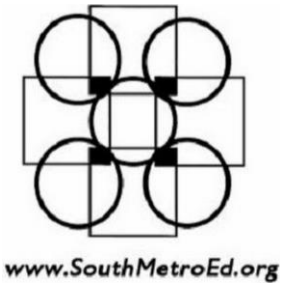
Workshop Outline



This is a document of one potential outline for the training workshop for high school teachers. From this outline a storyboard was created that visually represents the experience of a teacher going through the workshop. This is just a guideline and can be adjusted however the workshop facilitator sees fit.

1. Teachers receive email invitation to event
    a. Details of time, date, location
    b. Summary of what they would experience at the workshop
        i. Explain how they would benefit from attending
2. Teachers receive follow up email upon confirming attendance
    a. Share background information resources that could help prepare them for the workshop, if need be
    b. Send pictures/video that can build excitement leading up to the workshop
    c. Any safety notes depending on lab location
3. Teachers arrive at the workshop
    a. Given a folder/packet of information
        i. Agenda
        ii. Background information about the presenters and the Makerspace location
        iii. Resource lists to look at when they return home
    b. Given a name tag made in the Makerspace (laser cut wood?)
    c. Directed into the learning space by creative signs also produced in the Makerspace
4. Introduction
    a. Presenter introduction
    b. Answer why we are here today
        i. Emerging tech useful for students
        ii. Expand student options in stem and manufacturing
        iii. Different learning environment
    c. Go over agenda
    d. Addressing their interest and concerns
    e. Safety training depending on lab setting
    f. Icebreaker
        i. Scavenger hunt type games
    g. Makerspace Tour

5. Instructions
    a. 3D Printing (1 to 2 hours)
        i. 3D Printing Lecture Slides
        ii. CAD Software Tutorial (tinkerCAD)
        iii. Derby Car Design Challenge
        iv. Possible Break/Brainstorming time
        v. Free modeling time for the car
            1. Ensure their projects are printable
        vi. Prepare model for print (dependent on lab equipment)
        vii. Send it to print
        viii. Debrief
            1. What worked for them?
            2. What didn't work?
            3. What did they learn?
            4. What did they enjoy
            5. What do they want to learn more about
            6. Sharing ideas for your classrooms
        ix. Go on to next activity while it prints
    b. BREAK TIME
    c. Laser Cutting (1.5 hours)
        i. Laser Cutting Lecture Slides
        ii. 2D graphics software tutorial (Inkscape)
        iii. Bridge Design Challenge
        iv. Free design time for bridge (15-30 minutes)
        v. Cutting
        vi. Testing
        vii. Debrief
            1. What worked for them?
            2. What didn't work?
            3. What did they learn?
            4. What did they enjoy
            5. What do they want to learn more about
            6. Sharing ideas for their classrooms
    d. BREAKTIME
    e. Test the Derby Cars which should have been finished
6. Final Debrief
    a. Ways Makerspaces can be incorporated into classrooms
        i. Go over couple of example projects
            1.
    b. Ways for further self learning
    c. Introduce resources
    d. Feedback (open discussion?)
        i. Workshop
            1. Did we meet the learning objectives

        a. Regarding 3D printing
        b. Regarding Laser cutting
    2. Learning pace
    3. Do you see yourself incorporating this material in your classrooms? why or why not?
  ii. Facilitator

7. Follow Up
    a. Thank them for their participation and feedback
    b. Ask them to offer any additional critiques they may have of the workshop or Makerspaces in general
    c. Provide resource information again