January 2018

Unit VII: Conduct Subject-Specific Research

Understandings/Focus Questions	Content	Skills/Standards	Assessment	Differentiation
1. How will we conduct subject specific research in science, social sciences, engineering, liberal and fine arts. 2. What can we do to prepare students for subject specific testing (ACT/PSAE)?	1. Non-science based study can be conducted using surveys. 2. Student will have to generate surveys to be distributed to their respective population groups. 3. Science based experiments - - Student will set-up their experiments based upon what they wrote in their methods section of their proposal 4. Students who are engaged in science based experiments will have time to prep for the ACT/PSAE during this time. Most of the experiments should run at least 6 weeks to obtain enough data to accurately report	**1. Scientific Experiments** • Students that are conducting scientific experiments will set-up their experiments • Students will also prepare for standardize tests while their experiments are running **2. Non-scientific Experiments** • Students will create and distribute surveys or conduct interviews to obtain their data • Students can either start their analysis of their surveys or interviews or	**Products** • Log/journal • Surveys - non-science studies **Student Self-Assessment** • Teacher-made prompts for reflection • Bell Ringers • Discussion (whole-class or small group) • Self-evaluation • Peer-evaluation	• Use small groups or individual learning • Peer tutoring • Organize content delivery in different ways • Use guided or teacher notes • Cue students to remain on task • Give directions in simplified language • Use flowcharts and graphic organizers • Allow movement to increase physical comfort • Provide correctives measures to ensure mastery of material

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	the findings. Also, all experiments should be conducted in triplets. This will eliminate random variability in the data. This will also be useful during the analysis phase of the study as students will learn how to calculate the standard deviations using Excel. 5. During this time, science students should be reviewing Earth and Space science as well as Physics topics. This could be easily accomplished using the Illinois PSAE Coach, Gold Edition ACT and ISBE Developed Science Book 6. Non-science teachers may not	prepare for standardize testing Rl.11-CCR.7 W.11-CCR.2 W.11-CCR.3 W.11-CCR.4 W.11-CCR.5 W.11-CCR.6 W.11-CCR.7 W.11-CCR.9 W.11-CCR.10 SL.11-CCR.1 SL.11-CCR.2 SL.11-CCR.4 L.11-12.2 L.11-12.4 L.11-12.6 Next Gen Engineering Technology, & Application of Science		

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	have time to do ACT and/or PSAE prep at this time as their students may be collecting data using their surveys. Non-science teachers will have an opportunity for test prep when students are no longer analyzing data			

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1. How will we conduct subject specific research in science, social sciences, engineering, liberal and fine arts. 2. What can we do to prepare students for subject specific testing (ACT/PSAE)	1. Non-science based study - students will still be analyzing their data and organizing it in graphs and/or tables. 2. Science based experiments - - Students should continue with their experiments for another 2 weeks. 3. Science students should continue with ATC/PSAE Prep during this time frame. Students should still be reviewing Earth and Space sciences topics as well as Physics. 4. If time permits, non-science teachers should start ACT and/or PSAE prep. If your students are still analyzing data from their surveys, you will have an opportunity for test prep when all students are no longer analyzing data	**1. Scientific Experiments** • Students that are conducting scientific experiments will continue collecting data from their experiments • Students will continue to prepare for standardize tests while data are being collected **2. Non-scientific Experiments** • Students can either continue to analyze their surveys or interviews or prepare for standardize testing Rl.11-CCR.7 W.11-CCR.2 W.11-CCR.3 W.11-CCR.4 W.11-CCR.5 W.11-CCR.6	**Products** • Log/journal • Test Prep Materials **Student Self-Assessment** • Bell Ringers • Discussion (whole-class or small group) • Self-evaluation	• Use small groups or individual learning • Peer tutoring • Organize content delivery in different ways • Use guided or teacher notes • Cue students to remain on task • Give directions in simplified language • Use flowcharts and graphic organizers • Allow movement to increase physical comfort • Provide correctives measures to ensure mastery of material

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		W.11-CCR.7 W.11-CCR.9 W.11-CCR.10 SL.11-CCR.1 SL.11-CCR.2 SL.11-CCR.4 L.11-12.2 L.11-12.4 L.11-12.6 Next Gen Engineering Technology, & Application of Science		