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| **Date Assigned: 9/26/16** | **Date Due: 9/28/16** |
| **Unit:** Methodology | **Turn In List:** **1. Terms** |
| *“I will be able to identify and prescribe solutions for various types of errors in a program.”* | |

**Working with Errors: What happens when a program breaks or fails?**

**Content Objectives:** Students will be able to identify and resolve syntax, runtime and logic errors while stepping through an application.

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| **Starter Activity** |
| Use a while loop to accomplish the following result:   |  |  | | --- | --- | | **Code** | **Result** | | // code here: | Macintosh HD:Users:kkapptie:Desktop:Screen Shot 2013-10-03 at 6.49.48 AM.png |   Use a for loop to accomplish the following result:   |  |  | | --- | --- | | **Code** | **Result** | | // code here: | Macintosh HD:Users:kkapptie:Desktop:Screen Shot 2013-10-03 at 6.49.48 AM.png | |

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| **Key Terms:** | |
| Syntax Error | Language violation. Won’t let the program run most of the time. |
| Runtime Error | Only breaks the code when in runtime. |
| Logic Error | Violates the intended use or functionality |
| Break Point | Marker used to specify where a program should stop. |
| Iterate or Iteration | Allows a programmer to traverse a container |

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| **Assignment:** |
| Complete the code to accomplish the result on the right:   |  |  | | --- | --- | | size(200,200);  background(255);  float w = \_\_\_\_\_\_\_\_;  while (\_\_\_\_\_\_\_\_) {  stroke(0);  fill(\_\_\_\_\_\_\_\_);  ellipse(\_\_\_\_\_\_\_,\_\_\_\_\_\_\_,\_\_\_\_\_\_\_,\_\_\_\_\_\_\_);  \_\_\_\_\_\_\_\_\_\_20;  } | Macintosh HD:Users:kkapptie:Desktop:Screen Shot 2013-10-03 at 9.45.11 AM.png |   Complete the code to accomplish the result on the right:   |  |  | | --- | --- | | size(200,200);  background(255);  for (\_\_\_\_\_\_\_\_; \_\_\_\_\_\_\_\_\_; \_\_\_\_\_\_\_\_–20) {  stroke(0);  fill(\_\_\_\_\_\_\_\_);  ellipse(\_\_\_\_\_\_\_\_,\_\_\_\_\_\_\_\_,\_\_\_\_\_\_\_\_,\_\_\_\_\_\_\_\_);  } | Macintosh HD:Users:kkapptie:Desktop:Screen Shot 2013-10-03 at 9.45.11 AM.png |   Use a nested loop to create random filled rectangles inside a canvas (8 lines of code in a for loop):   |  |  | | --- | --- | | size(200,200);  for (int x=0; x<width;x+=10) {  for(int y=0; y<height;y+=10) {  fill(random(255));  noStroke();  rect(x,y,10,10);  }  } | Macintosh HD:Users:kkapptie:Desktop:Screen Shot 2013-10-03 at 7.21.37 AM.png |   **Etch-A-Sketch**  Modify the code below to create an algorithm to write your name.   |  |  | | --- | --- | | int x, y;  void setup() {  size(400,400);  frameRate(10);  // Set start coords  x = 0;  y = 0;  }  void draw() {  fill(255);  drawName();  noLoop();  }  // Algorithm for your first name  void drawName() {  moveRight(1);  }  // Method to draw right line  void moveRight(int rep) {  for(int i=0;i<rep\*10;i++){  point(x+i,y);  }  x=x+(10\*rep);  } | Mac HD:Users:kkapptie:Desktop:Screen Shot 2014-09-29 at 6.40.57 AM.png | |

Notes (Points of interest, mistakes, lessons learned, web resources, and thoughts):

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