Google Sheets - Interactive Study Guide

1. Open Google Sheets
2. Type worksheet including the answer key
   (The answer key may be in a row at the top, in a column, or in a separate worksheet.)

3. Conditional Formatting
   a. Place cursor where student will type answer
   b. Click Format on menu bar
   c. Choose Conditional Formatting and configuration box appears to the right
d. In conditional formatting window, change
   i. Format Cells if to **Text is Exactly**
   ii. Value or Formula =cell reference on answer
   iii. Formatting Style Custom and choose preferences
   iv. Click Done

v. Continue process for all answers.

vi. Close conditional format rules

4. If Statement with text result
   a. Place Cursor where you want the If Statement to produce text when the answer is correct or incorrect.
   b. Type `=if (C3=E3, "Correct", "Try Again")`
      C3 is cell reference where the student types the answer
      E3 is cell reference where the answer key answer is located
      "Correct" and "Try Again" must be in quotes for it to view as text
      Press Enter

c. Use autofill to copy formula down column D or create new formula for each answer.
5. If Statement with numeric result

a. Place Cursor where you want the If Statement to produce text when the answer is correct or incorrect.

b. Type =if (C3=E3, 1, 0)

C3 is cell reference where the student types the answer
E3 is cell reference where the answer key answer is located
1, 0 is points they will receive if they are correct or incorrect (to be considered a numeric value in Sheets do not use quotes)
Press Enter

c. Use autofill to copy formula down column D or create new formula for each answer.

6. Protect Columns, Rows, or Worksheets

Choose columns or rows that you do not want student editing.

a. Select column or row that you would like to protect
b. Click Data on menu bar, click Protected sheets and ranges

Window appears on right
d. Enter Description if you choose  
e. Click Change Permissions  
f. Choose Restrict who can edit this range, Choose Custom, Only check your name  
g. Click Done  

h. Click Done to save settings  
i. Continue on all columns that you would like protected  

7. Hide Columns, Rows, or Worksheets  
Hide columns, rows, or sheets that you do not want students to see.  
a. Hover over column header, row header, or worksheet tab  
b. Click down arrow in right corner  
c. Choose Hide Column, row, or worksheet  
As editor you can view this but not has student
8. Share Sheet with student
   a. Click blue Share button in right corner
   b. Add emails
   c. Click Done

At this time in Google Classroom, you can only share as an announcement or in assignment—students can edit assignment (which is all students in same document) and not make an individual copy for each student. If you make a copy for each student in Google Classroom it makes the student the owner and they can make all changes to it and it does not keep protections.

I have gotten passed this by doing it on my interactive smart projector as class review or competition, or made a copy and assigned different copies to different students (which is time consuming if it is a large class) or small groups. I sometimes make it a challenge for which group finishes first.

I have also had students make their own study guide and then share with other students. Students sometimes learn more creating the study guide then just studying with it.