

ART A LA CARTE: Part II - Art In Math

UNIT OVERVIEW

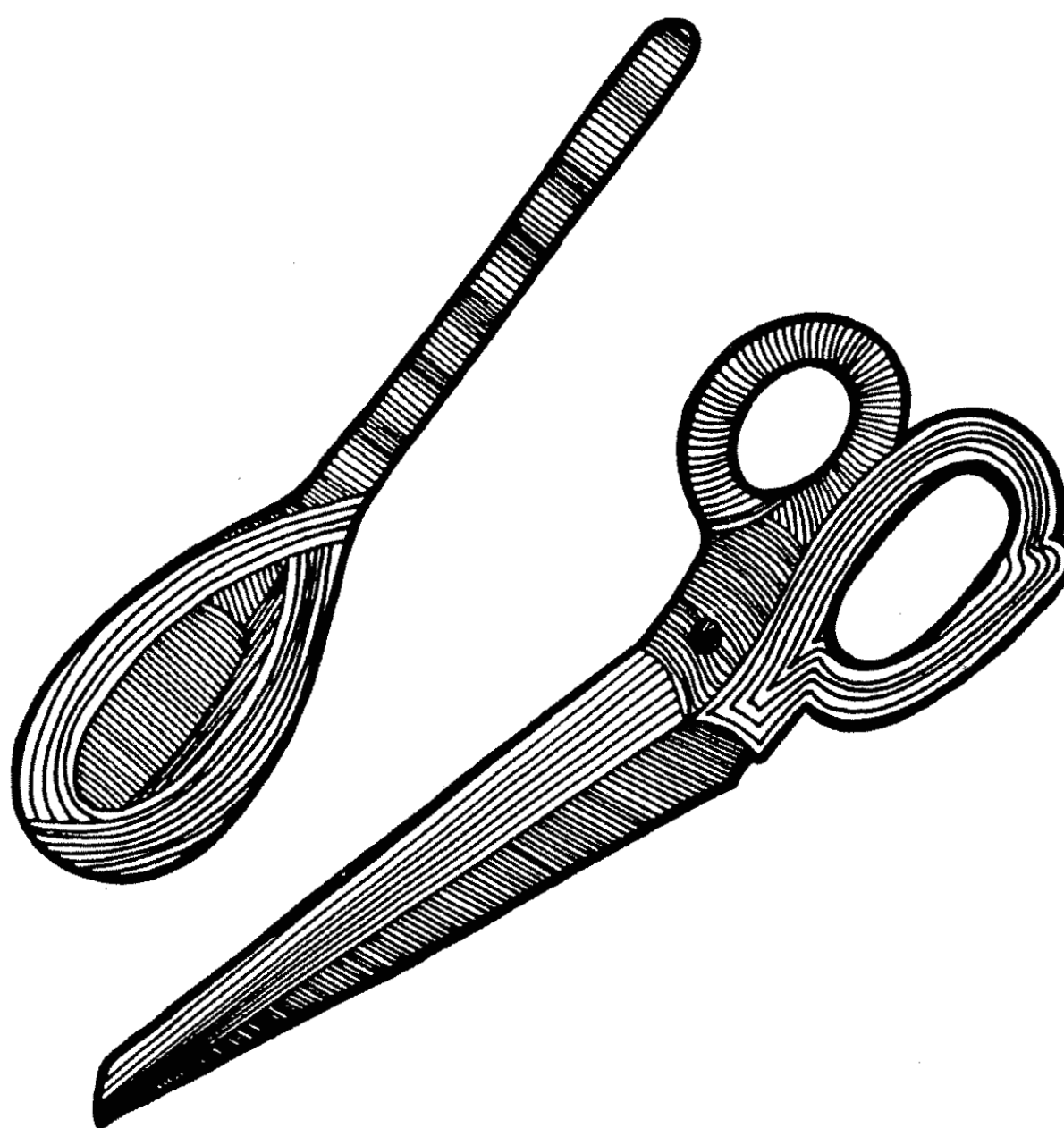
The lessons contained in this unit are very open-ended and adapt well to integration with math. Concepts such as symmetry, parallel lines, converging lines, tangents, geometric shapes, fractional parts and angles can all be introduced, explored and made part of each lesson. The exploration of line and shape are an integral part of these art lessons.

Each lesson details step-by-step directions often involving easy to use geometric templates or “tracers” to create an image. The lessons are presented just as they are taught and real-sized teacher samples are posted to demonstrate how to draw each shape and combine them to create the final image.

The lessons are set up so that they can be drawn by an individual directly from the unit or, by reproducing each step onto pages, an entire class can be guided through the lesson. One preferred strategy is for the teacher to demonstrate the steps with students following along creating a “rough draft”. This allows students to make mistakes and practice the various techniques insuring a better final product.

STUDENT PROJECTS

1. Geometric Overlays
2. Follow The Leader
3. Tornado Lines
4. Geometric Lines
5. Geometric Reflections
6. 3-D Lines
7. Kaleidoscopes
8. Insect Icons
9. Animal Mandella
10. Bird Flight
11. Mushroom Lines
12. Sea Shell Lines



EVALUATION - INDIVIDUAL ART WORK

Name: _____	
Date: _____	
Project: _____	
attitude, behaviour, effort	/3
following steps, attentive, correct use of materials, technical aspects, completed task	/5
creativity, outstanding product	/2
Comments	

Total Mark	/10

Name: _____	
Date: _____	
Project: _____	
attitude, behaviour, effort	/3
following steps, attentive, correct use of materials, technical aspects, completed task	/5
creativity, outstanding product	/2
Comments	

Total Mark	/10

Name: _____	
Date: _____	
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Name: _____	
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attitude, behaviour, effort	/3
following steps, attentive, correct use of materials, technical aspects, completed task	/5
creativity, outstanding product	/2
Comments	

Total Mark	/10

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PROJECT #1- GEOMETRIC OVERLAYS

Materials:

geometric templates (tracers) in various sizes and shapes (squares, diamonds, trapezoids and circles); 12" x 8" drawing paper; coloured construction paper; pencil crayons and a soft lead pencil.

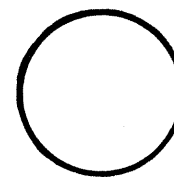
Method:

Post a completed sample of the work. Discuss with students what they notice about the work. With luck, they will notice the use of the geometric shapes and how they have been overlaid. Point out that the areas created by the overlaying of each shape have been coloured in a pattern and that areas that touch are never coloured the same colour. This will require planning. Also, the concepts of primary and secondary colours can be introduced as well as the use of complimentary colours in art. (green with red, blue with orange, and purple with yellow)

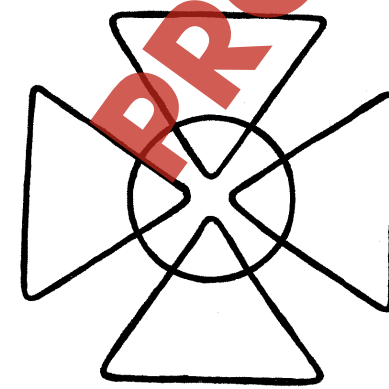
Step #1 Select a large, central shape about 12cm across. Trace this shape center to the page using pencil.

Step #2 Select a second shape about the same size as the first. This shape is traced so that it rests upon all four compass directions, north, south, east and west.

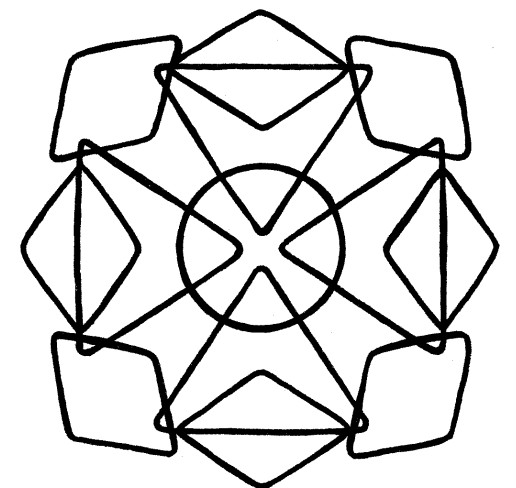
Step #3 The final step in the sketching portion of the lesson involves selecting a third shape. This shape should differ from the previous two, and also be smaller by half. This last shape can be traced at regular intervals throughout the previous shapes to create an interesting, complex and visually intricate design.



Step #1



Step #2



Step #3

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PROJECT #3 - TORNADOES

Materials:

white drawing paper; ruler for each student; selection of fine-tip felt pens in various colours; fine-tip ball point pens; pencil crayons; teacher samples; construction paper to serve as mats for completed works; glue; scissors.

Method:

Display a sample of the finished image and lead a discussion on what can be noticed about the work. Distribute drawing paper and ready any other supplies. For the sake of simplicity, it is best to introduce this lesson using only fine-tip ball point pen as a medium. Once students have explored the technique they can move on to felt pen and pencil crayon if they desire.

Step #1 Begin by scribing a line at the top of the page about 1 to 2 cm in length. This will be the starting point for the work, and should be placed with care, leaving enough room for other lines to spiral their way down and across the page.

Step #2 Continue adding lines drawing the next line close to the first, almost touching, with the ends just a small distance past the ends of the first line. As each new line is added gradually increase its length and its distance from the lines before it. Continue adding lines until the lines are about 6 cm in length.

Step #3 Once the 6 cm length has been reached, lines are to be drawn in such a way that they start to get shorter in length, as well as gradually becoming closer to each other. When the lines are less than 1 cm in length a complete "tornado" has been drawn.

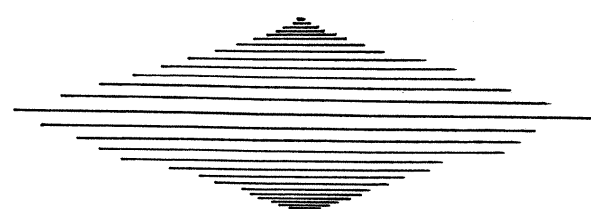
Step #1



Step #2



Step #3



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PROJECT #5 - GEOMETRIC REFLECTIONS

Materials:

white drawing paper; a selection of tracing templates and geometric shapes; fin-tip felt pens, ball point pens; rulers; pencils; teaching samples; construction paper for display purposes; poster sized paper for demonstration purposes.

Method:

For a change of pace, one can do this lesson as a "follow the teacher" guided art lesson. Do not display the teaching sample until after the demonstration. Distribute the art paper and tracers. Students should be ready with a pencil, ruler and their selected tracer.

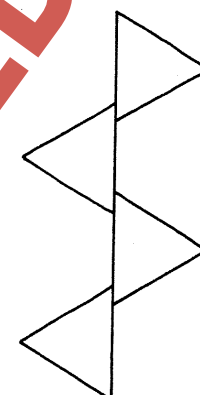
Step #1 On the demonstration paper, draw a vertical line from page top to page bottom, as centered as possible. Students follow your lead.

Step #2 Using one shape only, trace the geometric shape so that it alternates along the line from top to bottom with students following. (Two shapes on each side seems to work best) Circulate around the room ensuring that students have correctly placed the shapes and that no difficulty or frustration arises.

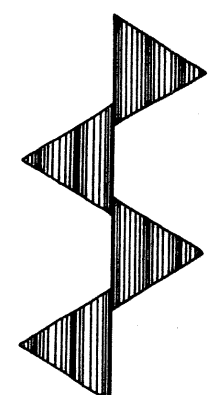
Step #3 Demonstrate how to draw the vertical lines into each shape. Reminders about gradually varying the space between lines should be made at this time. Students then fill in all four shapes with vertical lines as in the demonstration. At first it is best to keep this to ball point pen with black being the easiest colour to use. Once students are familiar with the method, they can experiment on their own. Each first try can be called a "draft" unless a student feels very confident about the work and selects to complete it as a finished image.



Step #1



Step #2



Step #3

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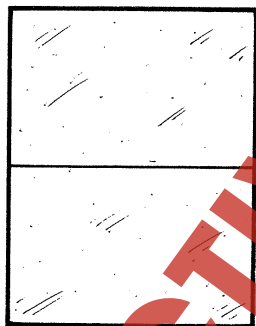
PROJECT #8 - INSECT ICONS

Materials:

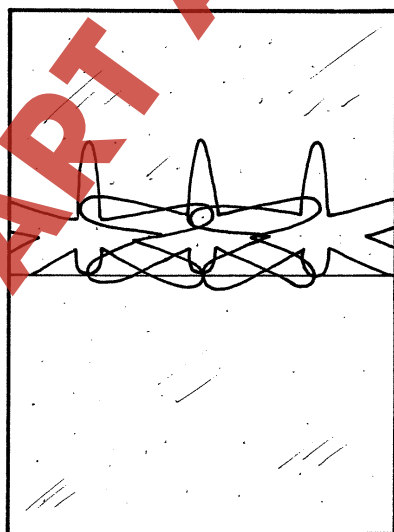
This lesson makes use of specially designed bee and dragonfly tracers or students can be encouraged to create their own tracers as long as they remain less than 18cm in length; large sized drawing paper (12"x 20"); pencil crayons; a soft lead drawing pencil; teaching samples are to be posted with a poster sized demonstration paper for detailing each step; ruler; fine-tip felt pens.

Method - Dragonfly:

Step #1 Demonstrate drawing a line across the width of the page dividing it in half.



Step #2 Using the dragonfly shape, trace three or four dragonflies on the top part of the page so that their wings overlap. The noses of the dragonflies should all touch the line causing parts of the wings to dip below the line. Do not erase any of the overlapping lines. Encourage the students to draw these lines using "dark" or heavy pencil marks so that they are easily seen.

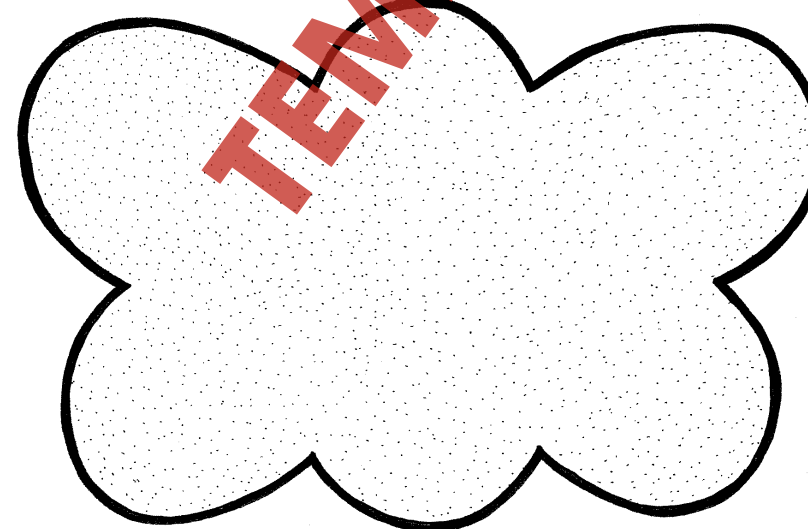


BEE AND DRAGONFLY TEMPLATES

Dragonfly



Bee



PROJECT #9 - ANIMAL MANDELLA

Materials:

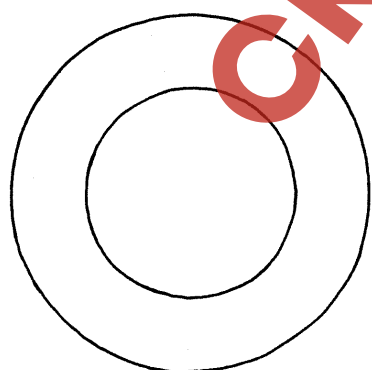
large circular tracer (an ice-cream tub lid or 9" paper plate); a smaller circular tracer (margarine tub lid); drawing paper that has been cut so that it is 45cm square; drawing pencils; pencil crayons; felt pens; various animal tracers no smaller than 10 cm and no larger than 18cm in length; teaching sample; demonstration sheet.

Method:

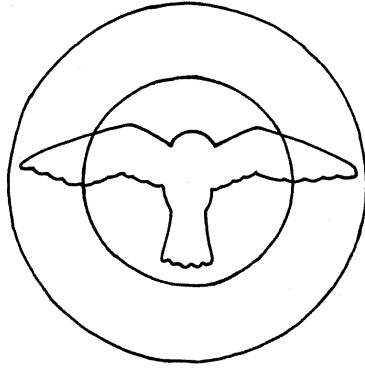
Although this activity may appear to be easy to teach at first glance, there can be difficulties. Therefore it is best presented as a guided art lesson with each step clearly described, discussed and then demonstrated by the teacher *before* students embark on the project. The demonstration should be about 10 minutes in length and involve students as much as possible, even asking for a student or two to trace the shapes during each step. Once the demonstration is complete, distribute the art paper and round tracers. This activity requires a lot of tracers, so it is best to distribute them as students are drawing out the circular shapes. Try to distribute various animal shapes randomly around the room so that students can share.

Step #1 The first step involves tracing the largest round center to the page. Once the large round has been traced, trace the small round in the center of the first to create a donut.

Step #2 Students select three or four animal shapes. Encourage them to put some thought into the shapes that they use. For example, they may wish to use animals which are hunted or hunters to each other. The largest or most important animal shape is traced into the center of the smallest circular area using pencil. Allow lines to overlap, and in no way erase any lines. During the demonstration one can discuss how to select the central animal figure, perhaps it is key to the food chain, or perhaps it is an animal that flies.



Step #1



Step #2

