students should stand on unstable desks, chairs, or other furniture to set up or to retrieve the paper. If you cannot safely tape something to your classroom ceiling, you can tape it to something lower, like the corner of a whiteboard.



Think Like a Crow Challenges

Challenge 2

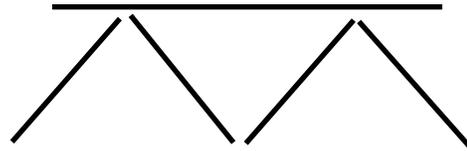
Goal: Create a bridge that can support the weight of a stapler.

Items Needed:

- Index cards
- Stapler

How to Solve It:

- Use some index cards to create adjacent “tents” as shown to the right.
- Hint: This works better if you place the long edge of the index cards along the ground (so that each tent is longer than it is tall).
- Carefully place index cards across the tops of the tents to form a flat surface.
- Put the stapler on top of the index card bridge.



Attention students!

Did you find another way to solve this challenge using only index cards? If so, let us know at novaeducation@wgbh.org!

Think Like a Crow Challenges

Challenge 3

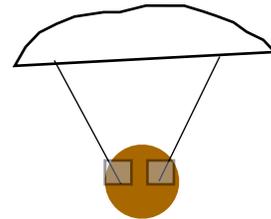
Goal: Design something that will always land a penny heads-up.

Items Needed:

- Box of tissues
- Tape
- Rubber bands (or string, if available)

How to Solve It:

- Don't leave it to chance—build a parachute!
- Use a tissue to create lift. Attach the tissue to the penny using tape and rubber bands (or string, if you have it in your classroom). Make sure the penny is facing up.
- Drop the penny from different heights and see what happens. Have students try dropping the penny from waist level, eye level, above their heads, and other points. Does the penny always land heads up?



Think Like a Crow Challenges

Task 4

Goal: Turn off the lights without touching the switch.

Items Needed:

- Box of tissues or books
- Ruler
- Eraser

How to Solve It:

- Generally, flinging erasers during class is a no-no, but today it is exactly what you need to do. To solve this challenge, you can build a lever.
- Put the box of tissues on a desk near the light switch.
- Then place the ruler on the tissue box, with one end extending past the box's edge. Put the eraser on the other end of the ruler.
- Launch the eraser and see where it lands. The goal is to fling the eraser so it hits the light switch, turning off the light.
- Move the setup if the eraser lands too far away or hits the wall too soon.
- If the eraser is hitting the wall too low, you can prop up the tissue box on one or more textbooks.

