

Re-purposing Technology Lesson Plan Template
TE 831: Teaching School Subject Matter with Technology

Summary Box

Lesson title: Dilations Project

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Subject area: Geometry

Technology used: Microsoft Word, Google Images, Screen Cast Maker, YouTube, and Weebly

Length of lesson: 35 minutes

Suggested grade level: 10th grade

Lesson Objectives:

- Students will be able to choose an appropriate picture to use for their dilation project by searching online and pasting it into a Microsoft Word document
- Students will be able to format a picture in which another object may be placed on top of it
- Students will be able to construct a grid consisting of squares on their picture in order to help them calculate and choose a scale factor

Student NETS Standards Alignment: Please list the [Student NETS](#) standards which your lesson aligns with. These should be listed as bullet points. See example below:

- Student NETS 1b – Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students create original works as a means of personal or group expression.
- Student NETS 5b- Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
- Student NETS 6a - Students demonstrate a sound understanding of technology concepts, systems, and operations. Students understand and use technology systems.

Materials:

- Computers with Microsoft Word and Internet Access
- Posterboard/Tag Board for each student
- Yard Sticks
- Pencils

- Headphones (recommended, but optional)
- Grading Rubric (attachment)
- Demo Video (<http://mcgerty.weebly.com/dilation-project.html>)

Lesson Procedure:

1. Introduction: We have already completed our lessons on dilations and now is our time to apply what we know!
2. Describe Project
 - a. Show an example of a past dilation project and describe what components we are covering today
 - i. Choosing an image
 - ii. Creating a grid on our image
 - iii. Recording our units of measurement of our squares on the grid
 - iv. Receiving approval of our images and grids
 - v. Printing grids
 - vi. If you have additional time, beginning your dilation
 - b. Pass out rubric to indicate where to record the information
 - c. Note that this is the only in class day to work on the project. The construction and art work is done at home. Have students write the due date on their rubric. (I usually give them two weeks, which is more than appropriate. Students can finish it in a few hours, but this gives them two entire weekends of possibilities. I look for a no-excuses time frame).
3. Begin the demonstration
 - a. Indicate that headphones are suggested and pass them out
 - b. Instruct students to watch the demo once to get an overall idea of what is expected.
 - c. Instruct students to replay the video, stopping along the way to use it as a step by step, or to replay anything they might need.
4. Address questions and approve images
5. Discuss pointers for project / Closing
 - a. Make sure you calculate that your new image (dilation) will be able to fit on the poster board.
 - i. Do a few examples with them
 - ii. Talk about units of measure
 - iii. Discuss (by questioning) that the number of squares will be the same on their dilation, just larger
 - iv. Reiterate that the calculations need to be on the poster. Looking at the rubric, the math is the most important part.
 - v. Remind them that they can come in with any questions as they go.
6. Hang dilations in the classroom as they are completed. Students LOVE admiring their work! (It's my favorite project of the year).