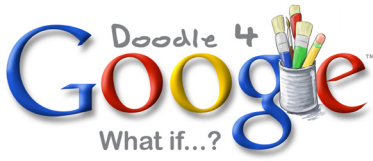


## Welcome

These lesson plans are suggestions for how the Doodle 4 Google project and its “What If...?” theme might be used to meet the U.S. National Standards of Art, Technology Literacy, English and Social Studies for students in grades 7-9.

For each subject, the plans include recommendations on developing students’ Google doodles, and the accompanying short essays, in order to enter the competition. However, if you plan to apply this project across multiple subjects, please adapt the lesson plans as you see fit.

On a similar note: we understand that, as teachers, you’re incredibly creative, so feel free to branch out on your own and to vary the “What if...?” theme according to your class topics or units. We want your students to think as big as they want to think – so you absolutely should encourage them to open their minds and let their creativity flow.



**Duration:** 3 class periods

## **Description:**

What if you could design your own school? Students will apply the elements of design to their classroom environments. They will reflect on classrooms of the past and discuss the functionality and structure of classrooms and schools. Then students will sketch a classroom of the future and draw a doodle that depicts their school design on a Google logo.

## **Standards:**

Source: National Standards for Arts Education

<http://artsedge.kennedy-center.org/teach/standards.cfm>

- Using knowledge of structures and functions (Visual Arts Standard 2)
- Choosing and evaluating a range of subject matter, symbols, and ideas (Visual Arts Standard 3)
- Reflecting upon and assessing the characteristics and merits of their work and the work of others (Visual Arts Standard 5)

## **Objectives:**

Students will be able to:

- identify the elements of design and apply them to classroom environments
- create sketches of school buildings or classrooms of today and those of the future
- doodle a design for a school around the Google logo

## **Materials:**

- Colored pens and pencils
- Paper
- Rulers

## **Procedures:**

1. Introduce the lesson by showing students photographs or pictures of school classrooms and buildings from historical settings like the 19th century. Ask the students to study the details and to list the similarities and differences of those rooms and buildings and the school rooms/building where they currently learn. Facilitate a discussion on the effect of design on functionality of a place.
2. Take the students on a walk around school and have them look at several classrooms and sketch them, detailing the visual elements of color, line, shape, texture and volume or form that they see in the furnishings and building structure.
3. Display the sketches in class and have each student discuss the elements of design they identified through their sketches.
4. For homework, have students bring in magazine clippings of furnishings, businesses, workplaces, rooms or buildings they find attractive, identifying in writing the visual elements in the clippings.
5. Brainstorm with the class design changes they think would make the school or classroom more functional or fun. Have students list what might help make the school more aesthetically pleasing or contribute to a better functioning classroom, building or learning environment.

6. Next ask students to imagine a school of the future. Facilitate a class discussion on the kinds of furnishings, spaces, and design they would expect or want to see in schools of the future.
7. Provide students with paper and have them sketch the classroom or school of the future. Display these sketches next to the sketches they made on the walk around the school. Have students identify the differences and similarities in the visual elements between their current school sketches and their future school sketches.
8. Provide pens and pencils and the Google logo template. Show the students several examples of Google doodles and ask them to doodle elements of the school they would design on to the Google logo.
9. Once your students have finished their drawings, be sure to have them give their doodle a title (5 words max) and write a 50-word description of how their idea expresses the theme “What if...?”
10. Display the logos and have students critique each other’s designs.

## Evaluation:

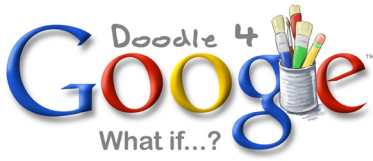
Teacher should create a rubric to assess students on the following:

- Student sketch of current school building or classroom shows detail and identifies the elements of design.
- Design elements are apparent in student sketch of the school of the future. Sketch shows detail and creativity.
- Student doodle integrates a compelling school design on the Google logo.

## Recommended Resources

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- Photographs of American classrooms and school buildings of the past from books or from the Internet



**Duration:** 3-5 class periods

## **Description:**

What if you could design a new machine or device? In this lesson students will look at innovations and inventions in the world of machines. They will brainstorm on the types of inventions they might like to see in the future and design their own “marvelous machine”. Students will then doodle a design for their machine on the Google logo.

## **Standards:**

Source: ISTE's Educational Standards for Students

[http://www.iste.org/Content/NavigationMenu/NETS/For\\_Students/NETS\\_S.htm](http://www.iste.org/Content/NavigationMenu/NETS/For_Students/NETS_S.htm)

- Creativity and Innovation: Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. (NETS 1)
- Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information. (NETS 3)
- Critical Thinking, Problem Solving, and Decision Making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. (NETS 4)

## **Objectives:**

Students will be able to:

- investigate the nature and function of machines
- create a presentation slide show outlining how machine technology affects their lives and the lives of others
- create and share an idea for a new machine that will make tasks easier, more efficient or more effective
- design and draw a Google doodle of their new machine

## **Materials:**

- Colored pens and pencils
- Computer based slide presentation programs or web sites
- Computers for Internet research

## **Procedures:**

1. Introduce the lesson by facilitating a class discussion on the types of machines or devices that students find most useful in their lives. Ask them to speculate on what things would be like without those machines and on how those machines have changed the world.
2. Have students select (or assign students) a machine/device to research. List questions for them to research. Questions might include:
  - The classification of the machine/device
  - The date of the invention and inventor
  - The task the machine/device accomplishes
  - The effect the machine/device has had on the world
3. Provide time in class for the research or assign as homework. Students should have written citations of the sources in proper format.

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4. Next, divide the class into groups to present their research. Explain to students that each group of 4 or 5 students will prepare a slide show presentation to share with the class.
5. Using computer-based slide presentation programs or websites with free slide presentation programs such as Google Docs, each student group member prepares one slide that visually depicts their machines and answers the research question. The slides are combined into one presentation for each group.
6. During the slide presentation the student presenters will discuss with the class the effects their researched machines have had on their lives and on the world.
7. After the presentation, explain to student that they will now create an idea for a new machine or device that might make tasks easier or help make a better world.
8. Conduct a class “brainstorm” on possible new machines so students can collaborate on ideas for “inventions”.
9. Have the students write explanations of what machine/device they would like to see, what it would look like and how it would affect their daily life and the lives of others.
10. In a small group have students read their paragraphs aloud and get feedback from their peers.
11. Show the class several examples of Google doodles. Instruct students to take their idea for a machine and create a doodle of that device on the Google logo. Provide pens and pencils and the Google logo template.
12. Once your students have finished their drawings, be sure to have them give their doodle a title (5 words max) and write a 50-word description of how their idea expresses the theme “What if...?”

## Evaluation:

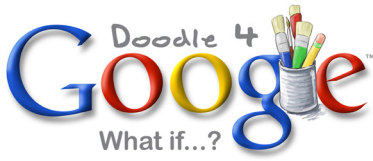
Teacher should create a rubric to assess students on the following:

- Student discussion and research work shows understanding of the nature, function and effects of machines.
- Student slide presentation is interesting, informative and captivating.
- Student machine/device idea shows creativity and innovation.
- Student doodle integrates a creative design around the Google Logo.

## Recommended Resources

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- *The New Way Things Work* by David Macaulay, A Walter Lorraine Book  
ISBN-13/EAN: 9780395938478 ISBN-10: 0395938473; Publication Date: 10/26/1998
- Internet Sites



**Duration:** 2-3 class periods

**Description:**

What if I were I globally connected? In this lesson students will examine the different styles of writing used to communicate within their own networks and across a variety of audiences world-wide. They will analyze and discuss the impact of global communications and then create doodles for a Google logo around the theme of global connections.

**Standards:**

Source: Standards for the English Language Arts from the National Council of Teachers of English  
<http://www.ncte.org/about/over/standards/110846.htm>

- Students adjust their use of spoken, written and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes. (Standard 4)
- Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes. (Standard 5)
- Students develop an understanding of and respect for diversity in language use, patterns, and dialects across cultures, ethnic groups, geographic regions and social roles. (Standard 9)
- Students use spoken, written and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion and the exchange of information). (Standard 12)

**Objectives:**

Students will be able to:

- understand how written and verbal communication takes on a variety of styles across different media
- analyze different story sources across the globe and identify similarities and differences in the reporting
- design and draw a Google doodle depicting the impact of global connections

**Materials:**

- Colored pens and pencils
- Computer based concept mapping software or paper and pens
- Computer for Internet research

**Procedures:**

1. Introduce the lesson by facilitating a general discussion with your class, asking them who they most often communicate with and how they most often conduct that communication (via what tools).
2. Have students individually draw a diagram or use computer concept mapping software to map out the people they most often communicate with and the connections between those people. Their maps might be organized into groups which include:
  - Friends
  - Family
  - Peers
  - Teachers

- Businesses or vendors
  - News media
3. Now tell students to include on the map the types of communication or tools they most often use with each of these groups. This might include:
    - Face-to-face communication
    - Texting
    - Email
    - Letters
    - Written or typed papers
    - Cards
    - Social networking sites
    - Blogs
    - Instant messages
    - Telephones/cell phones
  4. Have students share their maps with a small group.
  5. Next facilitate a class discussion on how the style of communication differs within each of these types of communications. Provide students with several examples of social networking sites such as MySpace, Facebook or blogs. These can be printed handouts. Ask students to brainstorm on how technology changes the way we communicate and what we communicate.
  6. Give students a short, formally written paragraph. In groups, have students re-write that paragraph as if they were to communicate that information in email, as a text message or on a social networking site. Have the groups read their re-written text to the class and ask them what changes occurred in the writing style and information that was communicated.
  7. Use the Internet and LCD projector to access several news sites and look at the same story reported from news sites across the globe (or print out stories). Have students outline the differences in communication style and story content.
  8. Discuss with the class the similarities and differences in the news sources and how they judge the validity of a source. Ask them to speculate on why a variety of sources might be preferable.
  9. In small groups ask students to discuss how a person's perspectives might change if connections were more global. Each group shares out their opinions with the class.
  10. Show the class several examples of Google doodles. Instruct students to take the theme of global communications and connections and draw a doodle around the theme of global connections. Provide pens and pencils and the Google logo template.
  11. Once your students have finished their drawings, be sure to have them give their doodles a title (5 words max) and write a 50-word description of how their idea expresses the theme "What if...?"

## Evaluation:

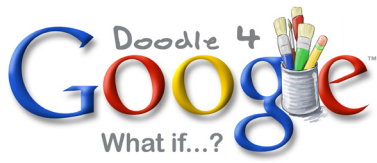
Teacher should create a rubric to assess students on the following:

- Student participation in discussions shows understanding of communication networks and styles of communication.
- Student concept map shows detail and personal communication connections.
- Student doodle integrates a creative design around the Google logo.

## Recommended Resources

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- Social networking sites, blogs, Internet news sites



**Duration:** 4 class periods

## **Description:**

What if you could live on another planet? In another solar system? In this lesson students will look at human exploration and discovery in geographic terms and learn how space exploration and settlement might effect the earth's environment. They will use their imaginations to doodle a Google logo that shows life in outer space.

## **Standards:**

Source: Geography for Life: National Geography Standards  
NGS National Geographic Society  
<http://www.nasaexplores.com/standards/standards-geography.php>

- The World in Spatial Terms
- Human Systems
- Environment and Society

## **Objectives:**

Students will be able to:

- understand the time frame and history of space exploration
- discuss the costs and benefits of space exploration
- produce a Google doodle depicting life on another planet or in another solar system

## **Materials:**

- Paper
- Pencils and markers
- Computers for Internet research (Google Sky) or books on the solar system

## **Procedures:**

1. Introduce the lesson by having students brainstorm on why humans explore. List famous periods of exploration and instruct students on the environmental results of some of those exploratory periods.
2. Give the students a brief background on world space exploration. Highlight the main events of the “space race” and the history of NASA.
3. Divide class into two groups and have them research the “pros and cons” of space exploration, including the environment impact on Earth of space exploration and habitation. Each group reports out to the class and lists findings on a white board or display.
4. Use Google Earth/Sky (free download) on classroom computers or provide books on the solar system so students can visually explore the planets and solar system. Each student chooses a planet or system for further research.
5. Individually students research their planet or system, and acting as a scientist or social scientist, writes a brief white paper advising the government on the suitability and sustainability of exploration and settlement on that planet.

6. Students present their white papers to the class for peer review.
7. Next explain to the students that they will now use their research on the planets to draw a Google doodle around the theme of “life in outer space”.
8. Once your students have finished their drawings, be sure to have them give their doodles a title (5 words max) and write a 50-word description of how their idea expresses the theme “What if...?”
9. When the doodles are complete, display them on a class bulletin board along with the white papers.

## Evaluation:

Teacher should create a rubric to assess students on the following:

- Student discussion and research indicates a understanding of the history of space exploration.
- Student “white paper” is written persuasively and shows solid research on chosen planet or solar system
- Student doodle shows imagination and creativity around the theme of “living in outer space”.

## Recommended Resources

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- Books or websites on space exploration
- Books or websites on NASA  
<http://www.nasa.gov>
- Movies on the Space Race or history of NASA