Lesson #2: Binary Calendar

Overview
Students will demonstrate their knowledge of binary by developing a calendar using binary numbers for the dates (month and day) of holidays.

Lesson Summary
- *Complete a review of how to count in binary with the students via a class discussion.*
- *Provide students with the assignment.*
- *Allow students to complete the assignment.*
- *Provide students with the opportunity to share the assignment with their peers. (This could take place in front of the class with the use of a projector or via a gallery walk in which students could walk around and view each of their peers calendars on their individual computers.)*

CS Content
Binary basics

Objectives
Students will be able to:
- Count in binary
- Demonstrate this knowledge creatively

Materials and Prep
- Computer
- Google Slides or some other presentation software

Resources
Student Documents
- Binary Calendar Assignment

Code Studio
- N/A

Video
- N/A

Assessments
- Successful completion of the assignment

Notes
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Binary Numbers Calendar Activity

DIRECTIONS: You will use binary numbers to develop a calendar that will showcase specific holidays. Follow the instructions provided below to complete this task.

1) Determine binary numbers for each of the following holidays. **NOTE:** *Only the month number and day are needed.* The binary number for New Year's Day is provided as an example below. Type in the remaining holiday binary numbers below and turn in this portion of the assignment after you complete the rest of the project.

   a) New Year's Day (January 1) - **0000100001**

   b) Valentine's Day (February 14) -

   c) Saint Patrick's Day (March 17) -

   d) Mother's Day 2016 (May 8) -

   e) Father's Day 2016 (June 19) -

   f) Independence Day (July 4) -

   g) Labor Day 2016 (September 5) -

   h) Halloween (October 31) -

    i)   Thanksgiving 2016 (November 24) -

    j)   Christmas Day (December 25) -

2) Use **Google Slides** to make your calender.
   a) Your calendar should include a total of **12 slides** (a unique cover slide that includes your first and last name, slides for each of the 10 holidays, and a slide for the back cover.)
   b) The holidays should be presented in the order by which they would occur throughout the year.
   c) Each holiday slide should include the binary number and at least 3 objects (pictures, words, shapes, etc.) that represent the holiday. **NOTE: *The actual months and days should not be included on the pages. This should be evident from your binary number and objects.***
   d) Type your last name and Binary Calendar (ex. Wingate Binary Calendar) in the *Untitled presentation* area of Google Slides.

3) Be creative with this project! Your calendar should not look exactly like the person sitting next to you. Show your uniqueness and creativity.

4) Turn in your completed calendar by adding the Google Slideshow to this assignment in Google Classroom. Submit this document as well to show the binary numbers that you determined for each holiday.