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Standards-based Grading in Science

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One Teacher's Journey: Standards Based Grading

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Outline

- *My experience
- *Solon's guidelines
- *Biology example
- *Reassessment
- *Resources
- *Time for discussion/questions

What do you
believe grades
should
represent?



My Timeline

- *Book Study with other Solon teachers in Spring of 2010
- *Implemented in Microbiology elective Spring of 2010
- *Moved all classes to SBG in Fall of 2010

Solon's Fundamentals

1. Entries in the grade book that count towards the final grade will be limited to course or grade level standards.
2. Extra credit will not be given at any time.
3. Students will be allowed multiple opportunities to demonstrate their understanding of classroom standards in various ways. Retakes and revisions will be allowed.
4. Teachers will determine grade book entries by considering multiple points of data emphasizing the most recent data and provide evidence to support their determination.
5. Students will be provided multiple opportunities to practice standards independently through homework or other class work. Practice assignments and activities will be consistent with classroom standards for the purpose of providing feedback. Practice assignments, including homework, will not be included as part of the final grade.

*** Exceptions will be made for midterm and/or final summative assessments. These assessments, limited to no more than one per nine-week period may be reported as a whole in the grade book.*

Solon SBG Standard Scale

Rubric Scale

4	3.5	3	2	1
Demonstrates thorough understanding (of course or grade level standard)	Demonstrates understanding (of course or grade level standard)	Demonstrates a developing understanding (of course or grade level standard)	Demonstrates partial understanding (of course or grade level standard)	Demonstrates minimal understanding (of course or grade level standard)







Science Department Standards Based Grading Guidelines

Rubric Score	Power School Entry	Parent Sees	Teacher Language	Student Language
4	4	$4/4 = 100\%$	Demonstrates thorough understanding of course standard.	I get this very well and can apply it to new situations.
3.5	3.5	$3.5/4 = 87.5\%$	Demonstrates understanding of course standard.	I'm almost there.
3	3	$3/4 = 75\%$	Demonstrates a developing understanding of course standard.	I have some questions.
2	2	$2/4 = 50\%$	Demonstrates partial understanding of course standard.	I need some help.
1	1	$1/4 = 25\%$	Demonstrates minimal understanding of course standard.	I need LOTS of help!
0	0 (or missing indicator)	$0/4 = 0\%$	Missing or not enough to assess.	I couldn't answer the questions and left some blank. I wasn't ready or I was gone.

Gradebook

HOMEWORK: ... (9/6/2017)	HOMEWORK: ... (9/7/2017)	DATA ANALYSI... (9/8/2017)	DATA TABLES - ... (9/8/2017)	CAUSE & EFFE... (9/28/2017)	DEFINING A SU... (9/28/2017)	ATOMS & MOL... (9/29/2017)	PLANT CELLS (9/29/2017)	PHOTOSYNTH... (10/13/2017)	CELLULAR RE... (10/14/2017)
✓	✓	3	3	3	3	3	3	3	3
✓	●	4	4	4	4	4	3	4	3
✓	●	4	4	3.5	3	3.5	3.5	3	3
✓	●	2	3.5	3	3.5	3.5	2	3	3
✓	✓	4	3.5	3.5	4	4	4	4	3.5
✓	●	4	4	3.5	3	4	3.5	4	3
●	●	4	4	2	2	3.5	3	3.5	2
✓	●	3.5	3	3	3.5	3	3.5	2	3.5
●	✓	3.5	4	3.5	4	4	3.5	4	3
✓	●	3.5	2	3	3.5	3.5	3	1	2

One Student

ASSIGNMENT	SCORE	DUE DATE ▼
Lear 2. Claim, Evidence, Reasoning	2 	10/15/2017
Lear 3. Matter and Energy in Ecosystems	2 	10/14/2017
Lear 4. Cellular Respiration	3 	10/14/2017
Lear 5. Photosynthesis	3 	10/13/2017
Lear 6. Plant Cells	3.5	9/29/2017
Lear 7. Atoms & Molecules	3.5	9/29/2017
Lear 8. Defining a Sustainability Problem	3	9/28/2017
Lear 9. Cause & Effect Diagram with Indicators	3.5 	9/28/2017
Lear 10. Data Tables - Duckweed	4 	9/8/2017
Lear 11. Data Analysis - Sustainability	4 	9/8/2017
Prac 12. HOMEWORK: Darewadi Case Study		9/7/2017

Gradebook

Assignment: **Cells 4.1 Microscope**

Score Comment

Scoring Type: **Points**

Collected: Late:

Exempt Score: Missing:

Score:

Points: 3.5/4

Percent: 87.5%

Grade: B+

Comment:

Reassessment from 3

Approximately 2029 characters left

Comment:

We would like Jordan to work toward reassessing the following learning targets she does not understand: using evidence to make decisions, trade-offs, and correlation vs. causation.

To reassess students must 1) have a completed notebook and glossary, 2) make corrections and go over those with Mr. Monahan. 3) do extra practice.

Approximately 1625 characters left

Reporting Term: **Q2**

Score Comment

Manual Override:

Percent:

Grade:

Points: n/a

Comment:

I would like to continue to see Megan during seminar, after school or by appointment in the morning for some reassessment.

Approximately 1926 characters left

Biology

*Required for graduation (10th grade)

FINAL GRADE CALCULATION

90% learning targets

10% final exam

Assessment Outline

- *Formative assessment/pre-test
- *Informal observations during instruction
- *Practice, homework etc. during instruction
- *Formal quick check
- *Target test (GRADED)
- *Reassessment (NEW GRADE)

Reassessment

Some target tests will only assess a single learning target while others will assess multiple learning targets. Students may reassess any learning target except lab practical exams and finals as long they meet the deadlines for reassessment and complete the "insurance policy." Reassessment dates are set by the teacher and will be approximately one week after the class gets results back.

Reassessment rules:

- Only one learning target may be reassessed at a time.
- No more than one learning target can be reassessed per day.
- **Reassessment cannot be on the same day a student received help from the teacher.**
- The reassessment is not identical to the original quiz or test.
- The new score replaces the previous score.
- Students may reassess as many times as necessary, but additional practice or work may be required with each attempt.
- Some learning targets are weighted more heavily. These will be communicated before assessment and noted in the assignment description in PowerSchool.
- After reassessment, if you would like another chance, you must contact the teacher within two days of receiving your results and work together to create a plan for the next reassessment.
- Stop in to go over reassessments results with your teacher. These are not passed back during class.

Reassessment

- *Communicate clearly & often (never stop)
- *Have a solid “insurance policy”
- *Builds relationships

Name : _____ Block _____

Reassessment Checklist

The following steps must be completed in order. Check them off as you complete them.

1. Determine which learning target you would like to reassess (only one at a time). Write it below.

Learning Target: _____ Original Score: _____

2. Complete A or B below depending on your original score and work:

- A. If you got a 3.5 or 3, and you completed and turned in evidence of studying before the test (for example you may have created study cards and answered the “Can I...” statements.) confirm this with your teacher.

Teacher Approval: _____ Date _____

- B. If you got less than a 3 or did not complete and turn in evidence of studying before the test, show your teacher you have completed work related to the learning target. A list is posted on the microscope cabinet. This includes related activities in your notebook, practice, etc. If you need help completing these, please do not hesitate to ask.

Teacher Approval: _____ Date _____

3. Ask teacher for your original assessment (test).

- A. Correct the part of the target test related to the learning target you want to reassess using a different color. You may use your notebook, a textbook, the internet, etc. **You may not use another person's test or work with another student.** Doing so may disqualify you.
- B. Consider your corrections. Write a reflection that connects original work to corrections. Why did you miss what you missed? What patterns do you notice?

Ecosystem Change Cause/Effect Diagram **Notebook Check**

Check that you have all of the following completed and ready to show your teacher:

- *Glossary for Ecology Activity 1 (Part 1 – two pages)
- *At least three sticky notes from your case study reading
- *Case Study Comparison chart
- *Cause/Effect diagram for your case study in notebook
- *Complete list of tips for making cause/effect diagrams
- *A Walk Outdoors handout
- *Invasive Species handout with 3 comments
- *Revisit the Challenge

Big Shifts

Support for SBG:

- *Clear communication of content & skills to be learned
- *Metacognitive goals
- *Failure, progress & improvement

Book Resources

Books:

- Brookhart, S. M. (2008). *How to Give Effective Feedback to Your Students*. Alexandria, VA: ASCD.
- Earl, L. M. (2003). *Assessment as Learning: Using Classroom Assessment to Maximize Student Learning*. Thousand Oaks, CA: Corwin Press.
- Fisher, D., & Frey, N. (2007). *Checking for Understanding: Formative Assessment Techniques for your Classroom*. Alexandria, VA: ASCD.
- Guskey, T.R. (2015). *On Your Mark: Challenging the Conventions of Grading and Reporting*. Bloomington, IN: Solution Tree.
- Guskey, T. R., & Bailey, J. M. (2010). *Developing Standards-Based Report Cards*. Thousand Oaks, CA: Corwin Press.
- Guskey, T. R., & Bailey, J. M. (2001). *Developing Grading and Reporting Systems for Student Learning*. Thousand Oaks, CA: Corwin Press.
- Guskey, T. R., & Jung, L.A. (2013). *Answers to Essential Questions About Standards, Assessments, Grading, & Reporting*. Thousand Oaks, CA: Corwin Press.
- Jung, L. & Guskey, T.R. (2012) *Grading Exceptional and Struggling Learners*, Thousand Oaks, CA: Corwin Press.
- Marzano, R. J. (2006). *Classroom Assessment & Grading that Work*. Alexandria, VA: ASCD.
- Marzano, R. J. (2010) *Formative Assessment & Standards-Based Grading*. Bloomington, IN: Solution Tree.
- Marzano, R. J. (2000) *Transforming Classroom Grading*, Alexandria, VA: ASCD.
- O'Connor, K. (2009). *How to Grade for Learning, K-12* (3rd ed.). Thousand Oaks: Corwin Press.
- Reeves, D. (2010). *Elements of Grading: A Guide to Effective Practice*, Bloomington, IN: Solution Tree.
- Wormeli, R. (2006). *Fair Isn't Always Equal*. Portland: Stenhouse.

Resources

- *Reach out to other teachers
- *Attend conferences

NGSS Assessment Shifts

- *Assessment is layered - can't change it all at once.
- *Try to move from 1-D assessment to 2-D assessment.
- *Maintain using a variety of assessments.
- *How do reassessments?

The background is a solid dark purple color. It is decorated with various light purple geometric shapes scattered across the surface. These shapes include squares, circles, and crosses. Some of the squares are rotated at 45-degree angles, while others are axis-aligned. The circles vary in size and some have a small white dot in the center, resembling a bullseye. The crosses are also of varying sizes and orientations. The overall effect is a patterned, textured background.

**What do you
believe grades
should
represent?**



Thank you!



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