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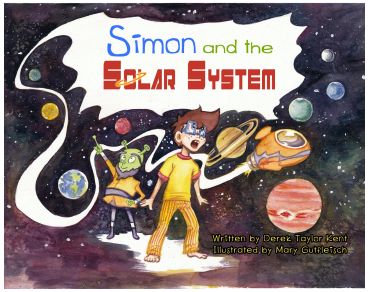
Lesson Plan for *Simon and the Solar System* Book



ELD Level: EADV **Book Title:** Simon and the Solar System **Author:** Derek Taylor Kent

Objective: Learn STEM concepts. Students will participate in an interactive read aloud, answer questions, learn advanced scientific concepts, and then recount what they have learned about the planets.

Problem Statement: This story is about a boy who is afraid to take an astronomy test because he is having trouble understanding the science, but then a friendly alien takes him on a tour of the solar system and he is able to understand the concepts through experience.

VOCABULARY (Wide Exposure)

Word	**Friendly Definition/Explanation**
Astronomy	The study of the outer space, including the planets, stars and moons
Flume	A deep narrow channel or ravine with a stream of water running through it
Clamor	Loud noise
Grandeur	Splendor or impressiveness, especially in one's personal style
Zest	To have joy or enthusiasm
Hemisphere	The top and bottom halves of Earth or any planet
Eon	A very long period of time. Can be thousands or millions of years.
Navigation	Guiding someone from one place to another

Teleportation	Starting in one place and appearing in another without traveling there
Hazardous	Dangerous
Girth	The measurement of something around its middle
Satellite	A small object that orbits a larger object
Forlorn	Very sad or distressed
Pharoah	The all-powerful kings of ancient Egypt
Postpone	To delay or put off something

FIRST READ: **Inferences/Modeled Reading Behaviors (second read students make the inferences)**

Note: Continue to do what good readers do (make predictions, model asking yourself questions, re-read, summarize, making connections).

- I'm thinking that Simon can't fall asleep because he's afraid of not doing well on his test
- I'm thinking that Simon needs to find a way to learn everything so he'll do well on the test
- Should Simon go with the alien in his spaceship? In real life we would never go anywhere with a stranger no matter how friendly they seem, but since this is just make believe, it's okay.

"Why" Question to Conclude: Why does Simon feel more confident about taking the test than at the beginning?

STEM Concepts Focus

Q: What was Simon's reaction to seeing Earth from space for the first time. Why did he feel that way?

SF with language focus: Simon felt_____ because _____

Q: Why might the tilt of the Earth and the angle of sunlight create the seasons? (when an area gets less direct sunlight, it doesn't get the sun's hot energy and becomes colder)

Q: What is the biggest planet in the solar system? (Jupiter) How much bigger than Earth is it? (300 times bigger)

Q: What does 300 times bigger mean? It would take 300 Earths to match the size of Jupiter.

Q: What planet is known for its rings? (Saturn) What are the rings actually made of? (ice)

Q: Why do Simon and Neil need to wear helmets when walking on Mars? (Earth as an atmosphere of air we have adapted to breathing and Mars does not)

Q: What is the smallest planet? (trick question- it's Mercury because Pluto is no longer a planet!)

Q: What type of planet is Pluto called now? (a dwarf planet)

Q: Where did the name Neil Newton come from? (Neil Armstrong the first man to walk on the moon and Isaac Newton, who discovered gravity)

CREATIVE ACTIVTY:

Let's create our own solar system! As a group class activity or individually, take out a large sheet of poster-sized paper. Create a new solar system by answering the following questions and drawing on paper.

- How many Suns are there? What size is the sun in this system? It could be a dual star system with two suns!
- How many planets are in the system? How many rocky planets and how many gas planets?
- What color/s is each planet?
- What are the names of each planet? Do they have moons? If so how many?
- How hot or how cold is each planet?
- Do any of the planets have rings?
- Do any of the planets support life? If so, what kind of life is it? Water life? Planet life? Intelligent life?
- Try to estimate how long it might take each planet in your system to revolve around the sun/s.

At the end, individually or as a class, present your solar system to the other and talk about the planets and the life that inhabits it!