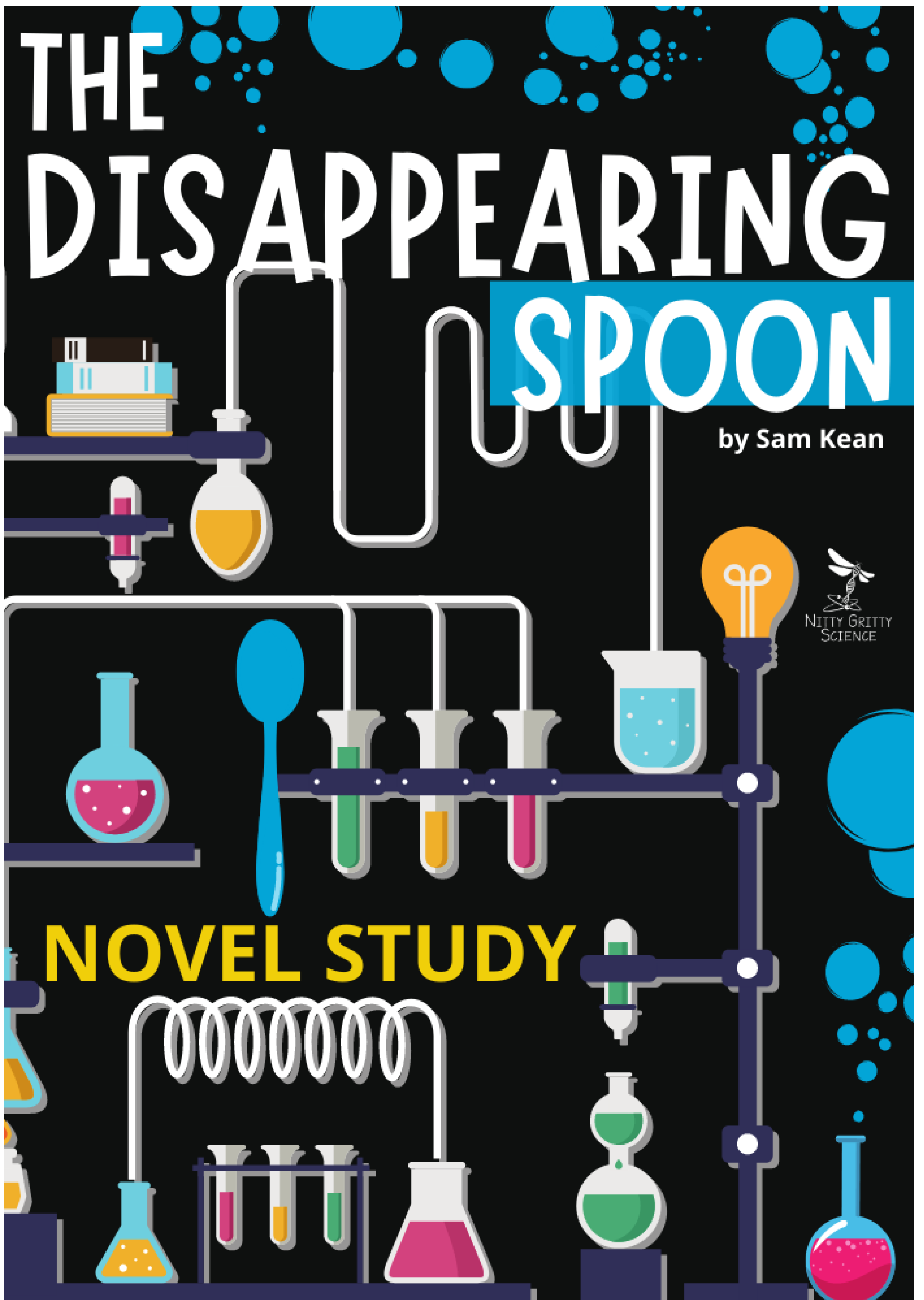


THE DISAPPEARING SPOON

by Sam Kean



NOVEL STUDY



Why Novel Studies in the Science Classroom?

Here at Nitty Gritty Science we want to foster the love of reading and improve science literacy. We believe that using novel studies in the science classroom will not only give students exposure to different perspectives but will also help them develop an understanding of how science vocabulary applies to so many events in their lives.

Research also shares benefits of using novel studies in the science classroom such as:

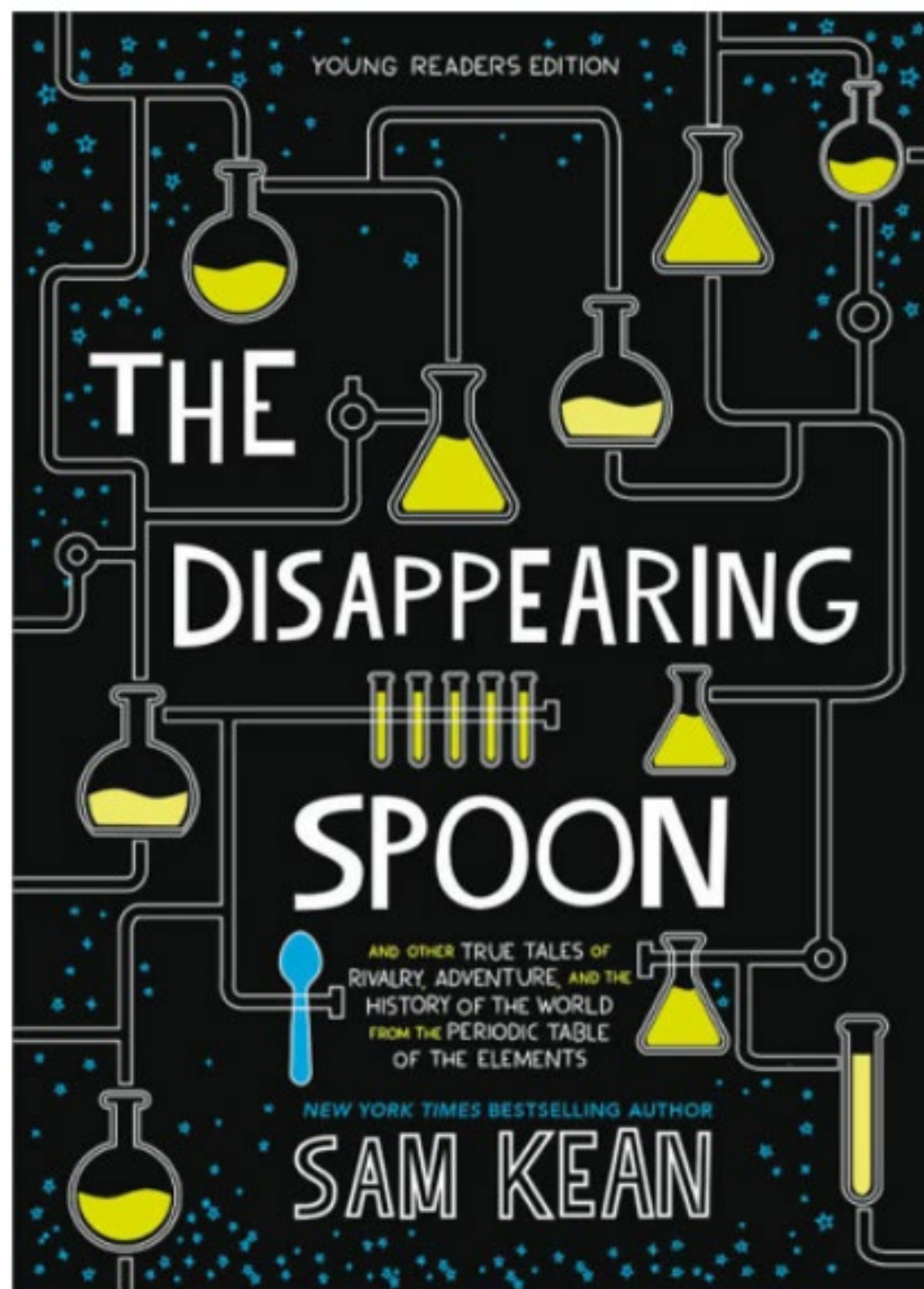
The literacy from reading can easily come from non-fiction and fiction novels that surround a science-related topic and are far more of a high-interest read for the majority of students than reading a textbook (Anderson & Hite, 2010; Batchelor, 2017; Coiro, 2012; Freudenrich, 2000).

Science fiction novels are an excellent way to engage students in science ideas while also helping students improve their literacy skills. (Creech and Hale, 2006)

Teachers can add in other readings from the internet and news articles which brings the reading level down to a more manageable level, however students are more willing to learn and spend the time to learn new vocabulary when highly engaged in what they are reading (Weinbugh et al., 2014).

There is very little research out there about the usefulness of using novels in classrooms other than ELA. Others have used novels and other types of formats to get students excited about science and science concepts (Batchelor, 2017; Coiro, 2012; Freudenrich, 2000; Ivey & Fisher, 2005; Jarman & McClune, 2001), but very few have used novels to teach science concepts and also try to increase literacy skills among students in the secondary classroom, so Nitty Gritty Science is here to help with that!

Happy reading,
Erica



The Disappearing Spoon, chronicling the extraordinary stories behind one of the greatest scientific tools in existence: the periodic table.

Why did Gandhi hate iodine (I, 53)? How did radium (Ra, 88) nearly ruin Marie Curie's reputation? And why did tellurium (Te, 52) lead to the most bizarre gold rush in history?

The periodic table is a crowning scientific achievement, but it's also a treasure trove of adventure, greed, betrayal, and obsession. The fascinating tales in *The Disappearing Spoon* follow elements on the table as they play out their parts in human history, finance, mythology, conflict, the arts, medicine, and the lives of the (frequently) mad scientists who discovered them.

Adapted for a middle grade audience, the young readers edition of *The Disappearing Spoon* offers the material in a simple, easy-to-follow format, with approximately 20 line drawings and sidebars throughout. Students will love learning about the history behind the chemistry.

Hyperlinked Table of Contents

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Check out the following sample pages focusing on science vocabulary, reading comprehension, and literacy-based projects!

Teacher Guide included!

WORD STUDY: Part 1

20. What's the difference between an experiment?

Blank lines for writing the answer to question 20.

21. Geological Definition:

Blank lines for writing the definition for question 21.

WORD STUDY: Part 1

24. Dioxide

A dioxide contains _____ oxygen atoms in its molecule.

26. List three uses of silicon.

1.

25. On page 38, write one of the longest

WORD STUDY: Part 2

1. Explain the Big Bang Theory.

Blank lines for writing the answer to question 1.

2. Supernova

A supernova is a stellar explosion.

TRUE

FALSE

WORD STUDY: Part 4

1. Marie Curie

Marie Curie

2. Refugee Science

Give two examples of refugee science.

Blank boxes for writing examples of refugee science.

4. Counterfeit

Identify two signs for counterfeit.

Blank boxes for writing signs for counterfeit.

Periodic Table Element Project

Directions: Choose one element from the periodic table and fill in each section below. Then, using the next page, fill in each side of the cube you've gathered.

My element is _____
My element's abbreviation is _____
My element's atomic number is _____
My element's atomic mass is _____

Three ways my element is used:

- 1. _____
2. _____
3. _____

My element is a _____ at _____ room temperature. My element has _____ electrons in its outer shell.

Physical

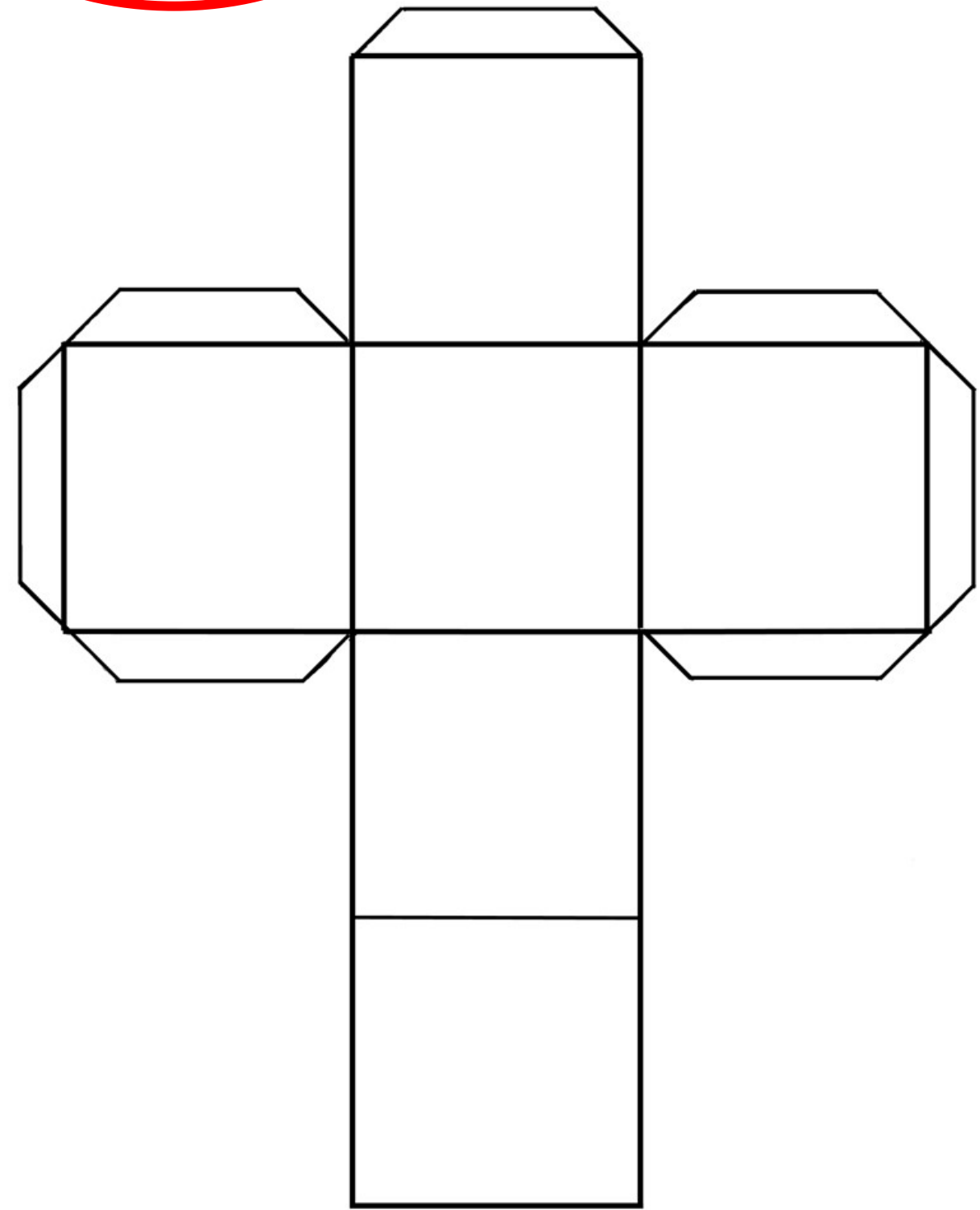
Interesting Facts:

Blank space for writing interesting facts.

S
s Planets

Rocky Planets

- 1. _____
2. _____
3. _____
4. _____



Novel Project option

