

INSTRUCTIONAL MATERIALS ADMINISTRATOR

BID 3297

Recommendation

No

Comments: What the textbook covers is clear, easy to read and thorough. The text is objective and accurate. The diagrams, pictures, charts and graphs are wonderful and plentiful. The online material is a great resource (although the virtual labs are pretty clunky with old graphics and not terribly user friendly).

However, the text fails to meet standards relating to climate change and renewable sources: SC.912.L.17.8, SC.912.L.17.13, SC.912.L.17.11, SC.912.L.17.4 are all POOR ALIGNMENT or NO ALIGNMENT. I cannot in good faith recommend this textbook for approval when it doesn't cover this subject adequately at all.

Material for Review

Course: Biology 1 (2000310)

Title: Glencoe Biology, Florida Edition , Edition: 1

Copyright: 2019

Author: McGraw-Hill Education, LLC

Grade Level: 9 - 12

Content

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- 5 - VERY GOOD ALIGNMENT
- 4 - GOOD ALIGNMENT
- 3 - FAIR ALIGNMENT
- 2 - POOR ALIGNMENT
- 1 - VERY POOR/NO ALIGNMENT

Upon completion of all Areas of Review, the Recommendation link will become available with a record of how you scored each section of the evaluation.

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- Additional information regarding the Content, Presentation, and Learning requirements are located in the Science K-12 Specifications for the 2017-18 Florida State Adoption of Instructional Materials.

Each set of materials submitted for adoption is evaluated based on each benchmark for that course and the Content, Presentation, and Learning items included in this rubric.

A. Alignment with curriculum 1. A. The content aligns with the state's standards and benchmarks for subject, grade level and learning outcomes.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Much of the instructional materials were GOOD ALIGNMENT to the standards, because they are clear, thorough, have plenty of diagrams or

pictures, and there are many opportunities to learn more with the online content. Because of the number of GOOD and VERY GOOD alignment, I feel that, on the whole, the materials are in GOOD/FAIR ALIGNMENT with the standards, with the below noted deficiencies. The text and the online component must be used together to meet the standards (some standards, such as MAFS.K12.MP.1.1, MAFS.K12.MP.2.1, LAFS.910.SL.1.2, LAFS.910.RST.1.3 and parts of the SC.912.N.1.1 standard, are only covered with the online material). == There are a few standards that were FAIR ALIGNMENT or POOR ALIGNMENT: LAFS.910.WHST.3.8: I could not find any reference in the text or online materials of "Integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation". SC.912.L.14.1: the text doesn't relate the history of the discovery to the process of science at all that I could find, but instead just asks the student to relate it. SC.912.L.14.4: The text gives a brief overview of microscopes, but no pictures or diagrams of any kind of microscope is shown. SC.912.L.15.15: While mutations are mentioned in the text, they are not mentioned in context of increasing genetic mutation. SC.912.L.17.8: The instructional materials barely mention (just in passing) climate change as a cause of loss of biodiversity. No explanation for HOW climate change causes loss of biodiversity either. == There was two standards that I felt were VERY POOR/NO ALIGNMENT: SC.912.L.17.4: VERY POOR ALIGNMENT. Climate change is not mentioned at all in the text or online materials in references to changes to the eco system. Changes due to seasonal variations is also very weakly explained. SC.912.L.17.3: VERY POOR ALIGNMENT. Text barely mentions environmental parameters for making policy decisions.

2. A. The content is written to the correct skill level of the standards and benchmarks in the course.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Yes, the content is at a highschool level. The material is presented clearly and the use of color diagrams, pictures, charts and graphs in the text book is great.

3. A. The materials are adaptable and useful for classroom instruction.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Online materials give a good variety of Labs, write ups, etc to use in the classroom

B. Level of Treatment 4. B. The materials provide sufficient details for students to understand the significance of topics and events.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Most topics get sufficient details for students.

5. B. The level (complexity or difficulty) of the treatment of content matches the standards.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

6. B. The level (complexity or difficulty) of the treatment of content matches the student abilities and grade level.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

7. B. The level (complexity or difficulty) of the treatment of content matches the time period allowed for teaching.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

C. Expertise for Content Development 8. C. The primary and secondary sources cited in the materials reflect expert information for the subject.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT **VERY POOR/NO ALIGNMENT**

Justification:

I can't find any primary or secondary sources cited at all for the textbook or online materials. However, in the text there are important works that are mentioned -- Hooke, Watson and Crick, etc.

9. C. The primary and secondary sources contribute to the quality of the content in the materials.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT **VERY POOR/NO ALIGNMENT**

Justification:

Again, I couldn't find any actual citations of sources (no bibliography, etc).

D. Accuracy of Content 10. D. The content is presented accurately. (Material should be devoid of typographical or visual errors).

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

All materials were accurate and presented well. I would suggest updating the Fig. 12 caption on page 398 however -- "Pasteur's experiment showed that sterile broth remained free of microorganisms until exposed to air"... The first picture in the figure has the flask with sterile broth, exposed to air -- because of the bend in the glass. So the caption should read something like "Pasteur's experiment showed the sterile broth remained free of microorganisms until exposed to unobstructed air".

11. D. The content of the material is presented objectively. (Material should be free of bias and contradictions and is noninflammatory in nature).

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

I agree it is objectively, except that climate change isn't really addressed at all (see standard alignment section). I appreciate the trickiness

of addressing SC.912.L.15.8 and I feel it was done fairly and objectively.

12. D. The content of the material is representative of the discipline? (Material should include prevailing theories, concepts, standards, and models used with the subject area).

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Yes, the content uses the prevailing theories and standards. The only area this needs to be improved is the sections involving discussing climate change (it's not fully addressed how and why and what the effects are).

13. D. The content of the material is factual accurate. (Materials should be free of mistakes and inconsistencies).

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Yes, the material presented is factually accurate.

E. Currency of Content 14. E. The content is up-to-date according to current research and standards of practice.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Yes, at the level this is presented, the content is accurate (I mean, current cutting edge research isn't included, but at this introductory level, the content is current and up to date) There is an example in the text that uses video/DVD rental stores as the example. That should be changed in future version because I don't think many highschoolers will know what that is in a few years.

15. E. The content is presented to the curriculum, standards, and benchmarks in an appropriate and relevant context.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

16. E. The content is presented in an appropriate and relevant context for the intended learners.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

F. Authenticity of Content 17. F. The content includes connections to life in a context that is meaningful to students.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

There are many examples in the text that relate to the lives of the students to help explain complex ideas.

18. F. The material includes interdisciplinary connections which are intended to make the content meaningful to students.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good opportunity to write and use math

G. Multicultural Representation 19. G. The portrayal of gender, ethnicity, age, work situations, cultural, religious, physical, and various social groups are fair and unbiased. (Please explain any unfair or biased portrayals in the comments section).

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Most of the pictures, portrayals, etc in the book are of animals, ecology, and cell/microorganisms, but there is a good diversity in the pictures and portrayals of people.

H. Humanity and Compassion 20. H. The materials portray people and animals with compassion, sympathy, and consideration of their needs and values and exclude hard-core pornography and inhumane treatment. (An exception may be necessary for units covering animal welfare).

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

No hardcore pornography in the instructional materials. Human reproduction and development is presented accurately and clinically. No portrayals of inhumane treatment. All people and animals portrayed with respect.

21. In general, is the content of the benchmarks and standards for this course covered in the material.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

See my 1A answer for more information.

Presentation

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A. Comprehensiveness of Student and Teacher Resources1. A. The comprehensiveness of the student resources address the targeted learning outcomes without requiring the teacher to prepare additional teaching materials for the course.

- VERY GOOD ALIGNMENT** GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Comprehensive. Teachers may want to include their own examples and experiments, but shouldn't have to. Some labs and worksheets, etc require preparation and set up (as expected for a science course).

B. Alignment of Instructional Components2. B. All components of the major tool align with the curriculum and each other.

- VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

The text and the online component must be used together to meet the standards (some standards, such MAFS.K12.MP.1.1, MAFS.K12.MP.2.1, LAFS.910.SL.1.2, LAFS.910.RST.1.3 and parts of the SC.912.N.1.1 standard, are only covered with the online material).

C. Organization of Instructional Materials3. C. The materials are consistent and logical organization of the content for the subject area.

- VERY GOOD ALIGNMENT** GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good organization of covered subjects.

D. Readability of Instructional Materials4. D. Narrative and visuals engage students in reading or listening as well as in understanding of the content at a level appropriate to the students' abilities.

- VERY GOOD ALIGNMENT** GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Great visuals and narrative. I especially like the diagrams for the cell section of the textbook (electron transport, cells, membranes, etc). There is audio narration for the text if students need it.

E. Pacing of Content5. E. The amount of content presented at one time or the pace at which it is presented must be of a size or rate that allows students to perceive and understand it.

- VERY GOOD ALIGNMENT** GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Logical flow and good pacing.

Accessibility6. The material contains presentation, navigation, study tool and assistive supports that aid students, including those with disabilities, to access and interact with the material. (For assistance refer to the answers on the UDL questionnaire).

- VERY GOOD ALIGNMENT** GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

7. In general, how well does the submission satisfy PRESENTATION requirements? (The comments should support your responses to the questions in the Presentation section).

- VERY GOOD ALIGNMENT** GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Content is presented clearly and thoroughly.

Learning

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A. Motivational Strategies1. A. Instructional materials include features to maintain learner motivation.

- VERY GOOD ALIGNMENT** GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

B. Teaching a Few "Big Ideas"2. B. Instructional materials thoroughly teach a few important ideas, concepts, or themes.

- VERY GOOD ALIGNMENT** GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

C. Explicit Instruction3. C. The materials contain clear statements of information and outcomes.

- VERY GOOD ALIGNMENT** GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Presented material is clear and detailed

D. Guidance and Support4. D. The materials provide guidance and support to help students safely and successfully become more independent learners and thinkers.

- VERY GOOD ALIGNMENT** GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good practice questions and assignments to allow students to think independently and not just regurgitate was the text said.

5. D. Guidance and support must be adaptable to developmental differences and various learning styles.

- VERY GOOD ALIGNMENT** GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Important information presented several ways -- text, assignments, labs, diagrams/pictures/charts, vocabulary words, etc.

E. Active Participation of Students6. E. The materials engage the physical and mental activity of students during the learning process.

- VERY GOOD ALIGNMENT** GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Through the GetIt, ReviewIt, end of chapter assessments, labs, worksheets and other online materials, the student has a way to process what they have learned and apply it.

7. E. Rate how well the materials include organized activities that are logical extensions of content, goals, and objectives.

- VERY GOOD ALIGNMENT** GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

F. Targeted Instructional Strategies8. F. Instructional materials include the strategies known to be successful for teaching the learning outcomes targeted in the curriculum requirements.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT
Justification:

9. F. The instructional strategies incorporated in the materials are effective in teaching the targeted outcomes.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT
Justification:

G. Targeted Assessment Strategies10. G. The materials correlate assessment strategies to the desired learning outcomes.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT
Justification:

11. G. the assessment strategies incorporated in the materials are effective in assessing the learners' performance with regard to the targeted outcomes.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT
Justification:

Through chapter GetIt, ReviewIt, assessments, worksheets, labs, etc, there are many ways to assess the student's performance

Universal Design for Learning12. This submission incorporates strategies, materials, activities, etc., that consider the needs of all students.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT
Justification:

With the online text and materials, you can have the narration read using audio, the text sizes can be increased as needed. The navigation is fairly easy (can go to specific pages, use the table of contents, search for terms). The only issue I had with the online textbook interface is each time I changed pages I had to re-click the "hand" tool so I could move the page to read it (I usually had to zoom in somewhat to read the page).

Mathematical Practice13. Do you observe the appropriate application of Mathematical Practices (MP) as applicable?

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT
Justification:

Many of the math standards are addressed with the online content in ConnectED

14. In general, does the submission satisfy LEARNING requirements? (The comments should support your responses to the questions in the Learning section.)

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT
Justification:

Yes. Students are encouraged in a variety of ways to engage with the material and think critically (labs, etc). The information is presented well and usually in a variety of ways.

Standards

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When looking at standards alignment reviewers should consider not only the robustness of the standard coverage but also the content complexity (depth of knowledge level) if appropriate. More information on content complexity as it relates to Florida standards can be found at: http://www.cpalms.org/Uploads/docs/CPALMS/initiatives/contentcomplexity/CPALMS_ccdefinitions_140711.pdf
For example, if the standard is marked as a level 3 (strategic reasoning and complex thinking) then the materials coverage should reflect this. If the materials coverage is only sufficient to allow for recall (level 1) then this should be reflected in the points assigned.

1. **SC.912.E.7.1:** Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.

Remarks/Examples:

Describe that the Earth system contains fixed amounts of each stable chemical element and that each element moves among reservoirs in the solid earth, oceans, atmosphere and living organisms as part of biogeochemical cycles (i.e., nitrogen, water, carbon, oxygen and phosphorus), which are driven by energy from within the Earth and from the Sun.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Content presented via text and diagrams. Measured with performance of various complexity. I could not locate the Applying Practices: Modeling the Carbon Cycle online in Connect ED, as listed by manufacturer. It would helpful to include discussion in the text about the positive/negative effects of throwing the cycles off balance (ie, too much CO2, etc).

2. **SC.912.L.14.1:** Describe the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science.

Remarks/Examples:

Describe how continuous investigations and/or new scientific information influenced the development of the cell theory. Recognize the contributions of scientists in the development of the cell theory.

VERY GOOD ALIGNMENT GOOD ALIGNMENT **FAIR ALIGNMENT** POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

The text needs more reinforcement about cell theory. It's so important and needs to be further addressed. I don't think "relate the history of the [cell theory's] discovery to the process of science" is covered in the text at all. The question on pg. 215, #7, simply asks the student to relate the history of the discovery to the process of science - when this hasn't been addressed.

3. **SC.912.L.14.2:** Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

I like how page 194 starts with diffusion and then steps into passive transport. Please highlight/bold that this is passive transport. Otherwise, everything is presented in depth and accurately. I especially like the chart of organelles on page 212. Good opportunity for student to answer questions at all levels of complexity plus a variety of labs, etc in the online connectED.

4. **SC.912.L.14.3:** Compare and contrast the general structures of plant and animal cells. Compare and contrast the general structures of prokaryotic and eukaryotic cells.

Remarks/Examples:

Annually Assessed on Biology EOC. Also assesses SC.912.L.14.2.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Great overview of plant vs animal cells. I especially like the chart of organelles on page 212. Good opportunity for student to answer questions at all levels of complexity plus a variety of labs, etc in the online connectED.

5. **SC.912.L.14.4:** Compare and contrast structure and function of various types of microscopes.

VERY GOOD ALIGNMENT GOOD ALIGNMENT **FAIR ALIGNMENT** POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

There's no picture or diagram of any kind of microscope! The text explains what they do, but please include what they look like!

6. **SC.912.L.14.6:** Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Covered very indepth in the text.

7. **SC.912.L.14.7:** Relate the structure of each of the major plant organs and tissues to physiological processes.

Remarks/Examples:

Annually Assessed on Biology EOC.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Covered clearly and in depth in the text, including pictures and diagrams. There are more opportunities for performance than listed in the publisher's alignment guide -- performance assessed in various levels of complexity.

8. **SC.912.L.14.26:** Identify the major parts of the brain on diagrams or models.

Remarks/Examples:

Annually Assessed on Biology EOC.

Florida Standards Connections: MAFS.K12.MP.4: Model with mathematics.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Clear, concise. Great photos and diagrams.

9. **SC.912.L.14.36:** Describe the factors affecting blood flow through the cardiovascular system.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Covered clearly and in depth in the text. The Virtual Lab "Hypertension" is very clunky and old.

10. **SC.912.L.14.52:** Explain the basic functions of the human immune system, including specific and nonspecific immune response, vaccines, and antibiotics.

Remarks/Examples:

Annually Assessed on Biology EOC. Also assesses SC.912.L.14.6 HE.912.C.1.7 and HE.912.C.1.5.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good text explanation and nice diagrams and pictures.

11. **SC.912.L.15.1:** Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.

Remarks/Examples:

Annually Assessed on Biology EOC. Also assesses SC.912.L.15.10 SC.912.N.1.3 SC.912.N.1.4 SC.912.N.1.6 SC.912.N.2.1 SC.912.N.3.1 and SC.912.N.3.4.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good, clear, in-depth explanations in the text. I appreciate explanations tying eras to geological rock data. Objective and thorough. Good opportunity for student performance at all levels of complexity.

12. **SC.912.L.15.4:** Describe how and why organisms are hierarchically classified and based on evolutionary relationships.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

In-depth, thorough explanation. Good diagrams.

13. **SC.912.L.15.5:** Explain the reasons for changes in how organisms are classified.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Publisher's alignment sheet doesn't include where the standard is met but I found it on pp. 479-480 and 482. The explanations meet the standard.

14. **SC.912.L.15.6:** Discuss distinguishing characteristics of the domains and kingdoms of living organisms.

Remarks/Examples:

Annually Assessed on Biology EOC. Also assesses SC.912.L.15.4 SC.912.L.15.5 SC.912.N.1.3 and SC.912.N.1.6.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Very in depth in the text. Good diagrams and charts.

15. **SC.912.L.15.8:** Describe the scientific explanations of the origin of life on Earth.

Remarks/Examples:

Annually assessed on Biology EOC. Also assesses SC.912.N.1.3, SC.912.N.1.4, and SC.912.N.2.1.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

I appreciate this can be a tricky topic, but the materials cover it objectively and scientifically. Clear, concise and thorough.

16. **SC.912.L.15.10:** Identify basic trends in hominid evolution from early ancestors six million years ago to modern humans, including brain size, jaw size, language, and manufacture of tools.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Little mention of language. Content is a good overview, not very in-depth.

17. **SC.912.L.15.13:** Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.

Remarks/Examples:

Annually assessed on Biology EOC. Also assesses SC.912.L.15.14, SC.912.L.15.15, and SC.912.N.1.3.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Instructional materials do not explicitly state "struggle to survive" but it is inferred on page 415. Good overview, but not terribly in-depth.

18. **SC.912.L.15.14:** Discuss mechanisms of evolutionary change other than natural selection such as genetic drift and gene flow.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good examples of genetic drift given but not much information about gene flow. Presents other mechanisms well with plenty of examples. Touches on Hardy-Weinberg.

19. **SC.912.L.15.15:** Describe how mutation and genetic recombination increase genetic variation.

VERY GOOD ALIGNMENT GOOD ALIGNMENT **FAIR ALIGNMENT** POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Mutation is mentioned in other areas of the text (pp 344-346) but not tied back to genetic variation. Genetic recombination is barely mentioned in the text.

20. **SC.912.L.16.1:** Use Mendel's laws of segregation and independent assortment to analyze patterns of inheritance.

Remarks/Examples:

Annually assessed on Biology EOC. Also assesses SC.912.L.16.2.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Mendel's laws of segregation and independent assortment are mentioned once in the textbook. There's a nice figure to explain the concepts.

21. **SC.912.L.16.2:** Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

All the standards information is touched on as an overview in the textbook, not very in-depth. Good alignment.

22. **SC.912.L.16.3:** Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.

Remarks/Examples:

Integrate HE.912.C.1.7. Analyze how heredity and family history can impact personal health. Annually assessed on Biology EOC. Also assesses SC.912.L.16.4 SC.912.L.16.5 SC.912.L.16.9.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Need more explanation of conservation of genetic information in the textbook.

23. **SC.912.L.16.4:** Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Textbook is pretty in-depth about mutation causes and effects. The text never actually says "gamete" just "sex cell".

24. **SC.912.L.16.5:** Explain the basic processes of transcription and translation, and how they result in the expression of genes.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Clear and thorough explanation of the central dogma/ transcription and translation of DNA and how it results in gene expression in the textbook. I did find the codon chart confusing. Good opportunity for student performance and varying levels of complexity.

25. **SC.912.L.16.8:** Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.

Remarks/Examples:

Integrate HE.912.C.1.7. Analyze how heredity and family history can impact personal health.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good overview but not very in-depth.

26. **SC.912.L.16.9:** Explain how and why the genetic code is universal and is common to almost all organisms.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT **POOR ALIGNMENT** VERY POOR/NO ALIGNMENT

Justification:

So, there's a lot of discussion about DNA, the genetic code, etc, but the textbook doesn't explicitly cover how and why the genetic code is universal or that's it's common to almost all organisms. Page 334 DOES state the central dogma is common to all living things.. but not explicitly the genetic code. Only a couple opportunities for student performance (questions/ extra materials online).

27. **SC.912.L.16.10:** Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.

Remarks/Examples:

Annually assessed on Biology EOC.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

In-depth, clear explanations and examples in the textbook. Good performance opportunities and writing opportunities with the textbook questions and online materials.

28. **SC.912.L.16.13:** Describe the basic anatomy and physiology of the human reproductive system. Describe the process of human development from fertilization to birth and major changes that occur in each trimester of pregnancy.

Remarks/Examples:

Annually assessed on Biology EOC.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Clear, in-depth, thorough, objective, clinical. Great diagrams. Many opportunities for student performance (textbook questions, online labs).

29. **SC.912.L.16.14:** Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Clear text. Very in-depth with diagrams and pictures.

30. **SC.912.L.16.16:** Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Clear and in-depth text. The concept of haploid is not presented clearly (p. 261)

31. **SC.912.L.16.17:** Compare and contrast mitosis and meiosis and relate to the processes of sexual and asexual reproduction and their consequences for genetic variation.

Remarks/Examples:

Annually assessed on Biology EOC. Also assesses SC.912.L.16.8 SC.912.L.16.14 SC.912.L.16.16.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Great compare/contrast. The diagram on page 266 is great. Good performance questions.

32. **SC.912.L.17.2:** Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Clear and in-depth overview. Lots of diagrams. Several performance questions/ activities at varying complexity levels.

33. **SC.912.L.17.4:** Describe changes in ecosystems resulting from seasonal variations, climate change and succession.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT **VERY POOR/NO ALIGNMENT**

Justification:

Climate change not mentioned in reference to changes to ecosystem. Seasonal variation very weakly covered.

34. **SC.912.L.17.5:** Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.

Remarks/Examples:

Annually assessed on Biology EOC. Also assesses SC.912.L.17.2 SC.912.L.17.4 SC.912.L.17.8 SC.912.N.1.4.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

All the information is present in the text and performance opportunities at varying complexity levels are given. Information presented is not very in-depth.

35. **SC.912.L.17.8:** Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT **POOR ALIGNMENT** VERY POOR/NO ALIGNMENT

Justification:

Textbook barely mentions (just in passing) climate change. No discussion about what climate change is, what causes it, how it affects biodiversity.

36. **SC.912.L.17.9:** Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.

Remarks/Examples:

Annually assessed on Biology EOC. Also assesses SC.912.E.7.1.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Clear, thorough explanation and diagrams. Several performance questions of varying levels of complexity.

37. **SC.912.L.17.11:** Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.

VERY GOOD ALIGNMENT GOOD ALIGNMENT **FAIR ALIGNMENT** POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Very general overview in the textbook, not very in-depth or thorough. I did like the Applying Practices "Analyze a Major Global Challenge" online in ConnectED assignment, but that was the only performance opportunity for this standard.

38. **SC.912.L.17.13:** Discuss the need for adequate monitoring of environmental parameters when making policy decisions.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT **VERY POOR/NO ALIGNMENT**

Justification:

The text barely mentions policy or legislative needs and certainly doesn't address the need for adequate monitoring of environmental parameters when making policy decisions. The performance opportunities Applying Practices "Analyze a Major Global Challenge", Applying Practices "Pest Management and Natural Selection" and Applying Practices "Microbeads, Mega Problem" are great and provide good opportunity for student discussion and critical thinking. However, the standard isn't really addressed in the main textbook.

39. **SC.912.L.17.20:** Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.

Remarks/Examples:

Annually assessed on Biology EOC. Also assesses SC.912.L.17.11, SC.912.L.17.13, SC.912.N.1.3.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good discussion about human lifestyles and environmental systems.

40. **SC.912.L.18.1:** Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.

Remarks/Examples:

Annually assessed on Biology EOC. Also assesses SC.912.L.18.11.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Clear, in-depth explanations. Good charts and diagrams to explain. Several performance questions and activities.

41. **SC.912.L.18.7:** Identify the reactants, products, and basic functions of photosynthesis.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Very in-depth with clear charts and diagrams. Good coverage of electron transport and the Calvin cycle. Good performance questions and online activity.

42. **SC.912.L.18.8:** Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Very in-depth with clear charts and diagrams. Good coverage of Krebs and glycolysis. Good performance questions and online activity.

43. **SC.912.L.18.9:** Explain the interrelated nature of photosynthesis and cellular respiration.

Remarks/Examples:

Annually assessed on Biology EOC. Also assesses SC.912.L.18.7 SC.912.L.18.8 SC.912.L.18.10.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

I really like the diagram on page 239 showing the interrelated nature of photosynthesis and cellular respiration.

44. **SC.912.L.18.10:** Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good description in text about ATP and ADP. Good diagrams about ATP being used becoming ADP. Good performance questions/ activities.

45. **SC.912.L.18.11:** Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good overview, not very in-depth. Good diagrams and graphs. Several good performance questions/ activities at varying levels of complexity.

46. **SC.912.L.18.12:** Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.

Remarks/Examples:

Annually assessed on Biology EOC.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good overview, not very in-depth. Good diagrams and graphs.

47. **SC.912.N.1.1:** Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following:

1. Pose questions about the natural world, (Articulate the purpose of the investigation and identify the relevant scientific concepts).
2. Conduct systematic observations, (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines).
3. Examine books and other sources of information to see what is already known,
4. Review what is known in light of empirical evidence, (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models).
5. Plan investigations, (Design and evaluate a scientific investigation).
6. Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs), (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage).
7. Pose answers, explanations, or descriptions of events,
8. Generate explanations that explicate or describe natural phenomena (inferences),
9. Use appropriate evidence and reasoning to justify these explanations to others,
10. Communicate results of scientific investigations, and
11. Evaluate the merits of the explanations produced by others.

Remarks/Examples:

Florida Standards Connections for 6-12 Literacy in Science

For Students in Grades 9-10

LAFS.910.RST.1.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.

LAFS.910.RST.1.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks attending to special cases or exceptions defined in the text.

LAFS.910.RST.3.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

LAFS.910.WHST.1.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

LAFS.910.WHST.3.9 Draw evidence from informational texts to support analysis, reflection, and research.

For Students in Grades 11-12

LAFS.1112.RST.1.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.

LAFS.1112.RST.1.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks analyze the specific results based on explanations in the text.

LAFS.1112.RST.3.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

LAFS.1112.WHST.1.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

LAFS.1112.WHST.3.9 Draw evidence from informational texts to support analysis, reflection, and research.

Florida Standards Connections for Mathematical Practices

MAFS.K12.MP.1: Make sense of problems and persevere in solving them.

MAFS.K12.MP.2: Reason abstractly and quantitatively.

MAFS.K12.MP.3: Construct viable arguments and critique the reasoning of others. [Viable arguments include evidence.]

MAFS.K12.MP.4: Model with mathematics.

MAFS.K12.MP.5: Use appropriate tools strategically.

MAFS.K12.MP.6: Attend to precision.

MAFS.K12.MP.7: Look for and make use of structure.

MAFS.K12.MP.8: Look for and express regularity in repeated reasoning.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Many of the math standards are met using the online ConnectED and the Skillbuilder handbook. Not a whole lot of opportunities for math performance in the text book (biology doesn't have a lot of math, but there are statistical and probability skills that can be used to address biological questions).

48. **SC.912.N.1.3:** Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.

Remarks/Examples:

Assess the reliability of data and identify reasons for inconsistent results, such as sources of error or uncontrolled conditions.

Florida Standards Connections: MAFS.K12.MP.2: Reason abstractly and quantitatively MAFS.K12.MP.3: Construct viable arguments and critique the reasoning of others

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

This is a cornerstone in biology and sciences, how science is carried out and perfected with scientific argumentation, critical and logical thinking and considering other scientific explanations. The text does a good job on pages 14-15 introducing this and explaining how scientists operate. There needs to be more attention to these concepts throughout the text and more performance opportunities.

49. **SC.912.N.1.4:** Identify sources of information and assess their reliability according to the strict standards of scientific investigation.

Remarks/Examples:

Read, interpret, and examine the credibility and validity of scientific claims in different sources of information, such as scientific articles,

advertisements, or media stories. Strict standards of science include controlled variables, sufficient sample size, replication of results, empirical and measurable evidence, and the concept of falsification.

Florida Standards Connections: LAFS.910.RST.1.1 / LAFS.1112.RST.1.1.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Textbook (briefly) and Science and Engineering Practices Handbook (online/ more in-depth) discuss how to evaluate scientific sources of information. Needs to be more information about this in the textbook.

50. **SC.912.N.1.6:** Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.

Remarks/Examples:

Collect data/evidence and use tables/graphs to draw conclusions and make inferences based on patterns or trends in the data.

Florida Standards Connections: MAFS.K12.MP.1: Make sense of problems and persevere in solving them.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good overview of what a scientific inference is and how they are drawn.

51. **SC.912.N.2.1:** Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).

Remarks/Examples:

Science is the systematic and organized inquiry that is derived from observations and experimentation that can be verified or tested by further investigation to explain natural phenomena (e.g. Science is testable, pseudo-science is not science seeks falsifications, pseudo-science seeks confirmations.)

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good job of the textbook pointing out science vs. pseudoscience. Several performance questions in the textbook.

52. **SC.912.N.2.2:** Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.

Remarks/Examples:

Identify scientific questions that can be disproved by experimentation/testing. Recognize that pseudoscience is a claim, belief, or practice which is presented as scientific, but does not adhere to strict standards of science (e.g. controlled variables, sample size, replicability, empirical and measurable evidence, and the concept of falsification).

Florida Standards Connections: MAFS.K12.MP.3: Construct viable arguments and critique the reasoning of others.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good overview of what science can answer and what is cannot.

53. **SC.912.N.3.1:** Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.

Remarks/Examples:

Explain that a scientific theory is a well-tested hypothesis supported by a preponderance of empirical evidence.

Florida Standards Connections: MAFS.K12.MP.1: Make sense of problems and persevere in solving them and, MAFS.K12.MP.3: Construct viable arguments and critique the reasoning of others.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good explanation about what a scientific theory is and how it's the culmination of a lot of evidence and experimentation. A few performance questions. A scientific theory and what is should be reinforced in other, relevant areas of the text as well.

54. **SC.912.N.3.4:** Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.

Remarks/Examples:

Recognize that theories do not become laws, theories explain laws. Recognize that not all scientific laws have accompanying explanatory theories.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good discussion of scientific theory vs law and how they are different and used differently.

55. **LAFS.910.RST.1.1:** Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.

VERY GOOD ALIGNMENT GOOD ALIGNMENT **FAIR ALIGNMENT** POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

This is not addressed in the textbook, but is addressed in the online materials with ConnectED.

56. **LAFS.910.RST.1.2:** Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Students can trace the text's explanations, but it isn't something explicitly mentioned in the text or performance questions. If students use the Reading Check question/ ReviewITs, they'll fulfill this standard.

57. **LAFS.910.RST.1.3:** Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Various labs/ minilabs/ virtual labs in the online materials.

58. **LAFS.910.RST.2.4:** Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Vocabulary words and meanings are defined in a special call out box in each chapter.

59. **LAFS.910.RST.2.5:** Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

This is met with various activities in the textbook and online materials.

60. **LAFS.910.RST.2.6:** Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

61. **LAFS.910.RST.3.7:** Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

There are many diagrams, charts and graphs throughout the text that explain visually what the text says with words. Equations are also expressed with words in addition to the mathematical equation.

62. **LAFS.910.RST.3.8:** Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Various materials with the online portion meet this standard.

63. **LAFS.910.RST.3.9:** Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Not explicitly in the text, but can be done with the various labs in ConnectED.

64. **LAFS.910.RST.4.10:** By the end of grade 10, read and comprehend science/technical texts in the grades 9–10 text complexity band independently and proficiently.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

The text provides vocabulary words and meanings in call out boxes in each chapter. Also provides opportunities to read scientific findings

and write about them independently and critically.

65. **LAFS.910.SL.1.1:** Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

- a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
- b. Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternate views), clear goals and deadlines, and individual roles as needed.
- c. Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions.
- d. Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Several activities online and in the text to foster communication between students and independent analysis among students. Opportunities to discuss and debate scientific findings and ideas.

66. **LAFS.910.SL.1.2:** Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Online materials provide opportunities to analyze and critique information using various sources.

67. **LAFS.910.SL.1.3:** Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

68. **LAFS.910.SL.2.4:** Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

explains and gives good opportunity to write and present research and findings. Instructor needs to guide students.

69. **LAFS.910.SL.2.5:** Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

70. **LAFS.910.WHST.1.1:** Write arguments focused on discipline-specific content.

- a. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence.
- b. Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns.
- c. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
- d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
- e. Provide a concluding statement or section that follows from or supports the argument presented.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Textbook and handbook provide guidelines for students to do this. Needs to be instructor led.

71. **LAFS.910.WHST.1.2:** Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

- a. Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
- b. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
- c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among

ideas and concepts.

- d. Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers.
- e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
- f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Textbook and handbook provide guidelines for students to do this. Needs to be instructor led.

72. **LAFS.910.WHST.2.4:** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Online handbook provide guidelines for students to do this. Needs to be instructor led.

73. **LAFS.910.WHST.2.5:** Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Online handbook provide guidelines for students to do this. Needs to be instructor led.

74. **LAFS.910.WHST.2.6:** Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Online handbook provide guidelines for students to do this. Needs to be instructor led.

75. **LAFS.910.WHST.3.7:** Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Textbook and handbook provide guidelines for students to do this. Needs to be instructor led.

76. **LAFS.910.WHST.3.8:** Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT **POOR ALIGNMENT** VERY POOR/NO ALIGNMENT

Justification:

I don't see any reference in the text or online handbooks about plagiarism or standard citation format.

77. **LAFS.910.WHST.3.9:** Draw evidence from informational texts to support analysis, reflection, and research.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Textbook and handbook provide guidelines for students to do this. Needs to be instructor led.

78. **LAFS.910.WHST.4.10:** Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Periodic GetIt, ReviewIT! and Chapter Assessments in text allow for writing exercises.

79. **HE.912.C.1.3:** Evaluate how environment and personal health are interrelated.

Remarks/Examples:

Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Good information/ clear and in-depth presented.

80. **HE.912.C.1.5:** Analyze strategies for prevention, detection, and treatment of communicable and chronic diseases.

Remarks/Examples:

Health prevention, detection, and treatment of: breast and testicular cancer, suicide, obesity, and industrial-related chronic disease.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Very thorough. Presented clearly. Good followup questions. I couldn't find the BioDiscoveries "Exploring Inter-Species Virus Transmission" online in ConnectED to evaluate.

81. **HE.912.C.1.7:** Analyze how heredity and family history can impact personal health.

Remarks/Examples:

Drug use, family obesity, heart disease, mental health, and non-communicable illness or disease.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

Thoroughly presented in several areas of the text. Good information about the genetic component of disease. There are several performance opportunities for students to study and analyze and create pedigrees for heredity and family history.

82. **MAFS.912.N-Q.1.1:** Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

83. **MAFS.912.N-Q.1.3:** Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

VERY GOOD ALIGNMENT **GOOD ALIGNMENT** FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

84. **ELD.K12.ELL.SC.1:** English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification:

85. **ELD.K12.ELL.SI.1:** English language learners communicate for social and instructional purposes within the school setting.

VERY GOOD ALIGNMENT GOOD ALIGNMENT FAIR ALIGNMENT POOR ALIGNMENT VERY POOR/NO ALIGNMENT

Justification: