Guidance for Secondary Science Remote Learning

In light of the *General Practices for Remote Learning* and *Specific Guidelines for Secondary* sections of the [SLCSD Teacher Guidance for Remote Learning](#) document, we have compiled some specific secondary science guidance for the recommended 2.5 hours of learning each week. *Note that this is less time than 2 typical class periods without homework!*

Step 1) Determine Essential Learning

[SEEd Standard](#)	Choose a Standard or even an entire Strand (see pg 3 for an example).
[Essential Learning Goal for the Week](#)	Determine the most essential/engaging piece of the Standard or Strand that any student could successfully learn independently (see pg 3 for an example). *This will probably involve significantly "trimming" the learning goal you would typically have in the classroom. A coach or colleague can help with this process!*
Time Frame	2.5 hours* during 1 week, including the weekend. (e.g. Mon-Mon or Tue-Tue.) *Expectations for the entire week should be provided on the first day of the week, each week, to help students plan and organize.* **Keep in mind that the 2.5 hrs should include the time required to access and navigate any technology.*

Step 2) Plan Remote Learning Lesson

Based on the SLCSD Teacher Guidance for Remote Learning, the critical aspects of successful remote learning at this moment in time are:

- Opportunities to engage with others (Teachers Face-Time and Peer Interactions),
- Learning opportunities that do not involve a device (Offline Learning and Online Learning)
- A way to end and communicate the week's learning (Communicate Learning)

We recommend that you aim for a balance of each of these critical aspects (divided into 5 categories below) to reflect their equal importance. This might mean that you aim for 30 min of each category each week or that one week is weighted more toward individual offline learning, while another week is weighted more toward online learning and interactions with teachers and peers. The message is to attend to each of these categories in order to maintain realistic expectations in this very "unreal" time by providing differentiated opportunities for the most equitable learning experience possible for our students. ***Note that it is NOT the intent to replicate our typical classrooms.*

Below, you will find a menu of options for incorporating each of these categories into your remote learning lesson for the week. **These options are taken directly from the lesson plans of secondary science teachers in our district.**

Critical Aspects of Realistic Remote Learning and Suggested min/week

Teacher Face-Time (~30 min)	Individual Offline Learning (~30 min)	Peer Interactions (~30 min)	Individual Online Learning (~30 min)	Communicate Learning (~30 min)
Instructional Video (Recorded)	Experimenting	Whole Class Live Recorded Broadcast	Online Interactives Learning Experiences Menu	Recording of Video or Oral Report
Virtual Office Hours	Exploring and Observing	Peer Grading or Review	Video	Formative Quiz
Social Media (e.g. Class Instagram)	Data Collection	Virtual Small Group Discussion or Project	Reading	Written Work (could be photo of handwritten)
Individual Check-In (e.g. Phone call, letter, email, etc)	Reading or Problem Solving using Hard Copy Text	Asynchronous Discussion Prompts (e.g. Canvas, Flipgrid, etc) Combating Social Isolation		Artistic Summary (e.g. poster, cartoon, poem, model, concept map, etc)

Sample Lesson Plan

SEEd Standard: BIO3.1 Construct an explanation for how the structure of DNA is replicated, and how DNA and RNA code for the structure of proteins which regulate and carry out the essential function of life and result in specific traits. Emphasize a conceptual understanding that the sequence of nucleotides in DNA determines the amino acid sequence of proteins through the process of transcription and translation.

Essential Learning Goal: Construct an explanation for how DNA instructs the making of proteins and how the functions of those proteins cause us to be who we are.

Engage: Students begin with an engaging video on Canvas or image on Instagram showing (but not explaining) how similar human DNA is to other organisms. This is accompanied by video or images from the teacher possibly a) introducing the learning goal and/or essential question, b) providing instructions for completing the week's task, or c) sharing images of the organisms in the teacher's world (pets, family, garden, etc) that were highlighted in the initial post about genetic similarity. Students then collect data from family members about "What causes us to be different from each other?" (Teacher Face-Time and Offline Time ~30min)

Explore: Students use short videos from the first three parts of this Learn Genetics Module, "Shared Biochemistry" to learn more about the role of DNA and function of proteins in making us who we are. For an example of how to adapt this module for remote learning, check out East High Lisa Jones' Honors Bio Week 2, Module 1 on Canvas Commons. (Online Time ~30min)

Explain/Elaborate: Students engage in small group discussions asynchronously using Canvas Discussion or Peer-review or synchronously in assigned Zoom small groups. Students share their poll results and try explaining "What causes us to be different from each other?" to their peers. (Online Time and Peer-Peer Interaction ~30 min)

Evaluate/Communicate: Students create a model on a poster or in a cartoon to share with family members to explain what causes us to be different from each other. Students explain their model to a family member or peer and then ask them to write a caption for the model. This is a way for students to self-evaluate the way they have communicated their model and revise it before posting it to the teacher. (Offline Time and Communication Time ~1hr)