

Celestial Clock

Materials: Creative Paradise, Inc. Molds_ [LF179 Celestial Frit Cast mold](#) and [GM81 Bend it Mold](#). Powder sifter, Pipette, ZYP. COE 96: F1 Powdered Frits, F2 Fine Frits, F3 Medium Clear frit. 5" x 10.5" piece of Blue Adventurine Glass. Clock parts. Liquid Fired Gold (optional). ZYP glass Separator Spray.

Always wear a respirator mask when working with powder frits. Spray your mold with ZYP Glass Separator Spray before using.



Sift powdered Cherry Red frit along the border and into the center of the face of the suns.



Sift powdered Rust frit into the center of the faces of the suns.



Sift powdered Transparent Yellow to cover the entire bottom of the sun cavities.



Fill the sun cavities with fine Canary Yellow Opal until the large sun holds 26 grams, the small holds 5 grams.



Sift powdered Navy into the face and face facing edge of the moon cavities and into the center of the star cavity.

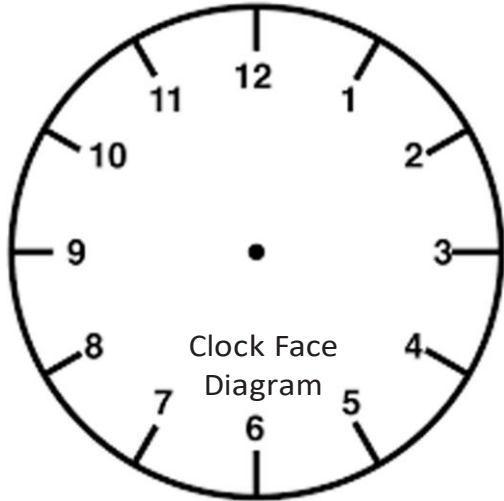


Sift powdered Pale Blue into the face and further back from the face facing edge of the moon cavities.



Fill the moon cavities with find White until the large moon cavity contains 16 grams of frit and the small cavity contains 8 grams of frit. Fire the frit cast mold using the Tack fire schedule found in table 1.

| Table 1* | | | |
|----------|------|------|------|
| Segment | Rate | Temp | Hold |
| 1 | 275 | 1150 | 30 |
| 2 | 300 | 1415 | 00 |
| 3 | 9999 | 950 | 75 |



Remove the castings from the mold. Use a scrub brush and soap and water to remove any glass separator from the castings.

Cut a 5" x 10.5" piece out of Blue Adventurine sheet glass. Print and then cut out the Clock Face Diagram provided above and place it on the Blue Adventurine glass. Make sure to print the Clock Face Diagram "Actual Size". You will use the Clock Face Diagram as a handy template to arrange your dichro pieces around (image 1).

Arrange the frit castings and the Clock Face Diagram using your own artistic preferences, keeping them arranged within the top 7.5" of the glass leaving the rest of the glass blank so it can bend. Make sure that the Clock Face Diagram is situated so the top and bottom marks are parallel with the side of the edge of the Blue Adventurine and that the frit castings are not encroaching the Clock Face Diagram (allow a 1/4" clearance) (image 1).

Cut 12 small (1/4" x 1/8") pieces of dichroic glass. Center a piece of dichroic at each line along the outside edge of the Clock Face Diagram on the glass (image 1). Use a bit of liquid hair spray to set each piece in place and then carefully remove the paper Clock Face Diagram. If desired use Dichroic frit to enhance the celestial scene by sprinkling them around the clock.

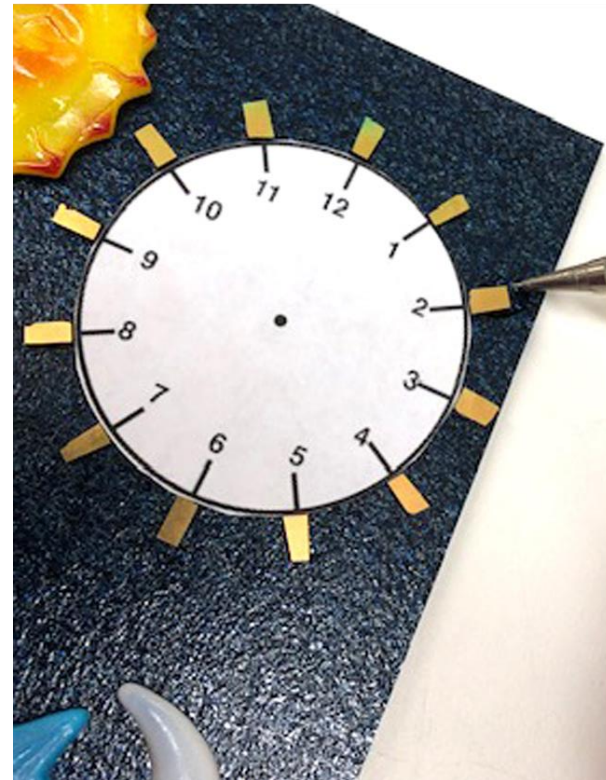
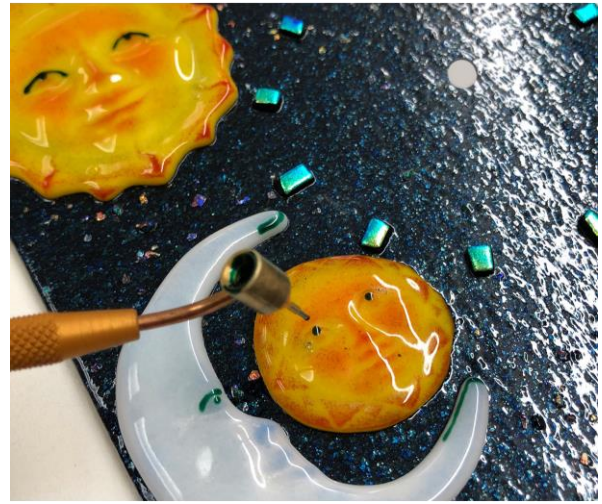


Image 1

Place the glass with the frit castings and dichroic pieces on a piece of kiln shelf paper on a flat kiln shelf and fire using the tack fire schedule found in Table 1.



After the glass has cooled, find the center of the clock face and use a drill with a 5/16" diamond core drill bit in water to drill a hole in the center of the clock face.

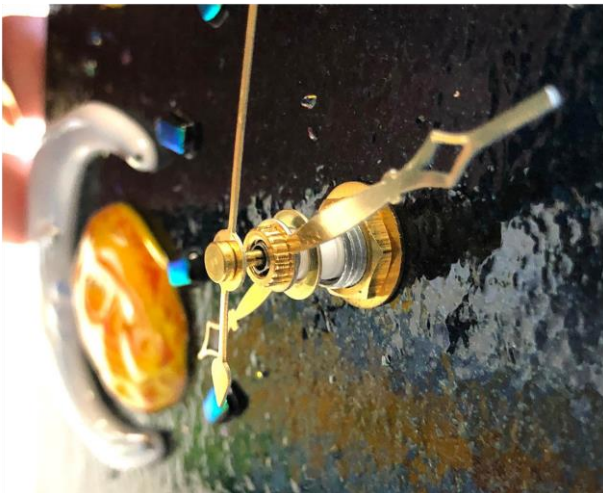


Optional: Use a gold applicator pen to apply some Fired White Gold to the eyes on the Sun and Moon.



Place the project on the GM81 Large Bend it Mold in the kiln. Fire using the schedule found in table 2.

| Segment | Rate | Temp | Hold |
|---------|------|------|------|
| 1 | 250 | 800 | 20 |
| 2 | 100 | 1260 | 15 |
| 3 | 9999 | 950 | 90 |



Place the black rubber washer on the shaft place the shaft through the hole place the brass washer on the shaft followed by the brass hex nut. Tighten the brass hex nut until the clock movement is held in place. Insert the hour hand followed by the minute hand on the shaft. Place the second hand on top as shown above.



The battery operated clock parts used in this tutorial are: 5/16" Short Shaft Clock. The minute hand is 1.375" and the hour hand is 1".