Design Mobile

MATERIALS

FOR STUDENT: (one per group of five students unless otherwise noted)

- FloraCraft® Make It: Fun® Foam Balls, ten 1 1/4" diameter
- Wire, plastic-coated "fun" wire, 22 gauge, 1 yd. 20" length of each of ten colors, such as: Red, yellow, royal blue, light blue, aqua, lime green, dark green, purple, pink and black
- Paper straws, two different colors, such as: Green and white stripe; and purple and white stripe.
- Baker's twine, 24" length, any color (for top twine); and 24" length for each student (assorted colors)
- Toothpicks, five
- Pencils, five
- Ruler
- Pliers, small, needle-nosed, one per one or two students (with teacher supervision)
- Paper plates, five
- Small plastic cup (to hold wires)

FOR TEACHER:

- Toothpick
- Pencil
- Ruler
- Pliers, small, needle-nosed
- Glue gun (for teacher only)

ART
GRADE LEVEL
SECOND - THIRD

COMPLETION TIME
- 50 minute session
- 30 minute session

OBJECTIVES

Students:
- Recognize movement and balance in both still works of art as well as moving works of art
- See objects as they relate to one another and create positive and negative shapes in space
- Work with others to create a unified mobile (sculpture) comprised of individual parts they created

STANDARDS

- Describe and analyze the principles of arrangement (e.g., harmony, contrast, emphasis, unity, balance, and movement) as they are used in works of art and found in the environment.
- Creating, performing and participating in the visual arts – students apply artistic processes and skills, using a variety of media to communicate meaning and intent in original works of art
- Use the interaction between positive and negative space expressively in a work of art

TEACHER PREPARATION

Note: Read through all the instructions first and check out the TIPS! Plan for two class sessions with students working together in groups of five per mobile. Locate or ask students to provide small, needle-nose pliers - per one or two students. Have a glue gun plugged in and ready to use (ideally set on low temperature) but out of student reach. This can give you immediate adhesion when you're in a hurry to help students. It is also recommended that you construct a mobile first, before preparing the materials for any others, since knowing the process, first hand, might affect how you prepare. Remove one of each of your wire shapes to share with students in Step 2.

[1] Open packages of foam balls.

[2] Use a ruler and wire cutter to measure and cut the wire into two sets of fourteen 4" lengths per student. Put wires into plastic cup. Make each set of wires a different color among the five students in one group.

Use scissors to cut a 24" length of baker's twine per student, plus an extra one per group.

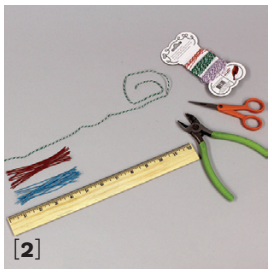
[3] On a paper plate for each student, place: Two foam balls, pencil, toothpick, needle-nosed pliers, ruler, baker's twine and cup of wires.

[4] Set the middle of one straw overlapping the middle of the other to make an X. Use a dot of hot glue to hold. Repeat for each group. Set the straws and one length of baker's twine aside, to give to the students at the second session.

LESSON INTRODUCTION

- Remind students that two of the six principles of arrangement are: Balance and Movement. Both can be representational and literal. This means that in still works of art we can see objects display balance. Also, movement is the path our eye takes as we look at the art. In sculpture, such as a mobile, we can see literal balance of the parts and movement as they move from one place to another.
- Students can make two wire design balls and then work in a group of five to assemble them together into a balanced sculpture that displays movement.


[1]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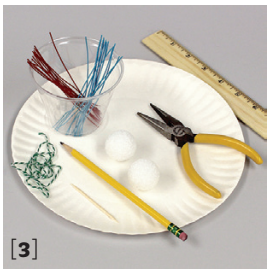
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[4]

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INSTRUCTIONS

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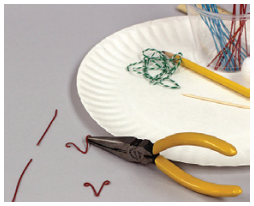
[1] Explain to the students that in this session they can each make two wire design foam balls for their group of five students. Then in the next session, they can string the design balls into a mobile, working on balance and watching the movement. Caution them to be careful with the pliers.

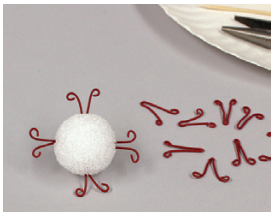
Demonstrate how to use the points of the pliers to bend the ends of one wire into small curls and then fold the center to create a "V" shape, Explain that each foam ball will need fourteen wires that have all been bent the same way.



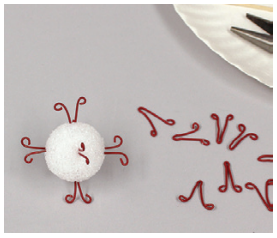
[2] Show students examples of other ways to bend the wires, coiling around toothpicks, pencils, etc. Encourage them to come up with their own designs and to consult with the other students in their group so that no two wire designs will look alike. (Remind students that each student will be making fourteen of the same wire shapes for one foam ball and can use a different design for the other foam ball.)

Have the students design their wire shapes, but ask them to wait to insert them into the foam balls.

[3] To insert the shapes into the design balls, demonstrate and have the students work in opposites: Insert one wire shape at the top and another at the bottom. Then, insert one to the right and one to the left.

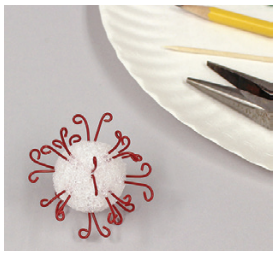


[4] Next, insert a wire shape into the front, and then, directly opposite, into the back.



[5] Point out to the students that if they look at the top, left side and front wire shapes, they can see a triangle of space created by the three. Insert another wire shape into the middle of that triangle.

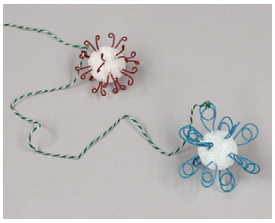
[6] Have the students notice that there is also a triangle of space on the top, right side and front; and two more on the bottom left and right sides in those same positions. Have them insert wire shapes into each of those triangles and repeat on the back with four more shapes for a total of fourteen shapes being inserted.



[7] When the students have assembled one foam ball, they may assemble their other one. Then they should write their names on their plates with their two design balls and baker's twine. Set aside until the next session.

NEXT SESSION

[8] Have each student get their plate. Demonstrate and have them tie the end of the twine on their plate to one of the wires in one of their design balls. Then, just string the other design ball further up on the twine for now, without knotting it, yet.



[9] Distribute one straw "X" and length of baker's twine to each group. Explain to the students that this is where balance in their project and cooperation with each other matters. Have each group work together to tie the twine that came with their straws, around the middle of the straws and tightly knot so that the straws will evenly hang from that center twine.

Then have the students find somewhere in the room, at eye level, that they can tie their twine to hold the straw unit while they add each of their twine with design balls. Have them start by tying (but not knotting yet) one twine length from the center of the straw lengths, hanging down. Then tie one length to the end of each straw.

Point out to the students that they need to adjust the twine lengths to allow for balance, as well as to vary the positions of the design foam balls so that they are spread out in a pleasing arrangement, taking into account the movement of the mobile. This may take some adjusting for the students to create the arrangement they like. Then, they may knot or pinch wire with pliers to hold.

REFERENCES

Alexander Calder: Meet The Artist! By Patricia Geis
Mobile Art by Clare Youngs
Mobiles & Stabiles by Julie Frith
Making Mobiles by Bruce Cana Fox

MODIFICATIONS

To simplify project:

- Have each student make one wire design ball instead of two.
- Use fewer wire shapes per foam ball.

To expand project:

- Have several groups of students (or all of them) combine their forms to create a larger mobile, with multiple straw "X"s hanging in the mobile arrangement.
- Have students research the work of Alexander Calder and use lengths of twisted wire or straws to create balancing crossbars in the design of their sculptures.

For multiple ages:

- Younger and older students can work side-by-side, with younger students making the wire design balls and the older students assembling them into the mobile.
- Have older students research more about movement in art, while younger students discuss the balance in art examples.

ADDITIONAL IDEAS

- Have students research famous works of art to find visual movement and discuss balance.
- Create a stabile of the wire design balls by mounting them on the straws, at all different heights, inserted into a foam block base.
- Make a jumbo mobile with using 3" or 4" foam balls, chenille stems (instead of wire) and dowels (instead of straws).
- This mobile concept can be a science project on the planets. Use longer dowels for the crossbars and paint various size foam balls the colors of the planets. (Note: Foam balls won't be proportionate but can be representative of the planets.)
- Provide students with lots of wire, butcher's twine and various size foam balls. Encourage them to create any type of abstract sculpture in a mobile or stabile.

TIPS

- Have students take turns adjusting their mobiles. If everyone is working at once, it's difficult to find the balance point.
- Show the students how to look for the negative areas (in the air) created by the twine and wire design balls, in order to create good visual balance as well as literal balance.
- As students are adjusting the positions of their wire design balls, be ready to assist with a glue gun as needed, but remind them that once it's glued with hot glue, they can't change the positions.
- For identification, have students create a group name and write it in pencil on one of their straws.
- If baker's twine lengths become twisted and the students can't straighten them out, cut off the design balls and give them new lengths of twine.
- If students can't find a place to hang their mobile as they work, have them set a chair on a desk and suspend the mobile from the top back of the chair, using tape.