

Paper Playground - Metallic Dragons

General Assembly Instructions



Thank you for purchasing Paper Playground - Metallic Dragons. We hope you will enjoy this product. If you have any questions, please visit the Penguin Labs website at <http://www.penguinlabs.com>.

Required Tools:

- A sharp knife, such as a hobby knife or scalpel.
- A straightedge, preferably a metal ruler.
- A cutting surface, such as a self-healing cutting mat.
- Cardstock paper, a minimum of #60 weight. Check with your printer's User Manual to see what type of paper it can use.
- Glue, glue stick, or paste. Regular white glue can warp the cardstock and should be applied in a very thin layer. Paste and glue sticks won't warp the paper, but can be difficult to apply properly and may set before the pieces are assembled correctly. A glue specifically designed for paper crafts is recommended, as it is easy to apply, doesn't set too quickly, and doesn't warp the paper.

General assembly instructions:

Start by printing the pages you need onto cardstock. You will not need all of the pages to assemble the model. Look at the instructions under "printing" to determine which pages you will need. Cut the pieces along the solid black lines. The pieces will be folded along the grey, dashed lines.

Folding cardstock is easier if you score the paper first. To score paper, use the back of a knife, a burnishing tool, or a ballpoint pen which has run out of ink. Run this tool along the fold line, creating a shallow cut or indentation in the paper. When you fold the paper, it will fold sharply along the score line.

The body, tails, and necks include a "glue ring" which is optional. Some builders find it easier to glue the ring to the tabs, holding the tabs to the strip with tweezers until the glue sets and gluing the bottom to the glue ring. Other builders prefer to glue the bottom directly to the tabs. Try assembling a piece without the glue ring, if you have difficulty, use the glue ring.

Printing

Each dragon comes with a number of options for you to mix and match to create different dragons. You will want to decide which pages you want to print out before starting the project. The basic dragon is made with the following pages (pages 1-8 of each dragon):

- | | |
|-------------|---------|
| • Head | • Body |
| • Back Legs | • Wings |
| • Fins | • Neck |
| • Foreleg | • Tail |

The basic reared-up dragon is made with the following pages:

- | | |
|------------------|-----------------|
| • Head | • Body |
| • Back Legs | • Wings |
| • Fins | • Arched Neck |
| • Stretched Legs | • Standing Tail |

Once you see how the pieces work together, you can customize your dragon by using different pages than the ones above.

Scaling

Dragons come in a wide variety of sizes. You can scale the dragon down to whatever size you may need. When scaling down dragons, details like the fins may be difficult to cut and assemble for sizes less than 50% of the original. How you scale the model depends on your computer and printer configuration. The best way to scale is to import the pieces you need into a graphics program and scale it within the program. If this is not an option, many printers allow you to scale the print out from within the printer settings.

To determine the scaling percentage, divide the desired size by the base size and express as a percent. The basic dragon has approximately the following dimensions when built without scaling:

- Length, nose to tail: 9 1/2 inches
- Length, body: 4 inches
- Height, to shoulder blades: 2 1/2 inches
- Width, body: 1 3/4 inches
- Width, wingspan: 6 1/2 inches

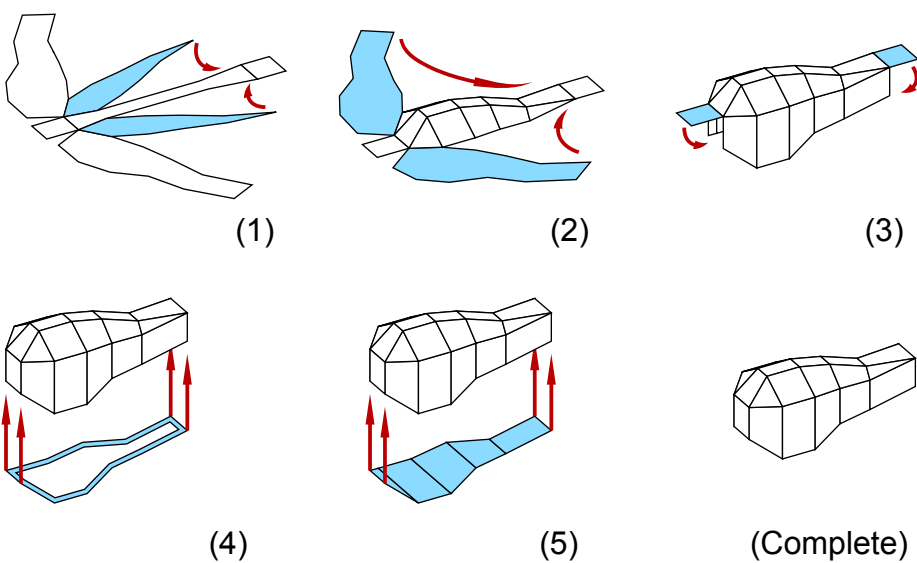
The reared-up dragon occupies a base of 3x3 inches and reaches a height (to the top of the head) of 7 inches.

Body Assembly Instructions

Cut and score the main body. Glue the white tabs of the center strip to the inside of the strips beside it (1). Glue the tabs of these strips to the inside of the outer most strips (2). When complete, the outer strips should be vertical, the vertical strip is horizontal and the between strips are at about a 45 degree angle. Fold down the white square sections at the ends of the center strip and glue to the tabs at the end of the outer strips (3)

(Optional, see "General assembly instructions", above)
Cut and score the glue ring, cutting out the center section. Glue the ring to the remaining tabs under the body (4)

Cut and score the belly and glue it directly to the glue ring (5) or directly to the tabs if you are not using the glue ring.

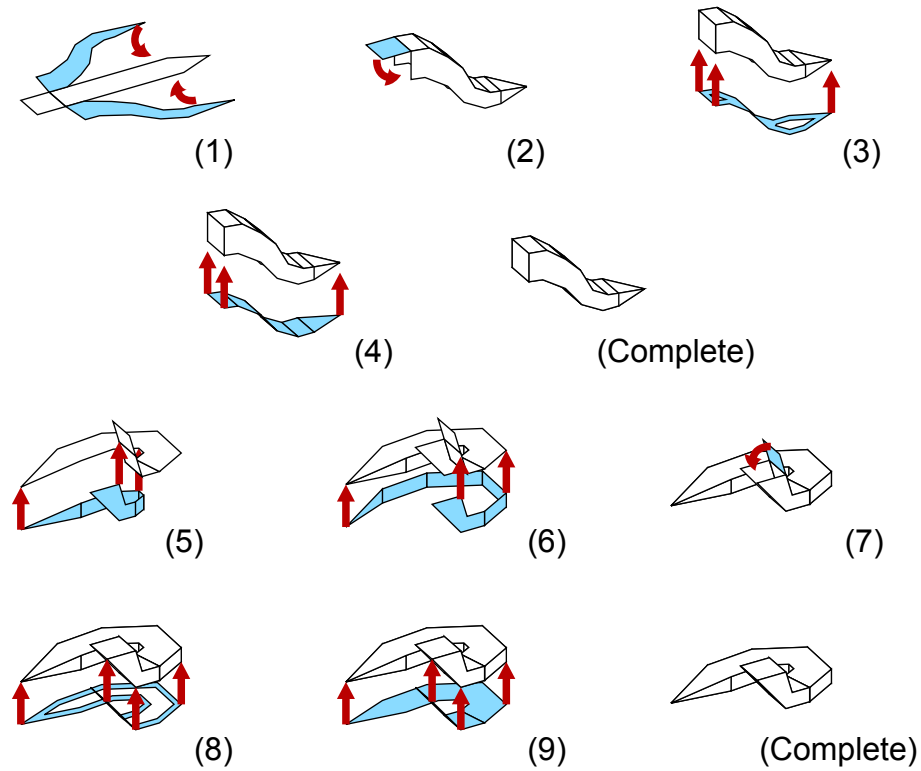


Tail and Neck Assembly Instructions

The tails and necks are all built in a similar fashion. The diagrams here show the basic and standing tails.

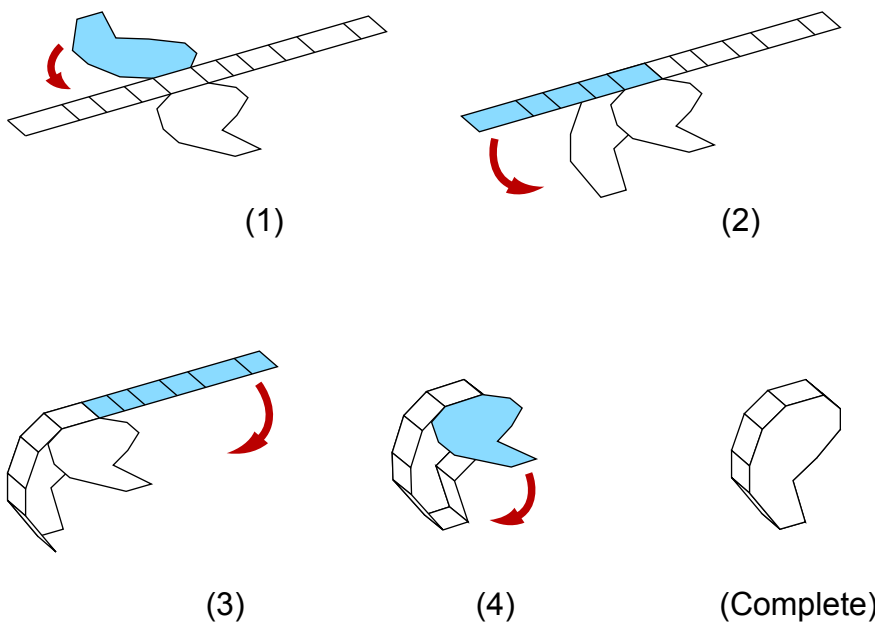
To assemble the basic tail, start by folding down the sides and attaching them to the top strip (1) then fold down and attach the end cap (2). Attach the glue ring to the assembly (3, optional) and attach the tail bottom to the assembly by gluing it to the glue ring or directly to the tabs of the piece (4). The basic and arched neck are assembled in a similar manner.

The standing tail is assembled by gluing the center section the inner side of the tail (5) and the outer side (6). Fold down the end flap (7). Attach the glue ring (8, optional) and the tail bottom (9). The turned necks and tails are built the same way.



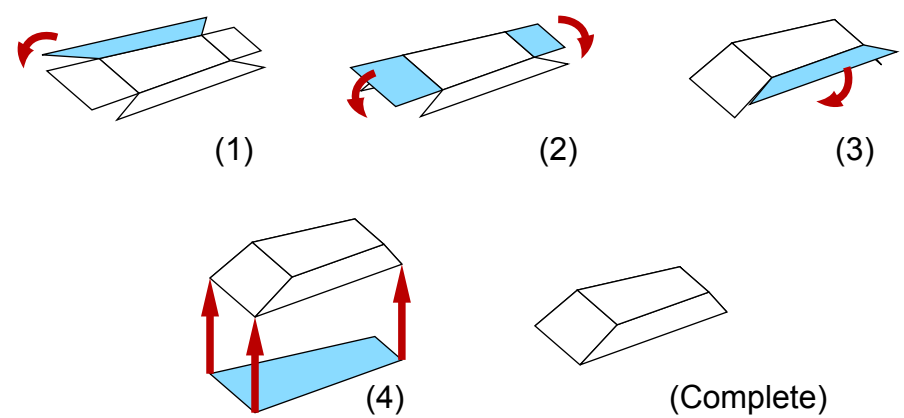
Leg Assembly Instructions

All the legs are assembled the same way. Cut out and score all of the sections. Glue the tabs of the center section of the legs to one to the side sections, following the angles of the side and gluing the ends of the center section together where they meet (1,2,3) Fold the other side over and glue onto the tabs. (4) **Helpful Hint:** when folding over the last side, make sure that the glue tabs are bent slightly outward and place a thin film of glue on the tabs. When you fold over the last side, it will make contact with, and adhere to, the tabs.



Foot Assembly Instructions

The feet are assembled by gluing the tabs on the side sections to the inside of the center section (1,2,3). Glue the feet bottoms to the underside of each foot (4).

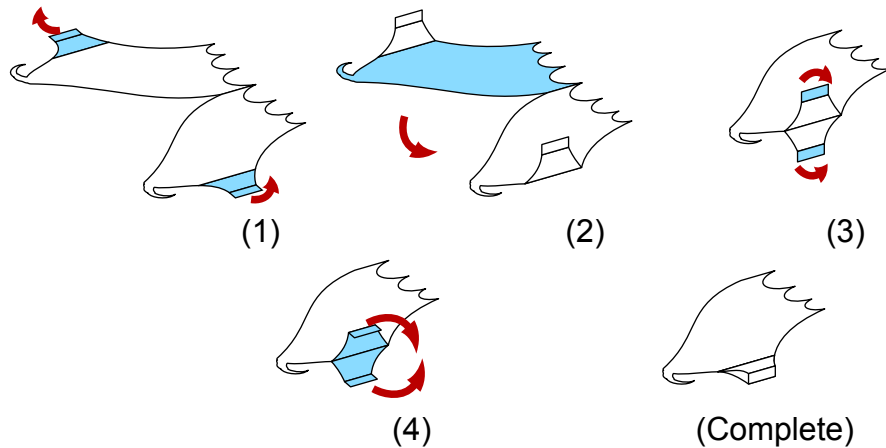


Finish by gluing the feet directly to the bottom of the leg.



Wing Assembly

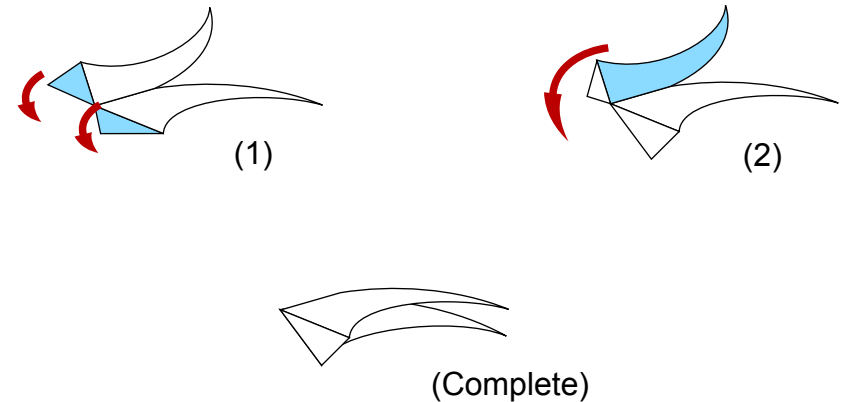
Cut and score the wings. Fold the tab and the base section on the wings upward (1) so they will not stick together when the wings are folded over and glued. Fold the wing in half and glue the back sides of the main sections together (2). Fold the tabs downward (3), fold the base sections together so the tabs overlap (4) and glue the tabs together. The wings should consist of a large, flat section with a triangular structure at its base (Complete) After the wing has dried, you may want to curl the wing slightly to give it a more natural shape.



Fin Assembly

There are two types of fins for the dragons. The fins on the brass, silver and gold dragon are assembled by folding the fins in half and gluing the glue tabs together (1,2). Glue the fins down the back and tail. For these fins it is easiest to start toward the head, working back towards the tail, "tucking" each fin into the one ahead of it. Note that some bending of the fins may be needed around the curves of the tail.

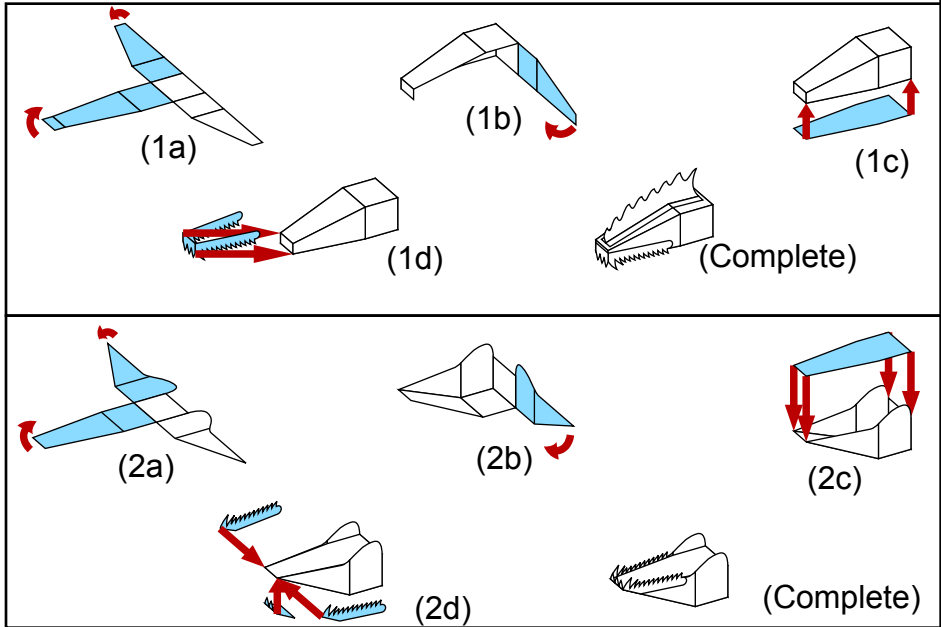
The fins on the bronze, cobalt, and copper dragon are attached by gluing the tab to the dragon. If you fold the tab under the fin and glue the colored part of the tab to the dragon, the fin will stick up instead of lying flat. For these fins, it is easiest to start from the rear of the dragon and work your way towards the head, overlapping the pieces.



Head Assembly Instructions

Cut and score all of the pieces. The upper and lower jaw are built by glueing the tabs of the center section to the inside of the side sections, matching the angle of the sides. (1a, 1b, 2a, 2b) The remaining tabs are folded inward. The roof and base of the mouth are glued onto these tabs. (1c, 2c)

If you are building the dragon with its' mouth closed, do not add the teeth sections. When cutting out the teeth sections, you may decide to cut along the black line, leaving black sections between the teeth or you may decide to cut out the black sections, cutting along the outline of the teeth. If the teeth are given as one, long section, attach them to the jaw pieces by glueing the scale ridge right along the edge of the mouth (1d). If the teeth are presented in three pieces, glue the long pieces to the sides of the mouth and the short, center piece to the center of the mouth, making sure to fold the teeth so they stick straight up (or down, for pieces attached to the upper jaw) (2d). The jaws will be joined during the final assembly steps.



Special Directions for Each Dragon

(refer to diagrams below)

The brass dragon has a fin assembly. Fold the sides down and attach the piece to the top of the dragon's head.

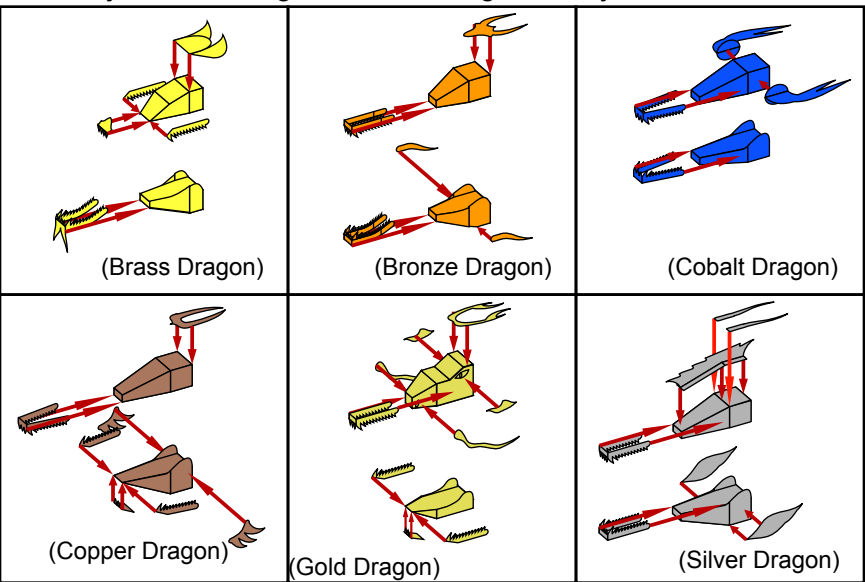
The bronze dragon has horns and jaw horns. The horns are glued directly to the top of the head and the jaw horns are glued along the bottom edge of the jaw.

The cobalt dragon has a set of horns that are attached to the sides of the head.

The copper dragon has horns and jaw horns. The horns are glued directly to the top of the dragon's head. The jaw horns are glued to the jaw.

The gold dragon has horns, whiskers, and eye frills. The horns attach to the top of the head. The eye frills attach just under the eyes and the whiskers attach just behind the nostrils. Just attach the base of the whiskers to the head, then you can bend the whiskers outward to make them more pronounced.

The silver dragon has a frill, horns and a jaw frill. To assemble the fins, fold the fins together and fold the scale sections perpendicular . Glue the fins together and glue the scale sections to the top of the dragon's head. Attach the horns to the top of the head and the jaw frills along the bottom edge of the jaw.



Final Assembly

Assembling the dragon in standing or walking positions follows the same basic instructions. The diagrams show the default pose.

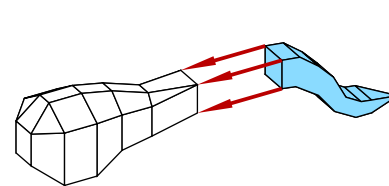
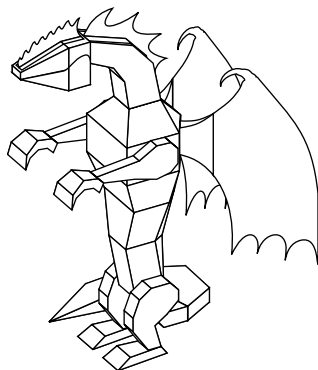
Start your assembly by gluing the tail directly to the back of the body. (1) Attach the legs to the body, positioning them so they rest firmly on the ground. (2)

Attach the top jaw directly to the neck, aligning the bottom of the jaw to the first fold. Note that in the red dragon, the top of the head will extend above the top of the neck. (3)

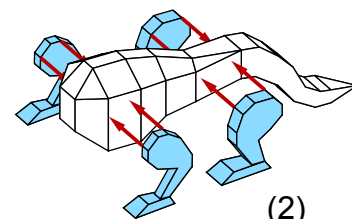
Apply a little glue to the inside of the jowls on the lower jaw and glue them to the upper jaw, opening the mouth to the angle of your choice. If you are building with the mouth closed, you can glue the insides of the mouth together (4). If the dragon has a neck fin, glue the two main pieces of the fin back-to-back, folding the tabs outward, and attach it along the top of the neck (5). Glue the neck directly onto the front of the body (6). If you are using the fins, attach the fins along the back of the dragon (not shown). Glue the wing bases directly to the body (7).

Other Assembly Options

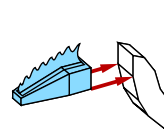
These instructions show how to build the basic dragon, but the set was designed to give you a range of options for your dragon. To build a standing dragon, replace the basic tail and neck with the standing tail and the arched neck, replace the forelegs with the stretched forelegs and use the clawed feet to build the standing dragon (see diagram). The turned tails and necks provide more posing options and using one basic foreleg and one stretched foreleg can add movement to your model. The options don't stop there! Swap pieces or add multiple heads or legs. The options exist to make your dragon a unique creation, have fun with it.



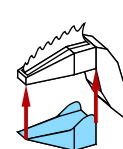
(1)



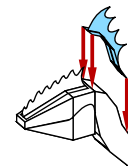
(2)



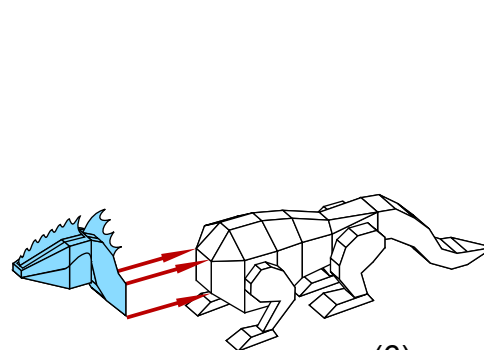
(3)



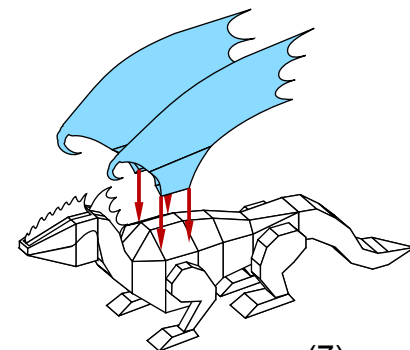
(4)



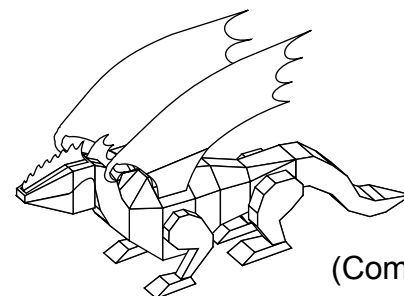
(5)



(6)



(7)



(Complete)

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Reference Photos

