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| Course/Subject/Grade(s): Science 9  | Planning Team |
| Unit Big Idea: Electric current is the flow of electric charge.  | Unit Guiding Question(s): How does current change in a circuit? How does current affect us?  |
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| GoalsCircuits V = IR  | Access – This is what I NEED to know and do | All – This is what I MUST know and do | Most – This is what I CAN know and do | Few – This is what I COULD know and do | Extension – This is what I can TRY to know and do |
| Content Goal: Describe the types of circuits Use V = IRDescribe how electricity affects the body  | I know what a circuit is I can match voltage, current and resistance to their units  | I can identify the basic components of a circuit I know voltage current and resistance I can perform 1 step isolated V = IR calculations I know the most dangerous part of electricity  | I can identify a circuit as series or parallel I know the difference between AC and DC I can explain how voltage, current and resistance I can solve word problems involving V = IR I can explain why current and voltage have different effects on the body  | I can identify short circuits I can compare and contrast the risks and benefits of AC and DCI can explain how voltage, current and resistance are related I can analyze a circuit to identify and calculate this missing voltage, current and/or resistance I can explain how to protect the body from electricity  | I can identify the best type of circuit for a particular application I can explain how to convert AC into DC current I can describe the voltage, current and resistance changes in a circuit I can determine equivalent resistance / current for a circuit I can explain how electricity effects different body systems  |
| Curricular Competencies: Questioning and predictingPlanning and conducting Processing and analyzing data Communicating  | Make observations aimed at identifying their own questions  | I can wonder about this phenomena in this unit.  | I can create a question based on observations of science phenomena in this unit  | I can create multiple questions based on observations of science phenomena in this unit | I can create multiple variable questions based on science phenomena in this unit  | I can extend my questions to include societal impacts of the science phenomena being studied  |
| Formulate multiple hypotheses and predict multiple outcomes  | I can guess what might happen in an experiment  | I can create `hypothesis for the a two variable experiment in this unit  | I can create more than one hypothesis for an experiment in this unit  | I can rationalize why a hypothesis is more probable in an experiment in this unit  | I can explain and justify multiple hypothesis for an experiment in this unit  |
| Analyze cause and effect relationships  | I can identify the cause that produces an effect  | I can analyze the cause and effect relationships in this unit  | I can explain the cause and effect relationships in this unit  | I can predict the cause and effect relationships in this unit  | I can explain with reference to scientific facts, why a prediction of cause and effect will occur.  |
| Select and use appropriate equipment to systematically and accurately collect data  | I can Identify equipment and its use | I can select the appropriate equipment to collect and record data for an experiment  | I can select the most efficient and best equipment to collect and record data  | I can explain why equipment and data recording techniques where chosen  | I can suggest improvements to data collection techniques.  |
| Communicate scientific ideas, claims, information for a specific purpose and audience  | I can explain an science idea | I can communicate scientific ideas using appropriate vocabulary and representations  | I can present a well-reasoned argument based on scientific evidence using appropriate vocabulary and representations.  | I can express and back-up my opinion on scientific ideas using evidence for my argument  | I can refute challenges to my opinion using evidence based argumentation  |