

How to Make a Fake Pokéball

Introduction:

Pokéballs are a feature of the *Pokémon* franchise, in which they are used to capture the eponymous creatures. In the anime, they look like Figures 1 and 2 below:



Figure 1: Ready to Throw



Figure 2: Shrunk for Storage

A Pokéball is a shiny sphere divided into red and white halves by a black line, with a button in the center to release the Pokémon inside. Pokémon trainers use them to carry up to six Pokémon with them to battle other trainers and "Catch 'Em All."

This DIY tutorial will explain how to make your own fake Pokéball.

Materials:



Figure 3: Materials

In order to complete these instructions, you will need the materials shown in Figure 3 above:

- 1 **sheet of white foam**
- 1 **pair of scissors** (adult supervision recommended for children)
- 1 **dime** (or similarly sized circular object for tracing)
- 1 **pencil**
- 1 bottle of **glue** (Elmer's works fine)
- 1 **smooth craft foam or Styrofoam ball** (this tutorial uses 3")
- 1 paint **brush** (this tutorial uses one 1/4" wide)
- **Aluminum foil**
- 1 **cup with water** for rinsing brushes (since this cup will get paint in it, using one you will not be drinking out of later is recommended)
- 1 **paper towel or napkin** for drying brushes
- 1 bottle of **black paint** (this tutorial uses Plaid "Black" Satin Acrylic)
- 1 bottle of **red paint** (this tutorial uses Plaid "Real Red" Gloss Acrylic)
- 1 bottle of **white paint** (optional, not shown in this tutorial)

Warning: Make sure you read the warning labels on each product, especially if small children are taking part.

Section 1: The Button

1. Near the edge of the foam sheet, draw two circles, one the size of the dime and one slightly smaller. The image below shows both circles and demonstrates the tip to ensure that the second circle isn't lopsided. See Figure 4 below.

Explanation: Drawing the circles near the edge of the foam means that you will have to cut through less of the foam to cut them out, meaning less waste.

Tip: Tracing a dime will ensure that the circle not lopsided. For the smaller circle, try tracing a dime and then drawing the smaller circle inside of it, cutting out only the smaller circle. This will allow you to reference the traced circle for less lopsidedness.



Figure 4: Two Foam Circles

2. Cut a rectangle containing the two circles out of the foam sheet. See Figure 5.

Warning: Scissors are sharp and should not be used by small children without adult supervision.

Explanation: This step makes it easier to turn the foam while cutting out circles, since you're working with a smaller piece.

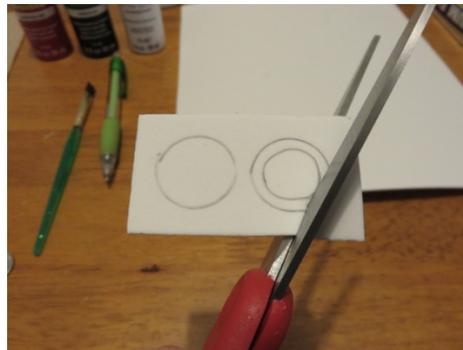


Figure 5: Cut Out the Circles

3. Cut the two circles out of the foam. You should end up with two separate circles, one smaller than the other. See Figure 6.



Figure 6: Two Circles

4. Centering the smaller circle carefully, glue the smaller circle on top of the larger circle. This will then be the button of the Pokéball. See Figure 7.

Tip: To minimize mess, don't use too much glue. If glue is seeping out from under the edges of the smaller circle, wipe off the excess.



Figure 7: The Button

5. Set the button aside for the glue to dry and begin Section 2.

Section 2: The Black

1. Tear off and crumple a bit of aluminum foil, molding it to act as a "stand" for the ball. See Figures 8 and 9.

Warning: Avoid touching sharp edges, including on the box of the foil.

Explanation: This step will prevent the ball from rolling when you put it down between paint colors, especially after the button is glued on.

Tip: Make sure the ball won't roll off the stand before you move on.



Figure 8: Ball on Stand

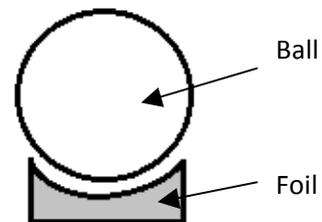


Figure 9: Diagram of Ball and Stand

2. Tear off a small sheet of aluminum foil. This will be used as a palette.

Tip: Make sure the foil is large enough that the two paint colors you will be using won't touch later.

3. Squirt a small amount of black paint onto the foil. See Figure 10.

Tip: Start with small amounts and squirt out more if necessary, rather than starting with a large amount. This reduces waste.

Tip: Squirt the black paint at one end of the palette rather than the middle, as you will have a second color later.



Figure 10: Black Paint on Palette

4. Find the seam dividing the ball in half. If there is not one, draw a line that does so.

5. Dip the brush in the black paint.

6. Center the brush on the seam or line as shown in Figure 11. A red line has been added to show where the seam is, as it is hard to see in the picture. The brush's bristles should be divided equally by the seam.

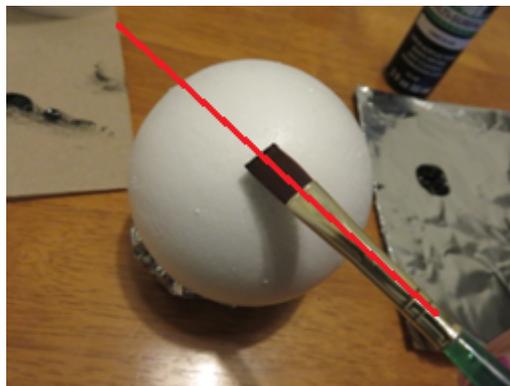


Figure 11: Centering the Brush

7. Paint a line around the circumference of the ball, keeping the brush centered on the seam. The line should be about the width of the brush (1/4").

Troubleshooting: Be very mindful of where you put your hands. If you're not careful, you may end up with undesired black smudges.

Tip: You will have to pick up the ball when painting. When you're done or need to set the ball back down, make sure to put it back on the aluminum foil to make sure it doesn't roll and get wet paint smudges on your work surface.

Tip: Try to maintain even pressure on the brush to avoid having a line with fluctuating width.

8. Rinse and dry the brush. Let the paint dry some as you decide where the front of the ball will be.

Troubleshooting: Cheap brushes can and will shed/lose bristles. Dry carefully.

Tip: Pick the area of the line that looks the most even.

9. Making sure that the smaller circle faces away from the ball, glue the button from Section 1 onto the line where the front of the ball will be, centering it as well as possible so that the black line divides the button into two equal halves. See Figure 12.

Troubleshooting: You may have to hold the button for a few seconds in order for the glue to bond and hold the button in place without slipping.

Troubleshooting: The button may not quite lie flat against the ball. That's fine, just be careful not to catch it on anything so that it isn't pulled off.



Figure 12: Glued Button

10. Dip the brush in black paint again.

11. Align the brush against the button as shown in Figure 13.

(This is a smudge. Be mindful of where you put your fingers!)

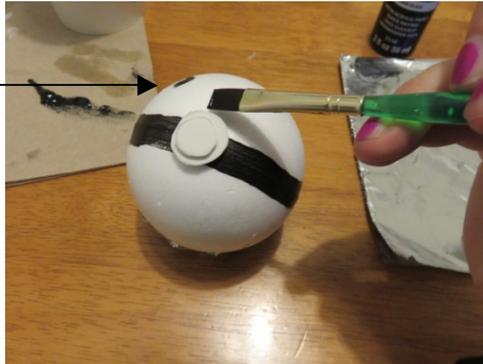


Figure 13: Aligned Brush

12. Paint a line outlining the button, being careful not to get black paint on the button. See Figure 14.

Troubleshooting: The glue may take a while to dry completely, so try not to nudge the button while painting around it or you may shift its position by accident.

Tip: The outline may end up looking a little square if you don't monitor it closely while painting. This is because the bristles of the brush can splay when painting a curve, causing that section to be wider. The end goal is a circle, so be mindful.



Figure 14: Black Completed

13. Rinse and dry the brush and begin Section 3.

Troubleshooting: Make sure that all the black is off the brush before you dry it. You'll be switching colors and you don't want to contaminate the red paint with the black.

Section 3: The Red

1. On the palette, squirt out some red paint. See Figure 15.

Tip: You will need more than you did black paint, but still start with small amounts and add if necessary rather than starting with a large amount.



Figure 15: Red Paint on Palette

2. Decide which half of the ball is the top and dip the brush in red paint.

Tip: The bottom half of the ball will not be painted, as it's already white. If you plan to use paint to cover up smudges, choose the smudged side of the ball for the top.

3. Being careful not to get red on the black lines, fill in the white space on the half of the ball that will be the top using the brush. See Figure 16.

Troubleshooting: The black paint may still be wet. Be careful of where you put your hands and the brush. To avoid touching the wet red paint with your fingers, try holding the ball lightly with your fingertips all on the bottom half. However, be careful not to drop the ball, as it were.

Tip: However, if the black line has smudges or uneven areas, you can cover the black paint with red to even out the line. White paint can be used to do the same on the bottom half of the ball, but may take several more coats than the red paint. Always be sure to rinse and dry the brush between colors to prevent cross-contamination.



Figure 16: Red Coat of Paint

4. Apply more coats of red paint as necessary until no white shows through and the red color looks even, allowing the paint to dry between coats.

5. Rinse and dry the brush.

6. Once the ball is dry, remove it from the aluminum foil. You should have a ball that looks like the image below in Figure 17.



Figure 17: Completed Pokéball

After the ball is dry, one option is to glue Velcro onto the back, opposite the button, to attach to a belt so that you can dress up as a Pokémon trainer. Or it can just sit there and look pretty. Whatever you decide to do with it, with a fake Pokéball you can continue on your journey to be the very best, like no one ever was. Congratulations!

Images in the introduction are screenshots from the Pokémon anime and were found on Google Image Search.

Pictures during the tutorial were taken by the author.

Diagrams during the tutorial were drawn by the author in MS Paint.

REPORT

To: Sara Kelm
From: STUDENT
Subject: Usability Test Report for DIY Fake Pokéball
Date: 6 April 2016

The purpose of this report is to inform Professor Kelm about the results of usability testing on the instructions for making a fake Pokéball.

Summary of Test Findings

The goal of this testing was to find out if the instructions provided to the testees were clear enough that the testee could successfully create a fake Pokéball similar to the one that I created.

The audience for these instructions is *Pokémon* fans of any age group, though the instructions include warnings geared toward children, such as safety warnings for scissors. The audience during usability testing was college-age students.

Overall, I discovered that despite attempting to make the instructions as clear as possible in the first draft or usability testing, there were several sections that were not clear enough to be easily understood. In particular, the step involving creating a stand for the ball out of foil caused problems for all three testees, especially when it came to the word "molding". Testees also all took longer than expected to complete the Pokéball, averaging about eighteen minutes while I took fifteen minutes (making sure to read the instructions as I went rather than creating the ball from memory.) Testees also showed less understanding of how to use a paintbrush than expected; clarification that all of the black paint should be off the brush before moving on to red paint was necessary despite multiple steps telling the testee to rinse and dry the brush. Having used paint and brushes for most of my life, this was surprising to me.

The instructions were found to be good overall by the testees, with a few clarification issues.

Instruction Overview

The purpose of the instructions is to guide the user in creating a fake Pokéball, an iconic object in the *Pokémon* franchise, out of Styrofoam and paint. The audience for the instructions is fans of *Pokémon*, as very few others would be interested in creating a Pokéball or, in some cases, even know what a Pokéball is. The use for the fake Pokéball that I had in mind while creating the instructions was for use in dressing up like a Pokémon trainer, but that use is not required in the instructions. Given that this is a DIY craft project, the environment that the user is most likely to use these instructions is at home during leisure, and the instructions are most likely to be found online; instructions cannot efficiently be packaged with the materials, as each material can be used for near-infinite other projects.

The instructions, therefore, are written and formatted more like what might be found on a blog rather than what might be found in the packaging for a printer. Color is an important element; warnings are in red, troubleshooting is in orange, instructions are in black, and tips are in gray. This color-coding helps the reader see the most important information first. Tips, the least

important for correctly completing the instructions, recede due to the lighter color. (It should be mentioned that this effect is more pronounced on a computer screen than after printing onto paper.) Pictures are centered in order to draw the eye; the break in formatting from the left-justified text draws attention to them. In DIY craft projects, feedback pictures are almost more important than the text itself.

Some steps have large gaps of white space; this is so that individual steps with their corresponding pictures all fit onto the same page rather than being split. This would not be an issue in an online format such as a blog post.

Methods

The instructions were formulated and then tested by me as I took pictures of the steps to include in the instructions (the thought behind stopping to take pictures during the timing of the test was to compensate for speed caused by prior knowledge of the steps.) Three peer-given usability tests were conducted; test one was conducted on March 23rd and tests two and three were conducted on April 1st. No revising took place between tests two and three.

Testees were given a copy of the instructions and a set of materials already laid out for them. I used a stopwatch app on my phone to measure the time taken by each testee and took notes during the procedure in a spiral, noting questions the testees had and areas that seemed to cause confusion, including backtracking. I also conducted a brief interview with the testee after each test, asking if there were any confusing sections and any suggested improvements that they had. I remained silent for as much of testing as possible in order not to influence the testees.

Testees were asked in the instructions for each usability testing day to think aloud, but none of the three testees did so; they worked in silence unless asking a question. I prompted the third testee to feel free to think out loud when it became clear that he was following the trend, but he did not. This problem was partially my fault as I was not more insistent, particularly in the first two tests, but it was still a problem. Testees were also a more narrow age range than the instructions were written for; ideally the instructions would be tested by younger children as well.

Discussion of Findings

Testees took longer to complete the instructions than expected; in addition, sections one and two took much longer to complete than section three. While this is understandable given that sections one and two involve more steps, section one alone taking ten minutes or more for all testees was unexpected. All three testees ran over the estimated fifteen minutes, with the third testee finishing the fastest at a little over seventeen minutes.

All three testees ran into slight problems with section one that resulted in revisions. A tip to wipe off excess glue, clarification to draw two separate circles, and diagrams to show feedback images of what the resulting circles should look like in relation to each other were added due to testees drawing or cutting out only the concentric circles. The second testee seemingly missed reading steps four and five of section one as well as the first step of section two without realizing it but was able to backtrack.

All three testees expressed confusion over "molding" foil into a stand for the ball to rest on between coats of paint. When explained in general terms that the step was meant to keep the ball from rolling, the stands created tended to be mostly flat rather than the curved shape I had envisioned and used while photographing steps.

All three testees seemed to run into at least slight problems while using paintbrushes, mostly in not getting all paint off while rinsing and occasionally not drying the brushes before dipping into paint (this can cause paint to get slightly watery.)

All three testees expressed general satisfaction with the instructions, though the second testee thought the instructions might be "too strict" or that there might be too much information. However, I'm unsure how to correct this when so much clarification is apparently needed. I feel that even the less-crucial tips and explanations would prove valuable for some users of the instructions, so I choose to err on the side of too much information.

Revision

The original draft of the instructions called for nail polish to be used instead of paint; the rationale was that the polish would be shinier than the paint. Unfortunately, the polish did not work as expected, dissolving some of the Styrofoam and ruining the paint brush besides, and was scrapped. Similarly, there was a fourth section that involved gluing Velcro to the ball for attaching it to a costume; this section was scrapped as it took too much time and was not strictly necessary. An allusion to the idea was made in the conclusion but does not appear in the steps.

In section one, testees ran into a variety of problems regarding the drawing and cutting out of the two circles making up the button, such as not realizing that they should draw two separate circles, not realizing that of the concentric circles the smaller one is the final product (the larger circle is a guideline) and cutting out the larger with the smaller drawn inside it, etc. Clarification was added to step one of section one and diagrams were added to steps three and four to help the user visualize the expected results.

In step one of section two, regarding the foil stand, I revised the wording after the first testee and again after the next two in an attempt to make the required action more clear. In addition, after the third usability test, I added a diagram next to the photo in an attempt to make the fact that the stand should not be flat, as several testees created a flat stand rather than a curved one that could successfully keep the ball from rolling between coats of paint. "Tip: make sure the ball won't roll off the stand before you move on" was also added to the already extant explanation for creating the stand.

I did not revise steps involving rinsing and drying the paintbrush after usability tests two and three. I feel that the steps given in the instructions already should have been clear enough, and there were already tips and explanations clarifying that all paint should be removed from the brush. I am unsure how much clearer I could be than "rinse and dry the brush" in order to get the user to rinse and dry the brush, and I've been told that the instructions are "strict" already.

One testee was confused about the required width of the black line in step six of section two; in order to reduce confusion, I changed the color of the added line in the photo to red and clarified

in step seven, in which the black line is actually created, that the line should be the width of the brush, 1/4".

The photos and diagrams were moved from above the words of the associated steps to below the words of the associated steps after one testee found the order of steps unclear. As each photo shows the end result of the step, not what the step starts out with, this makes sense. After peer review, all photos and diagrams were labeled.