



Lesson Planning: **Application**

Subject:

Grade Range:

Curriculum Area:

Research Writing: Elemental Journal

5th – 8th

Application

Welcome to Blackbird & Company’s English Language Arts program!

Research Writing: Elemental Journal is one of the Application elements of our ELA program.

As your students work through this Science Discovery Guide, they will experience an interesting and broad introduction into the fascinating realm of chemistry. Over the course of 40 weeks, students will be guided on a wonderful voyage through the mysteries of the periodic table. The purpose of this guide is twofold, first, to act as a guide for research and discovery of how the periodic table is organized, and second, to provide a structure for exploration into the unique personality and purpose of a selection of elements. At the conclusion of the year, students will have researched and cataloged their findings on 42 of the 144 known elements.

This Mapping Guide is provided to help YOU plan and prepare to mentor your students as they engage in the ongoing work of decoding the periodic table, marveling at the diversity of these building blocks of the universe.

Are you ready? Let’s go!

The following guidelines assume you are planning for the start of a typical school year beginning the last week of August and ending the first week of June. This equals about 40 calendar weeks, and allows for 175–180 days of instruction when accounting for breaks and holidays. If you are starting mid-year, or are following a different schedule, simply adjust the dates as needed.

Elemental Journal: Planning

June – August (Overall subject preparation)

- ➔ Familiarize yourself with the materials and read ALL introductory pages in the student workbook.

Elemental Journal Mapping

July – August (Scheduling for the school year)

Things to consider as you map:

- ➔ Read closely the “Table of Contents” and the Introduction in the student guide. Spend some time looking through student pages 1-59 to familiarize yourself with the process and nature of the lessons, stopping to look at the What You Will Need section on page viii and the companion books that are utilized and referred to throughout the guide work.
- ➔ This Science Discovery Guide is divided into 15 sections. Your students will need approximately 1 hour per week, depending on the developmental stage of your budding research scientists. This unit requires 40 weeks to complete.
- ➔ Guide corrections need to be done weekly to insure that your students receive all input, corrections, and encouragement needed to be successful.
- ➔ After the Preliminary Research is completed, pages 1-5, your student will begin the journey through the Periodic Table. Students will spend 3 weeks exploring each of the Periodic Groups, with the exception of Hydrogen which lands in a category of its own, and the Transition Elements which will each take 5 weeks of research.



SAMPLE MAPPING GUIDE

Now you have decisions to make about holidays, activities, and interruptions in scheduling.

Your student should easily complete this unit by the end of April,
even if you take time off for fun projects around the holidays.

This sample schedule assumes the following breaks: 1 week in November for Fall Break,
3 weeks in December/January for Winter Break, 1 week in April for Spring Break.

Duration: 40 weeks

Week 1 - Preliminary Research

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

DAY	ASSIGNMENT	NOTES/ MARK COMPLETE
Week 1	• Preliminary Research, workbook pages 1-3	

Week 2 - Hydrogen

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

DAY	ASSIGNMENT	NOTES/ MARK COMPLETE
Week 2	• The Elements! Hydrogen, workbook pages 7-9	

Weeks 3-5 - Group 1: Alkali Metals

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

DAY	ASSIGNMENT	NOTES/ MARK COMPLETE
Week 3	• Group 1: Alkali Metals, workbook pages 10-11	
Week 4	• Group 1: Alkali Metals, workbook pages 12	
Week 5	• Group 1: Alkali Metals, workbook pages 13	

Weeks 6-8 - Group 2: Alkaline Earth Metals

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

DAY	ASSIGNMENT	NOTES/ MARK COMPLETE
Week 6	• Group 2: Alkaline Earth Metals, workbook pages 14-15	
Week 7	• Group 2: Alkaline Earth Metals, workbook page 16	
Week 8	• Group 2: Alkaline Earth Metals, workbook page 17	

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Weeks 9-13 - Groups 3-12: Transition Elements

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

DAY	ASSIGNMENT	NOTES/ MARK COMPLETE
Week 9	• Groups 3-12: Transition Elements, workbook pages 18-19	
Week 10	• Groups 3-12: Transition Elements, workbook page 20	
Week 11	• Groups 3-12: Transition Elements, workbook page 21	
Week 12	• Groups 3-12: Transition Elements, workbook page 22	
Week 13	• Groups 3-12: Transition Elements, workbook page 23	

Weeks 14-16 - Group 13: Boron Elements

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
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DAY	ASSIGNMENT	NOTES/ MARK COMPLETE
Week 14	• Group 13: Boron Elements, workbook pages 24-25	
Week 15	• Group 13: Boron Elements, workbook page 26	
Week 16	• Group 13: Boron Elements, workbook pages 27	

Weeks 17-19 - Group 14: Carbon Elements

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
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DAY	ASSIGNMENT	NOTES/ MARK COMPLETE
Week 17	• Group 14: Carbon Elements, workbook pages 28-29	
Week 18	• Group 14: Carbon Elements, workbook page 30	
Week 19	• Group 14: Carbon Elements, workbook pages 31	

Weeks 20-22 - Group 15: Nitrogen Elements (pnictogen)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
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DAY	ASSIGNMENT	NOTES/ MARK COMPLETE
Week 20	• Group 15: Nitrogen Elements, workbook pages 32-33	
Week 21	• Group 15: Nitrogen Elements, workbook page 34	
Week 22	• Group 15: Nitrogen Elements, workbook pages 35	

Weeks 23-25 - Group 16: Oxygen Elements (chalcogen)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
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DAY	ASSIGNMENT	NOTES/ MARK COMPLETE
Week 23	• Group 16: Oxygen Elements, workbook pages 36-37	
Week 24	• Group 16: Oxygen Elements, workbook page 38	
Week 25	• Group 16: Oxygen Elements, workbook pages 39	

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Weeks 26-28 - Group 17: Halogen Elements

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

DAY	ASSIGNMENT	NOTES/ MARK COMPLETE
Week 26	• Group 17: Halogen Elements, workbook pages 40-41	
Week 27	• Group 17: Halogen Elements, workbook page 42	
Week 28	• Group 17: Halogen Elements, workbook pages 43	

Weeks 29-31 - Group 18: Noble Gases

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

DAY	ASSIGNMENT	NOTES/ MARK COMPLETE
Week 29	• Group 18: Noble Gases, workbook pages 44-45	
Week 30	• Group 18: Noble Gases, workbook page 46	
Week 31	• Group 18: Noble Gases, workbook pages 47	

Weeks 32-34 - F Block: Lanthanoid Elements

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
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DAY	ASSIGNMENT	NOTES/ MARK COMPLETE
Week 32	• F Block: Lanthanoid Elements, workbook pages 48-49	
Week 33	• F Block: Lanthanoid Elements, workbook page 50	
Week 34	• F Block: Lanthanoid Elements, workbook pages 51	

Weeks 35-37 - F Block: Actinoid Elements

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
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DAY	ASSIGNMENT	NOTES/ MARK COMPLETE
Week 35	• F Block: Actinoid Elements, workbook pages 52-53	
Week 36	• F Block: Actinoid Elements Elements, workbook page 54	
Week 37	• F Block: Actinoid Elements Elements, workbook pages 55	

Weeks 38-40 - Elements 104-112: Superheavies

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
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DAY	ASSIGNMENT	NOTES/ MARK COMPLETE
Week 38	• Elements 104-112: Superheavies, workbook pages 56-57	
Week 39	• Elements 104-112: Superheavies, workbook page 58	
Week 40	• Elements 104-112: Superheavies, workbook pages 59	

Complete!