**Name: Z Period: 3**

**Picture Lab Activity #1 – Introduction to Digital Pictures and Color**

Go to: <http://games.penjee.com/binary-bonanza/>

<http://games.penjee.com/binary-numbers-game/>

<https://www.crazygames.com/game/binary-game>

1. How many bit does it take to represent the values from 0 to 255?

It’ll take 8 bits to represent the values from 0 to 255

1. How many bytes does it take to represent a color in the RGB color model?

3 Bytes to represent a color in the RGB color scheme

1. How many pixels are in a picture that is 640 pixels wide and 480 pixels high?

640\*480 = 307,200 pixels

**Picture Lab Activity #2 – Picking a Color**

Go to: <http://www.webmonkey.com/2010/02/color_charts/>

Type 3 of your favorite colors (NO BLACK, WHITE, or GRAY) including their hexadecimal value. Convert the hexadecimal value to binary. Type this next to the hex value. (NO ONLINE CONVERTERS ALLOWED)

1. 0xFF4D86 = 1111 1111 0100 1101 1000 0110

2. 0xFF410E = 1111 1111 0100 0001 0000 1110

3. 0x70B83C = 0111 0000 1011 1000 0011 1100

Answer the following questions….(You can use RGB values or hexadecimal values)

1. How can you make pink?

#FF08F0

1. How can you make yellow?

#FFFF0A

1. How can you make purple?

#B236F3

1. How can you make white?

#FFFFFF

1. How can you make dark gray?

#A9A9A9

**Picture Lab Activity #3 – Exploring a Picture**

1. What is the row index for the top left corner of the picture?

0th index

1. What is the column index for the top left corner of the picture?

0th index

1. The width of this picture is 640. What is the right most column index?

640th index

1. The height of this picture is 480. What is the bottom most row index?

480th index

1. Does the row index increase from left to right or top to bottom?

Top to bottom

1. Does the column index increase from left to right or top to bottom?

Left to right

1. Set the zoom to 500%. Can you see squares of color? Yes or No, Why?

Yes, we’re expanding the picture, so the individual pixels takes up more room and therefore more visible

Complete Exercises 1 &2 - copy and paste your code here (DO NOT TYPE OVER ORIGINAL CODE – COMMENT IT OUT)

Picture pix = new Picture("abstract.jpg");

Picture smPic = pix.scale(0.25, 0.25);

smPic.write("small\_abstract.jpg");