Preparing Students for the Nevada Science High School Proficiency Exam

- The Nevada Science HSPE is based upon the Nevada State Science Standards. The ***Targeted Interventions for Proficiency in Science*** (***TIPS***) website available at www.rpdp.net provides detailed information on content, misconceptions commonly faced by students, sample proficiency-style and DOK-leveled questions, strategies for interventions and additional resources for teachers. This information is available for each of the benchmarks within the content strands.

- Incorporate various science disciplines as much as possible when teaching. For example, while balancing equations, the Chemistry teacher should use the equation for photosynthesis. The Biology teacher who is teaching photosynthesis should tie in why leaves change color in the autumn, relate it to the seasons, and incorporate the properties of light. The Principle of Science teachers have various opportunities throughout the spiraling curriculum to expand on areas where students need assistance.

- Make connections with previously learned material to ensure that students understand the big ideas of science. Practice making graphic organizers to connect related concepts.

- Reinforce vocabulary terms throughout the year. Model the appropriate use of terms and encourage students to incorporate science terminology into their responses.

- Provide students with sample questions that have the same format as the proficiency questions. Analyze the questions to explain why a certain answer is correct and why the other options are incorrect. The ***HS TIPS*** website has over 800 sample science HPSE-style questions.

- Provide students with questions that require the analysis of data tables, graphs, and diagrams. Model how to interpret information from figures. Instruct students to read the title, axes, and units of the graph before they try to interpret the data. Practice answering questions that require analysis of the information on a graph in addition to constructing graphs.

- Ask questions of varying degrees of difficulty. The questions on the Science HSPE are coded in terms of the Depth of Knowledge (DOK) levels. A majority of the questions on the HSPE focus on application of a concept rather than the recall of information.

- Use the Science Item Specifications and Achievement Indicators provided by the Nevada Department of Education (NDE) when developing lesson plans to ensure that the topics that will be tested are being covered and to gauge if the students are performing at the *Emergent, Approaches, Meets*, or *Exceeds* levels.

- Analyze the data from past HSPE scores to determine which benchmarks need reinforcement. Develop intervention strategies to help the students succeed with those benchmarks.

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