Science Lesson Plan Template

Teacher: Steven D. Shadwick	**Subject/Grade:** 5th Grade Science	**Dates:** M 11/5/19 – M 11/12/19
Lesson "What Objects Are Part of the Solar System ?"		
Unit Unit 5: Our Solar System	**Learning Target(s)/I Can Statement(s)** • Identify the major components of the solar system • Describe the major characteristics of the planets of the solar system • Compare and contrast the inner and outer planets • Explain that stars are very large and appear small r large based on their distance from us	

Performance Objectives
(List the objectives addressed in this lesson)

Pre-Requisite / Scaffolding Skills	**Objective(s) for the Lesson**
• Mississippi College and Career Readiness Standards for Science, (2018)	• **P.5.5A.1** –Obtain and evaluate scientific information to describe basic physical properties of atoms and molecules • **P.5.5A.2** – Collect, analyze, and interpret data from measurements of the physical properties of solids, liquids, and gases (e.g., volume, shape,movement, and spacing of particles)
Essential Vocabulary • solar system • planet • comet • dwarf planet • asteroid • astronomy • star • universe • galaxy	**Materials/Resources:** • computer/iPad, projector, document camera, Google Classroom, and internet resources (Quizlet, Kahoot, EdPuzzle, USATest Prep, EADMS, Mystery Science). • *Mississippi College and Career Readiness Standards for Science (2018)* • *Houghton Mifflin Harcourt Science Fusion* and associated resources

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Lesson Process	
ENGAGE *Pique student interest and get them personally involved in the lesson, while pre-assessing prior understanding.*	Daily, TLW complete a multiple choice, standardized test question (source: USATest Prep or EADMS). TTW will ask students about their answers and rationale, then discuss the correct answer and any underlying concepts to aid understanding. • **Monday (11/5):** TLW watch the Mystery Science Lesson "What are the wandering stars?" as a class and answer comprehension questions as we progress. TLW complete "Running to Neptune" activity to demonstrate the scale of the solar system, relative distances between planets, and proximity to our closest star, the sun. https://mysteryscience.com/astronomy/mystery-6/planets-solar-system/78?r=41983154
EXPLORE *Involve students in the topic; activities providing them with a chance to build understanding.*	After the Bell Ringer, TTW open class with brief announcements and an overview of the day's agenda, objectives, and skills. • **Tuesday (11/6):** After overview of vocabulary, TLW explore the question, "How Do We Observe Objects in the Solar System?" via the Virtual Lab/Digital Lesson 2 in Science Fusion. The class will discuss findings together at the end of the investigation.
EXPLAIN *1. What information is needed for the students to gain the knowledge or skill?* *2. How will the teacher demonstrate to the students what is to be learned?*	• **Wednesday (11/7):** TLW complete Digital Lessons 1 and 3 ("What Objects are Part of the Solar System?' and "What are Stars and Galaxies?"). TLW complete related Lesson Quizzes with 70% or higher.
ELABORATE/EXTEND *Allow students to use their new knowledge and continue to explore its implications in new and unfamiliar situations, independently.*	• **Thursday-Friday (11/8 -11/9):** TLW read "How Do the Sun, Earth, and Moon Move in Space?" as a class and answer summary heading questions together. TLW create an original model of the Earth-Sun-Moon system and construct explanations via rubric.
EVALUATE *How will the teacher determine whether the students have "gotten it" before proceeding? Assess both students and teachers to determine how much learning and understanding has taken place.*	At each level of the lesson, TLW be asked independently and cooperatively to repeat, give examples, demonstrate, and answer questions at higher-order thinking levels. Special attention will be given to the "language of science" through use of pertinent vocabulary in context. TLW be encouraged to ask questions when warranted. Ultimately, instruction moves students through the lesson's 5Es of

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<table>
<tr><td></td><td>engage, explore, explain, elaborate, and evaluate; from misconceptions to mastery.

• Monday (11/12): TLW will compete as a class in Quizziz to review topics related to this week's objectives.</td></tr>
<tr><td colspan="2">Student Tasks</td></tr>
<tr><td>Small Group Instruction/Centers
For grades using small groups/centers/lab rotations.</td><td><table>
<tr><td>Center 1</td><td></td></tr>
<tr><td>Center 2</td><td></td></tr>
<tr><td>Center 3</td><td></td></tr>
<tr><td>Center 4</td><td></td></tr>
<tr><td>Center 5</td><td></td></tr>
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<tr><td>Closure
What activity will be used to summarize the major points or big ideas of the lesson? How will you check for understanding after each lesson/activity?</td><td>Daily, TLW complete a short prompt or reflection based on the day's lesson.

• Monday: Explain why the Sun is so bright.
• Tuesday: List two facts you learned from today's investigation.
• Wednesday: Explain what a galaxy is and how we view them.
• Thursday: Tell how your model can be used to explain seasonal changes.
• Friday: Name one thing that makes your model good and one thing that you could do to make your model better.</td></tr>
<tr><td>Homework
What at-home practice opportunities will you provide your students prior to demonstrating mastery?</td><td>• Thursday (11/8): Finish questions from class reading. Continue developing Earth-Sun-Moon models.</td></tr>
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Tier Students	IEP Students

Enrichment/Remediation (for advanced/struggling):

- Students with a solid understanding of topics will be given more challenging examples and problems to solve, with links to more real-world applications. They may also be asked to explain topics to other students.
- Students struggling with the topics will be separated into small groups and offered step-by-step assistance in solving problems, with frequent references to prior knowledge and understanding.
- Students may be given additional instruction and assignments.

Tier Interventions (for students with D/F averages/IEP students):

- TLW be given adapted reading guides, additional work, and individualized explanations if exhibiting difficulty understanding.
- TLW be guided through independent practice in a small group/individual setting with the assistance of the teacher during class, taking caution to reteach and reevaluate knowledge of important concepts/topics as they arise.
- TLW be provided opportunities for tutoring before or after school and allowed to retake exams on which they scored <70%.
- TLW be given opportunities to advance knowledge of concepts by completing activities that require higher-order thinking skills.
- TLW be encouraged to seek real-world applications and relevance of topics by conducting at-home research via the internet and media.