

# EXPLORING SPACE-TIME IN 3D



The Baltimore Museum of Art's sculpture garden is home to a collection of artworks by various artists exploring different ideas in the outdoors. One of the works is *Construction 140* (1971) by José Ruiz de Rivera. The artist was interested in space-time, an idea in mathematics that joins space and time into one idea, called a continuum, which helps scientists understand very large

things, like galaxies, and very small things, like atoms. Sculptures like this one can take up a lot of space, but to fully experience them, you have to move around them and that takes time.

To further emphasize the connection between space and time, de Rivera placed a motor in the base of his sculpture. The motor allows the stainless-steel spirals of the sculpture to slowly rotate every four minutes.

Let's make a sculpture inspired by *Construction 140*.

Find out more about space-time

[artbma.org/spacetime](http://artbma.org/spacetime)

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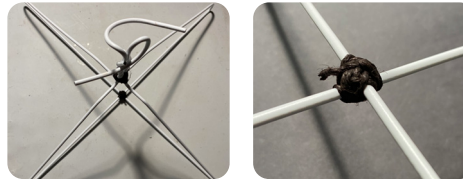
Image Above: José Ruiz de Rivera. *Construction 140*. 1971. The Baltimore Museum of Art: Gift of Ryda and Robert H. Levi, Baltimore, BMA 1987.217. © Estate of José de Rivera, Courtesy of Richard Gray Gallery, Chicago. Icon: web by icons from the Noun Project

## MATERIALS

Two wire hangers, colored construction paper, scissors, string, tape, a marker, and wire cutters or pliers.

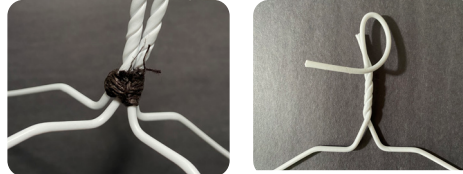
## INSTRUCTIONS

1



Place one hanger perpendicular inside the other hanger to make an X shape at the base. Wrap string around the X to join the hangers together at the bottom.

2

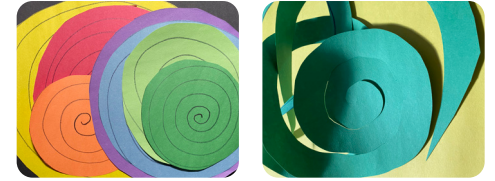


Wrap another piece of string around the two hooks at the top of the hangers to join them. Ask an adult for help and use pliers to close the hooks to make a loop.

3

Once the hangers are combined, attach string to the hangers in places you want the paper to hang from. The strings do not need to be the same size.

4



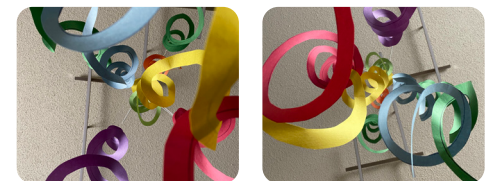
Draw eight or more spirals on your favorite colors of construction paper. The spirals can be large and small, but make sure the lines don't touch each other as you draw. Then cut along the lines to create hanging spiral streams of paper.

5



Tape the center of each spiral to an individual piece of string hanging from the hanger.

6



After your spirals are attached, hang your sculpture near a doorway or window so it moves as people pass by or when the wind blows. If you can, walk around it to see how it changes from different views.



We'd love to see your work! Snap a picture of your final creation and share with us on Facebook, Instagram, or Twitter using the hashtag #ArtBMAFromHome for a chance to be featured.

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