

Marilyn G. Stewart Second Edition



STEAM: Focus on Engineering

Consider Stability When Creating Art

Have you ever seen a fishing net or butterfly net? Janet Echelman makes sculptures that are like very large nets. Sometimes they are large enough to hang between buildings! To make her sculptures stay in place, or become stable, the artist works with engineers and computer scientists.





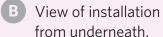
Janet Echelman, Renwick 1.8. 2015. High-molecular-weightpolyethylene, hightenacity-polyester, colored LED lighting. 100' length x 40' width x 40' height.

What keeps this sculpture from falling? What might happen if this sculpture were hanging outside on a windy day?

Look and Respond

In what ways does the sculpture look like a net? Something is flexible if it can be stretched or bent without breaking. Do you think this sculpture is flexible? Why or why not?







Close-up view of anchor points.



Work in place in the Grand Salon.

Research and Collaborate

Gather different nets—for example, potato and onion bags, basketball hoops, and soccer netting. What happens when a net is stretched or pulled? What happens to a net in the wind?

Create, Reflect, Revise

Tie knots with yarn or rope to make a netted sculpture. Work in teams. Hang the sculpture using chairs and clothespins as anchor points (something that holds an object firmly) to make the edges of the sculpture stable. What happens when you add or change the anchor points?

Research Journal

Force is a push or a pull that produces change. What happens when you add force by tugging at a net? Is the net easy to bend and twist?

Make a list of materials that you think would be good for making a net. Make another list of materials that you would not use.

Vocabulary

ENGLISH **SPANISH** stable estable flexible flexible anchor points puntos de anclaje

force fuerza