

Cross Curricular Activities with Two Guys

**Justin Hose
and
Tres Wells**



Who are We?

Justin Hose

- Frederick County Public Schools
- Math Specialist
- PhD Candidate
- Previous Experience as a Fifth Grade Teacher
- Performs Professional Development
- Teaches courses for teacher recertification

Tres Wells

- Albemarle County Public Schools
- Math Specialist Certified
- Nationally Board Certified
- Currently 5th Grade Teacher
- Experience in grades 5 - 12



Agenda / Topics

- Why Use Cross Curricular Activities?
- Let's do some activities!
 - Cryptography
 - Mondrain
 - Space and Math



Why Cross Curricular Activities?

□ Connections

- Connects to students prior knowledge
- Makes the learning meaningful
 - Learning is not done in isolation

□ Application

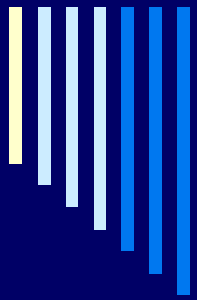
- Allows students to participate in applying concepts in different situation
- Mirrors real world uses of academic knowledge
- Think Da Vinci

□ Saves Time



Social Studies, Language Arts, and Math - Cryptography

- What is Cryptography?
- When has/is cryptography used?



Caesar Shift Cypher

Used by Julius Caesar for personal correspondence to keep them hidden

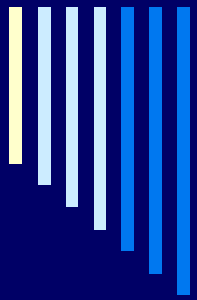
Concepts taught:

- Greece
- Modular Arithmetic
- Language

Social Studies, Language Arts, and Math - Cryptography

Caesar Shift Cipher

The image shows a digital interface for a Caesar Shift Cipher. At the top, the title "Caesar Shift Cipher" is displayed in a white box. Below the title is a large circular cipher wheel. The wheel consists of two concentric rings of letters. The outer ring is black with white letters, and the inner ring is red with white letters. The letters are shifted by three positions. Below the wheel are four circular buttons: two black and two red, each with a right-pointing arrow. To the right of these are two white circular buttons with a double left arrow and a house icon. In the bottom right corner is a black button with the text "TGME" in red.



Art and Math Mondrain



Game created by Sid Sackson from the book: "Beyond Tic Tac Toe" isbn# 394-83136-5

This book is out of print, I found it at www.abe.com

Games based on:

Victor Vasarely – Hungary

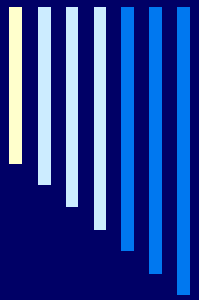
Joan Miro – Spain

Piet Mondrain – Holland
Germany

Hans Arp –

Sonia Delaunay – Russia
Switzerland

Paul Klee –



Art and Math Mondrain



3 or 4 players, each using a different color.

Each turn consists of filling in a space on the board

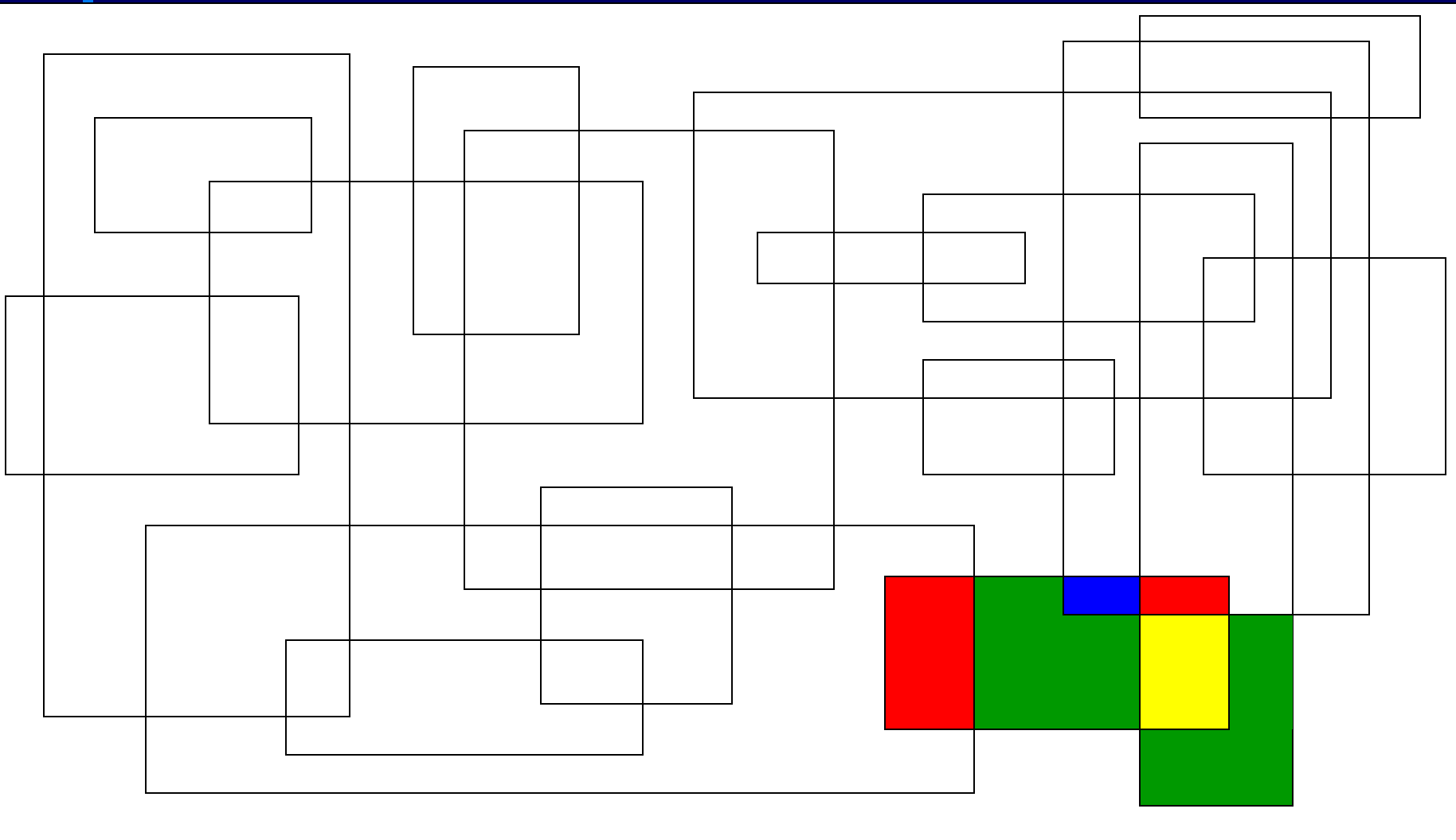
First Move - Anywhere

“Next To” Rules

Scoring – Number of spaces in completed rectangle

Completing 2 or more rectangles

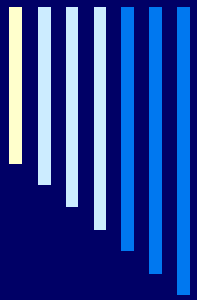
Art and Math Mondrain



Art and Math Mondrain



<u>red</u>	<u>green</u>	<u>blue</u>	<u>yellow</u>
5		3	



Science, Language Arts, and Math Space



- With a Space Unit, what kinds of topics could be taught?
- Size of the planets

Planet	Mercury	Venus	Earth	Mars	Jupiter	Saturn	Uranus	Neptune
Radius	2,439.7 km	6,051.8 km	6,371 km	3,389.5 km	69,911 km	58,232 km	25,362 km	24,622 km

Information from http://solarsystem.nasa.gov/multimedia/display.cfm?Category=Planets&IM_ID=1710



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