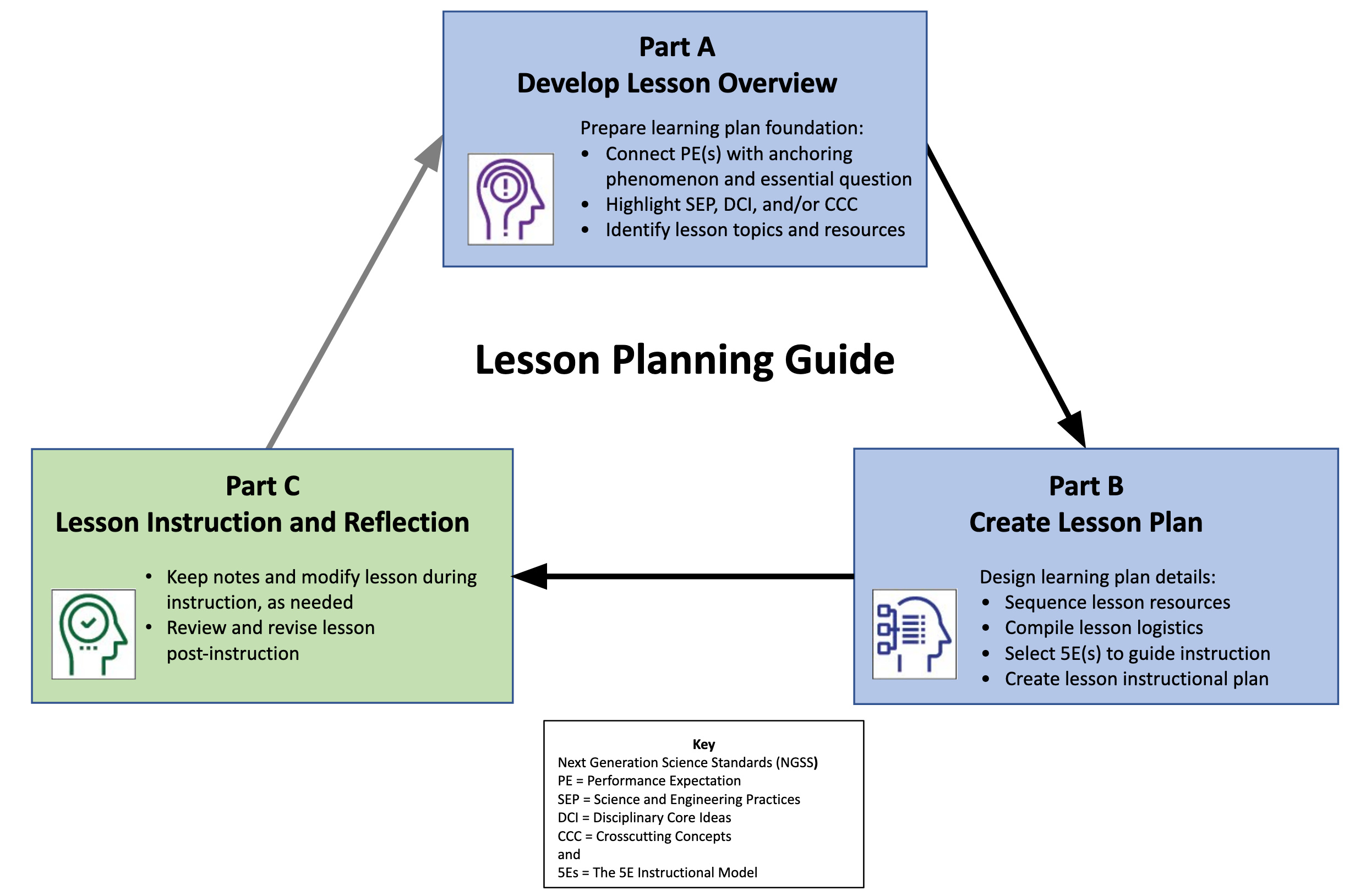
****

|  |  |
| --- | --- |
|  | **Lesson Overview Template (Part A)** |
| **Lesson Plan Sequence** | |
| Develop [NGSS](https://www.nextgenscience.org/)-aligned lesson(s) guided by the [5Es instructional model](https://bscs.org/bscs-5e-instructional-model).  Part A: Develop the learning plan overview to provide foundation for instruction.  Part B: Create detailed lesson(s) for the learning plan using the 5Es instructional model to guide instruction. | |

|  |  |  |
| --- | --- | --- |
| **Connect grade level** [**Performance Expectation(s)**](https://ngss.nsta.org/performanceSearchResults.aspx) **to a lesson-based** [**anchoring phenomenon**](https://static1.squarespace.com/static/56ef1da37da24f301fccaacd/t/5aa86e09652dea04982ceb94/1520987659683/NGSS+StorylineTool%231-AnchoringPhenomenon+-+v2.2.pdf) **topic.**  See more about [phenomena](https://www.ngssphenomena.com/) and using [phenomena with NGSS](https://static1.squarespace.com/static/56ef1da37da24f301fccaacd/t/581f4bb3e58c62bd0983dd03/1478446005130/Using+Phenomena+in+NGSS.pdf). | | |
| PE(s):  Anchoring phenomenon topic: | | |
| **Ask a Driving Question that connects to the identified grade level PE(s) and anchoring phenomenon topic, which is engaging and relevant to students.**  See more about [Driving Questions](http://www.authenticeducation.org/ae_bigideas/article.lasso?artid=53) and using [Driving Questions with NGSS](http://nstacommunities.org/blog/2013/08/01/essential-questions/). | | |
|  | | |
| Highlight specific SEPs, DCIs, and CCCs that support the PE(s) in learning about the phenomenon-based question. | | |
| [**Science and Engineering Practices Progression**](https://www.nextgenscience.org/sites/default/files/resource/files/Appendix%20F%20%20Science%20and%20Engineering%20Practices%20in%20the%20NGSS%20-%20FINAL%20060513.pdf)**:** | [**Disciplinary Core Ideas Progression**](https://www.nextgenscience.org/sites/default/files/resource/files/AppendixE-ProgressionswithinNGSS-061617.pdf)**:** | [**Crosscutting Concepts Progression**](https://www.nextgenscience.org/sites/default/files/resource/files/Appendix%20G%20-%20Crosscutting%20Concepts%20FINAL%20edited%204.10.13.pdf)**:** |
|  |  |  |
| Prior Knowledge | | |
| Determine students’ prior knowledge (e.g., pre-test, class discussion, exit ticket, 1-minute report,KWL chart, survey, etc.) about the anchoring phenomenon: | | |

|  |
| --- |
| **Identify Key Topics** |
| List the main concepts of the anchoring phenomenon that are the focus of the storyline and lesson plan learning goals, revise as needed: |
| **Select Activity Resources** |
| Identify lesson resources to investigate the anchoring phenomenon through a variety of activities, revise as needed (include title and): |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Lesson Plan Template (Part B)** | | | |
| **Grade and Subject:** | | | | **Instructional Time:** |
|  | | | | min. |
| **Lesson Title:** |  | | | |
| **Anchoring Phenomenon:** |  | | | |
| **Driving Question:** |  | | | |
| **Lesson Introduction** | | | | |
| **Lesson Overview**  (summary)**:** | | | **Learning Goals**  (objectives)**:** | |
|  | | |  | |
| **Standards & Resource Alignment** | | | | |
| **Building Toward Target NGSS**  PE with supporting SEP, DCI, CCC (links)**:** | | | **Lesson Resources**  (sequence and links)**:** | |
|  | | |  | |
| **Teacher Preparation** | | | | |
| **Student Misconceptions**  (potential student ideas that are problematic when engaging in the lesson): | | | **Scientific Terminology**  (vocabulary named once students “figure out” concepts of lesson): | |
|  | | |  | |
| **Materials Preparation** | | | | |
| **Student Needs**  (activity sheets, data packet, etc.): | | **Group Needs**  (lab equipment, group data packets, etc.): | | **Safety & Technology Needs**  (dangerous materials, websites cued, etc.): |
|  | |  | |  |
| **Supporting Information** | | | | |
| **References**  (links to cite sources of data, images, websites, etc.): | | | **Background Reading**  (for teachers and/or students): | |
|  | | |  | |

|  |
| --- |
| **For each lesson, select the relevant 5E instructional focus section(s) from the following:** |

|  |
| --- |
| **Engage: *Interest in a concept is generated and students’ current understanding is assessed.***  ACTIVATE interest: Introduce anchoring phenomenon, driving question, and assess students’ prior knowledge |
| * Engages students in the concepts through a short activity or relevant discussion * Connects students’ past and present experiences * Creates interest and generates curiosity * Uncovers students’ current knowledge and misconceptions * Initiates student’s investigation into the anchoring phenomenon based on an observation, problem, or question |
| **Student Anticipated Driving Question(s):** |
|  |
| **Lesson Activities** (experiment, demonstration, video, visualization, reading, etc. coherently sequenced to help build understanding of PE): |
| (For each activity, provide details of the procedure including timing, teacher guidance, student prompts, strategies for discussions and differentiation, etc.) |
| **Formative Assessment** (activity sheet, Venn diagram, summary, exit ticket, think-pair-share, etc. to check for understanding of lesson concepts): |
|  |
| **Consensus Discussion** (claims, evidence, and reasoning on what students figured out in this lesson): |
|  |
| **New Questions and Next Steps** (student-driven questions, ideas on what to investigate in the next lesson and how to investigate it, etc.)**:** |
|  |

**AND/OR**

|  |
| --- |
| **Explore: *Students participate in activities to explore questions related to a concept****.*  BUILD Knowledge: Learn the science behind concepts |
| * Students explore the concepts with others to develop a common set of experiences * Provides students with one or more actual experiences * Offers opportunities for creative thinking and skills development * Students make and record observations and ideas, make connections, and ask questions * Students usually work in groups * Teacher acts as coach or facilitator in student-led investigations |
| **Student Anticipated Driving Question(s):** |
|  |
| **Lesson Activities** (experiment, demonstration, video, visualization, reading, etc. coherently sequenced to help build understanding of PE): |
| (For each activity, provide details of the procedure including timing, teacher guidance, student prompts, strategies for discussions and differentiation, etc.) |
| **Formative Assessment** (activity sheet, Venn diagram, summary, exit ticket, think-pair-share, etc. to check for understanding of lesson concepts): |
|  |
| **Consensus Discussion** (claims, evidence, and reasoning on what students figured out in this lesson): |
|  |
| **New Questions and Next Steps** (student-driven questions, ideas on what to investigate in the next lesson and how to investigate it, etc.)**:** |
|  |

**AND/OR**

|  |
| --- |
| **Explain: *Students construct their understanding of a concept and develop evidence-based explanations.***  DEVELOP Concepts: Research information using real-world data |
| * Develops students’ explanation for the concepts they have been exploring with teacher providing supporting guidance * Students describe their observations and come up with explanations * Students listen critically to each other’s explanations * Students learn to apply and interpret evidence * Develops students’ academic vocabulary by applying scientific terms once students have figured out the lesson concepts * Teacher guides students’ reasoning, asks appropriate questions, and directs students to additional supporting resources |
| **Student Anticipated Driving Question(s):** |
|  |
| **Lesson Activities** (experiment, demonstration, video, visualization, reading, etc. coherently sequenced to help build understanding of PE): |
| (For each activity, provide details of the procedure including timing, teacher guidance, student prompts, strategies for discussions and differentiation, etc.) |
| **Formative Assessment** (activity sheet, Venn diagram, summary, exit ticket, think-pair-share, etc. to check for understanding of lesson concepts): |
|  |
| **Consensus Discussion** (claims, evidence, and reasoning on what students figured out in this lesson): |
|  |
| **New Questions and Next Steps** (student-driven questions, ideas on what to investigate in the next lesson and how to investigate it, etc.)**:** |
|  |

**AND/OR**

|  |
| --- |
| **Elaborate: *Students deepen and expand their understanding by applying their understanding in new contexts.***  APPLY Learning: Utilize information in new ways |
| * Extends students’ understanding or applies what they have learned in a new setting * Students use the information they have gained to propose solutions and extend their learning to new situations * Teacher supports students in broadening their understanding and extend ideas to other situations so they can draw broader conclusions beyond their experiment or investigation |
| **Student Anticipated Driving Question(s) Extended/Applied in a New Context:** |
|  |
| **Lesson Activities** (experiment, demonstration, video, visualization, reading, etc. coherently sequenced to help build understanding of PE): |
| (For each activity, provide details of the procedure including timing, teacher guidance, student prompts, strategies for discussions and differentiation, etc.) |
| **Formative Assessment** (activity sheet, Venn diagram, summary, exit ticket, think-pair-share, etc. to check for understanding of lesson concepts): |
|  |
| **Consensus Discussion** (claims, evidence, and reasoning on what students figured out in this lesson): |
|  |
| **New Questions and Next Steps** (student-driven questions, ideas on what to investigate in the next lesson and how to investigate it, etc.)**:** |
|  |

**AND/OR**

|  |
| --- |
| **Evaluate: *Students and teachers have opportunities to assess students’ understanding of a concept.***  DEMONSTRATE Ability: Write, illustrate, create, etc. artifact(s) that accurately describe knowledge gained |
| * Students have the opportunity to demonstrate understanding of skills and concepts, and evaluate their own progress * Teacher evaluates students’ understanding and progress, as well as their own instructional practice, and may implement alternative assessment strategies * Enables adjustment of misconceptions, reinforces students’ understanding of the PE concepts in greater depth |
| **Driving Question:** |
|  |
| **Skills Learning Performance (SEPs) Goals:** |
|  |
| **Formative Assessment** (quiz, test, report, presentation, poster, video, model, etc. to demonstrate students’ understanding about the PEs.): |
|  |
| **Content Learning Performance (DCIs, CCCs) Goals:** |
|  |
| **Summative Assessment** (quiz, test, report, presentation, poster, video, model, etc. to demonstrate students’ understanding about the PEs.) |
|  |

|  |  |
| --- | --- |
|  | **Lesson Instruction and Reflection (Part C)** |
| **Lesson Notes During Instruction** | |
| * What modifications (instruction, timing, etc.) were made or are needed for specific lessons, activities, or resources? * How effective (or ineffective) are specific lessons, activities, or resources for student learning? * Which specific lessons, activities, or resources were or need to be changed? | |
| **Review and Revise Post-Instruction** | |
| * What parts of the lesson were a success? * What were some challenges about the unit or lesson? * How could the unit or lesson be changed or improved? | |