

Real Science-4-Kids

Lesson Plan Pre-Level I



Chemistry



Biology



Physics

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1 Overview

Teaching Real Science-4-Kids is as easy as 1-2-3.

1. **introduce content.**
2. **perform an experiment.**
3. **make connections.**

RS4K comes in easy-to-use subject modules. There are currently three modules in the Pre-Level I bundle; **chemistry**, **physics**, and **biology**. (Geology/Astronomy is in production). Each of these modules is designed to introduce your child to the foundational building blocks of science. Once your child has been introduced to these foundational subjects, he or she can build their science education *from the ground up*, understanding, mastering, and quickly learning new science information.

Chemistry first!

This series can be taught in any order, but it is recommended that you start your child with **chemistry**. Chemistry and physics are the two most important subjects for mastering any science. All of science is built around these two core subjects.

I recommend chemistry first because it is both foundational and easier than physics to grasp conceptually.

Once you have completed the full chemistry text with experiments, you can move to either physics or biology. Once all three subjects have been taught, your child will have a solid foundation for learning advanced science.

The lesson plan

This is a weekly lesson plan that will walk you through the Pre-Level I curriculum. It is divided into three subject modules; chemistry, physics, and biology. There are 20 weeks of instruction for each subject module. You can teach the 20 weeks in **one semester** or **one year** depending on the age of your child. You can decide how fast or slow to go with your child. You don't want to go too fast for younger students. It is better that they learn fewer "facts" with more understanding, so don't overwhelm them. You also don't want to go too slow for an older child. Here is a recommended guideline.

- ◆ Age 5-6 : a subject module (20 weeks) in **one year**.
- ◆ Age 7-8 : a subject module (20 weeks) in **one semester**

Each week is divided into three sections; **content**, **experiment**, and **connections**.

1. The content directs your child to learn the scientific "facts" in each subject.
2. The experiment allows your child to learn the first step of the scientific method.
3. Connections between science and language, history, and art are explored.

You can modify the lesson plan as desired and remember there is no “wrong” way to teach science if you let your child **explore, investigate, ask questions, examine, and observe** everything they find interesting. The Pre-Level age group is about learning life through play and learning science through play is our approach.

Throughout this Lesson Plan there are many suggestions for further study. These suggestions are meant to get you and your child exploring science. If it says “this is open inquiry” don’t worry about “right” answers. These are suggestions for exploration and exploration is the first step in learning.

Before you begin

- ◆ Open the teacher’s manuals for the three subject modules; chemistry, physics, and biology.
- ◆ Look at the materials list for each subject module.
- ◆ Using a large container or bin, collect the non-perishable items from the lists. Organize the items in your container. This will help you be prepared for the experiments for each subject module.
- ◆ Look through the lesson plan. The lesson plan is easy-to-use and should help you organize your child’s study.

Need Help?

We are here to help you!

We have several support options available.

If you like online communities, we have a **Yahoo group** that discusses experiments, ideas, and even provides contacts for resale of RS4K curriculum.

<http://groups.yahoo.com/group/RealScience4Kids/>

There is also a **free online tutorial** that is in development but soon to be finished for all subject modules.

<http://www.ikogs.com/>

RS4K has a **Facebook Fanpage** where you can meet other RS4K users and ask questions directly to Dr. Keller.

<http://www.facebook.com/rebecca.w.keller>

You can **call our office** and talk to our friendly staff. Many of them have used RS4K and are willing to help you with any questions you might have.

office: 505-266-2761

toll free: 1-800-266-2761

Pre-Level I Chemistry



Week 1

Chapter 1. ATOMS



CONTENT

DAY 1

Read Chapter 1 Sections 1.1-1.5 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 1: What is it made of? Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 5 and discuss the word "atom." Ask your child where we get words and what they think the word atom means.

Take a break.

DAY 4



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about atoms, or what things are made of. Read the Summary at the end of the chapter.

NOTES

Week 2

Chapter 1. ATOMS



CONTENT

DAY 1

Pick one section of Chapter 1 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 1. Repeat the experiment with items your child chooses. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about their own history. When were they born? Where were they born? What time were they born? This is “history.” Tell them that the discovery of atoms have a “history” too.

DAY 4

Have your student draw an atom and a molecule. What do they think a large molecule might look like built of atoms?



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 1.

NOTES

Week 3

Chapter 2. MOLECULES



CONTENT

DAY 1

Read Chapter 2 Sections 2.1-2.4 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 2: Follow the rules! Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Look at page 11 and discuss the word "sodium." Ask your child where we get words and what they think the word sodium means. [This is open inquiry; use this opportunity to explore]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about molecules, or how atoms form molecules. Read the Summary at the end of the chapter.

NOTES

Week 4

Chapter 2. MOLECULES



CONTENT

DAY 1

Pick one section of Chapter 2 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 2. Repeat the experiment with items your child chooses. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about a relative's history (parent, sibling). When were they born? Where were they born? How easy is it to understand someone else's history? [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your student draw a molecule. Have them draw what they think a toy car might look like built of molecules.



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 2.

NOTES

Week 5

Chapter 3. MOLECULES MEET



CONTENT

DAY 1

Read Chapter 3 Sections 3.1-3.8 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 3: What will happen? Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 18 and discuss the word "water." Ask your child where they think the word water comes from. [You can look up the word water in a dictionary or on the internet.]

Take a break.

DAY 4



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how molecules react with atoms and other molecules. Read the Summary at the end of the chapter.

NOTES

Week 6

Chapter 3. MOLECULES MEET



CONTENT

DAY 1

Pick one section of Chapter 3 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 3. Repeat the experiment with items your child chooses. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about the history of chemical reactions. Where did we find out about how molecules meet other molecules? (answer - by doing experiments). [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw a chemical reaction. Have them draw what they think happens with molecules in a gas tank.



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 3.

NOTES

Week 7

Chapter 4. ACIDS AND BASES



CONTENT

DAY 1

Read Chapter 4 Sections 4.1-4.5 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 4: Sour or not sour? Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 28 and discuss the word "acid." Ask your child where they think the word "acid" comes from. [You can look up the word "acid" in a dictionary or on the internet.]

Take a break.

DAY 4



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about acids and bases. Read the Summary at the end of the chapter.

NOTES

Week 8

Chapter 4. ACIDS AND BASES



CONTENT

DAY 1

Pick one section of Chapter 4 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 4. Repeat the experiment with items your child chooses. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about the history of acids. Where did we find out about how acids? (answer - by doing experiments). [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw what happens in a soda can. (Lots of molecules reacting with each other)



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 4.

NOTES

Week 9

Chapter 5. ACIDS AND BASES REACT



CONTENT

DAY 1

Read Chapter 5 Sections 5.1-5.5 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 5: Pink and green together. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 35 and discuss the word "base." Ask your child where they think the word "base" comes from. [You can look up the word "base" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week **10**Chapter **5. ACIDS AND BASES REACT****CONTENT****DAY 1**

Pick one section of Chapter 5 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.

**EXPERIMENT****DAY 2**

Discuss the results from Experiment 5. Repeat the experiment with items your child chooses. This is open inquiry and will help your child explore observations.

**CONNECTIONS****DAY 3**

Ask your child about the history of bases. Where did we find out about how bases? (answer - by doing experiments). [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw what they happens in their stomach when they have a stomach ache.

**REVIEW****DAY 5**

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 5.

NOTES

Week 11

Chapter 6. MIXTURES



CONTENT

DAY 1

Read Chapter 6 Sections 6.1-6.6 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 6: Make it mix! Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 44 and discuss the word "mixture." Ask your child where they think the word "mixture" comes from. [You can look up the word "mixture" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week 12

Chapter 6. ACIDS AND BASES REACT



CONTENT

DAY 1

Pick one section of Chapter 6 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 6. Repeat the experiment with items your child chooses. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about the history of mixtures. Where did we find out about how mixtures behave? (answer - by doing experiments). [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw what happens with the molecules when water mixes with oil.



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 6.

NOTES

Week 13

Chapter 7. UN-MIXING



CONTENT

DAY 1

Read Chapter 7 Sections 7.1-7.6 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 7: Make it un-mix! Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 54 and discuss the word "evaporation." Ask your child where they think the word "evaporation" comes from. [You can look up the word "evaporation" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week **14**Chapter **7. UN-MIXING****CONTENT****DAY 1**

Pick one section of Chapter 7 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.

**EXPERIMENT****DAY 2**

Discuss the results from Experiment 7. Repeat the experiment with items your child chooses. This is open inquiry and will help your child explore observations.

**CONNECTIONS****DAY 3**

Ask your child about the history of evaporation. Where did we find out about how evaporation works? (answer - by doing experiments). [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw what happens with the molecules when water mixes with oil.

**REVIEW****DAY 5**

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 7.

NOTES

Week 15

Chapter 8. FOOD AND TASTE



CONTENT

DAY 1

Read Chapter 8 Sections 8.1-8.4 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 8: Salty or Sweet? Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 54 and discuss the word "carbohydrate." Ask your child where they think the word "carbohydrate" comes from. [You can look up the word "carbohydrate" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week 16

Chapter 8. FOOD AND TASTE



CONTENT

DAY 1

Pick one section of Chapter 8 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 8. Repeat the experiment with items your child chooses. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about the history of carbohydrates. Where did we find out about carbohydrates? (answer - by doing experiments). [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw what carbohydrate molecules look like in bread.



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 8.

NOTES

Week 17

Chapter 9. MOLECULAR CHAINS



CONTENT

DAY 1

Read Chapter 9 Sections 9.1-9.4 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 9: Making Goo. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 68 and discuss the word "polymer." Ask your child where they think the word "polymer" comes from. [You can look up the word "polymer" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week **18**Chapter **9. MOLECULAR CHAINS****CONTENT****DAY 1**

Pick one section of Chapter 9 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.

**EXPERIMENT****DAY 2**

Discuss the results from Experiment 9. Repeat the experiment with items your child chooses. This is open inquiry and will help your child explore observations.

**CONNECTIONS****DAY 3**

Ask your child about the history of polymers. Where did we find out about polymers? (answer - by doing experiments). [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw what carbohydrate molecules look like in bread.

**REVIEW****DAY 5**

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 9.

NOTES

Week **19**Chapter **10. MOLECULES IN YOUR BODY****CONTENT****DAY 1**

Read Chapter 10 Sections 10.1-9=10.4 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.

**EXPERIMENT****DAY 2**

Perform Experiment 10: Make it rise. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.

**CONNECTIONS****DAY 3**

Open the text book to page 75 and discuss the word "protein." Ask your child where they think the word "protein" comes from. [You can look up the word "protein" in a dictionary or on the internet.]

DAY 4

Take a break.

**REVIEW****DAY 5**

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week **20**Chapter **10. MOLECULES IN YOUR BODY****CONTENT****DAY 1**

Pick one section of Chapter 10 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.

**EXPERIMENT****DAY 2**

Discuss the results from Experiment 10. Repeat the experiment with items your child chooses. This is open inquiry and will help your child explore observations.

**CONNECTIONS****DAY 3**

Ask your child about the history of proteins. Where did we find out about proteins? (answer - by doing experiments). [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw what protein molecule might look like in their body.

**REVIEW****DAY 5**

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 10.

NOTES

Pre-Level I Biology



Week 1

Chapter 1. LIFE



CONTENT

DAY 1

Read Chapter 1 Sections 1.1-1.6 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 1: Where does it go? Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 7 and discuss the word "kingdom." Ask your child where we get words and what they think the word "kingdom" means.

Take a break.

DAY 4



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about atoms, or what things are made of. Read the Summary at the end of the chapter.

NOTES

Week **2**Chapter **1. LIFE****CONTENT****DAY 1**

Pick one section of Chapter 1 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.

**EXPERIMENT****DAY 2**

Discuss the results from Experiment 1. Repeat the experiment with items your child chooses. This is open inquiry and will help your child explore observations.

**CONNECTIONS****DAY 3**

Ask your child they might sort the events in their life. What comes first? Second? Third? This is "history." Tell them that sorting biological life has a "history" too.

DAY 4

Have your student draw their favorite living creature. How would they classify this creature?

**REVIEW****DAY 5**

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 1.

NOTES

Week 3

Chapter 2. CELLS: A TINY CITY



CONTENT

DAY 1

Read Chapter 2 Sections 2.1-2.5 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 2: What do you need? Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Look at page 20 and discuss the word "nucleus." Ask your child where we get words and what they think the word "nucleus" means. [This is open inquiry; use this opportunity to explore]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about molecules, or how atoms form molecules. Read the Summary at the end of the chapter.

NOTES

Week 4

Chapter 2. CELLS: A TINY CITY



CONTENT

DAY 1

Pick one section of Chapter 2 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 2. Repeat the experiment if necessary. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about the history of a cell. How did we discover cells? When do they think this happened? Has our understanding of cells changed? [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your student draw a cell. Have them draw what they think a cell might look like in their body.



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 2.

NOTES

Week 5

Chapter 3. FOOD FOR PLANTS



CONTENT

DAY 1

Read Chapter 3 Sections 3.1-3.6 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 3: Who needs light? Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 25 and discuss the word "chloroplast." Ask your child where they think the word "chloroplast" comes from. [You can look up the word "chloroplast" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how molecules react with atoms and other molecules. Read the Summary at the end of the chapter.

NOTES

Week 6

Chapter 3. FOOD FOR PLANTS



CONTENT

DAY 1

Pick one section of Chapter 3 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 3. Repeat the experiment if necessary. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about how we know that plants make food from the sun. Where did we find out about how plants make food? [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw a chloroplast catching sunlight.



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 3.

NOTES

Week 7

Chapter 4. PLANT PARTS



CONTENT

DAY 1

Read Chapter 4 Sections 4.1-4.5 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 4: Thirsty flowers. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 36 and discuss the word "plankton." Ask your child where they think the word "plankton" comes from [You can look up the word "plankton" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about acids and bases. Read the Summary at the end of the chapter.

NOTES

Week 8

Chapter 4. PLANT PARTS



CONTENT

DAY 1

Pick one section of Chapter 4 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 4. Repeat the experiment if necessary. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about how we found out about the parts of a plant? (answer - by doing experiments and making observations). [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw the parts of a plant.



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 4.

NOTES

Week 9

Chapter 5. GROWING A PLANT



CONTENT

DAY 1

Read Chapter 5 Sections 5.1-5.5 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 5: Growing seeds. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 40 and discuss the word "seedling." Ask your child where they think the word "seedling" comes from. [You can look up the word "seedling" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week **10**Chapter **5. GROWING A PLANT****CONTENT****DAY 1**

Pick one section of Chapter 5 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.

**EXPERIMENT****DAY 2**

Discuss the results from Experiment 5. If the seedlings are still growing make observations and record the results. This is open inquiry and will help your child explore observations.

**CONNECTIONS****DAY 3**

Ask your child about the discovery of plant growth. Did we always know about the life cycle of plants? [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw the life cycle of a flowering plant.

**REVIEW****DAY 5**

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 5.

NOTES

Week 11

Chapter 6. PROTOZOA



CONTENT

DAY 1

Read Chapter 6 Sections 6.1-6.4 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 6: Little creatures move. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 47 and discuss the word "protozoa." Ask your child where they think the word "protozoa" comes from. [You can look up the word "protozoa" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week 12

Chapter 6. PROTOZOA



CONTENT

DAY 1

Pick one section of Chapter 6 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 6. Repeat the experiment if necessary. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about how we know protozoa exist. Who discovered them? How long ago do they think protozoa were discovered? [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw a protozoa.



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 6.

NOTES

Week 13

Chapter 7. PROTOZOA EAT



CONTENT

DAY 1

Read Chapter 7 Sections 7.1-7.5 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 7: Little creatures eat. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 57 and discuss the word "amoeba." Ask your child where they think the word "amoeba" comes from. [You can look up the word "amoeba" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week **14**Chapter **7. PROTOZOA EAT****CONTENT****DAY 1**

Pick one section of Chapter 7 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.

**EXPERIMENT****DAY 2**

Discuss the results from Experiment 7. Repeat the experiment if necessary. This is open inquiry and will help your child explore observations.

**CONNECTIONS****DAY 3**

Ask your child about how we know what protozoa eat. When did we find out about what protozoa eat? . [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw a protozoa eating food.

**REVIEW****DAY 5**

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 7.

NOTES

Week 15

Chapter 8. FOOD AND TASTE



CONTENT

DAY 1

Read Chapter 8 Sections 8.1-8.6 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 8: Butterflies flutterby. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 67 and discuss the word "chrysalis." Ask your child where they think the word "chrysalis" comes from. [You can look up the word "chrysalis" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week 16

Chapter 8. FOOD AND TASTE



CONTENT

DAY 1

Pick one section of Chapter 8 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 8. Repeat the experiment if necessary. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about the history of butterflies. How did we find out about how butterflies develop? (answer - by doing experiments). [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw their favorite butterfly.



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 8.

NOTES

Week 17

Chapter 9. FROGS



CONTENT

DAY 1

Read Chapter 9 Sections 9.1-9.6 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 9: Tadpoles to frogs. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 72 and discuss the word "amphibian." Ask your child where they think the word "amphibian" comes from. [You can look up the word "amphibian" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week 18

Chapter 9. FROGS



CONTENT

DAY 1

Pick one section of Chapter 9 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 9. Repeat the experiment with items your child chooses. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about the history of frogs. Where did we find out about frogs? (answer - by doing experiments). [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw a frog.



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 9.

NOTES

Week 19

Chapter 10. OUR BALANCED EARTH



CONTENT

DAY 1

Read Chapter 10 Sections 10.1-9=10.4 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 10: Creatures in balance. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 82 and discuss the word "cycle." Ask your child where they think the word "cycle" comes from. [You can look up the word "cycle" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week 20

Chapter 10. MOLECULES IN YOUR BODY



CONTENT

DAY 1

Pick one section of Chapter 10 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 10. Repeat the experiment if necessary. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about the history of cycles on Earth. Where did we find out about the water cycle, life cycle, or food cycle? (answer - by doing experiments). [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw the food cycle of a rabbit.



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 10.

NOTES

Pre-Level I Physics



Week 1

Chapter 1. WHAT IS PHYSICS?



CONTENT

DAY 1

Read Chapter 1 Sections 1.1-1.5 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 1: Falling objects. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 5 and discuss the word "observation." Ask your child where we get words and what they think the word "observation" means.

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about atoms, or what things are made of. Read the Summary at the end of the chapter.

NOTES

Week **2**Chapter **1. WHAT IS PHYSICS?****CONTENT****DAY 1**

Pick one section of Chapter 1 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.

**EXPERIMENT****DAY 2**

Discuss the results from Experiment 1. Repeat the experiment if necessary. This is open inquiry and will help your child explore observations.

**CONNECTIONS****DAY 3**

Ask your child about the history of physics. When did the science we call “physics” start? [This is an open inquiry exercise. Use this time to explore.]

DAY 4

Have your student draw “gravity.” What does “gravity” look like? [This is an open inquiry exercise. Use this time to explore.]

**REVIEW****DAY 5**

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 1.

NOTES

Week 3

Chapter 2. PUSH AND PULL



CONTENT

DAY 1

Read Chapter 2 Sections 2.1-2.5 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 2: Get to work. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Look at page 9 and discuss the word "energy." Ask your child where we get words and what they think the word "energy" means. [This is open inquiry; use this opportunity to explore]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about molecules, or how atoms form molecules. Read the Summary at the end of the chapter.

NOTES

Week 4

Chapter 2. PUSH AND PULL



CONTENT

DAY 1

Pick one section of Chapter 2 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 2. Repeat the experiment if necessary. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about how we discovered force, energy, and work. Did we discover these concepts before we discovered math? [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your student draw “force.” What do they think “force” looks like? [This is open inquiry; use this opportunity to explore.]



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 2.

NOTES

Week 5

Chapter 3. KINDS OF ENERGY



CONTENT

DAY 1

Read Chapter 3 Sections 3.1-3.5 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 3: Moving energy in a toy car. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 20 and discuss the word "kinetic." Ask your child where they think the word "kinetic" comes from. [You can look up the word "kinetic" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how molecules react with atoms and other molecules. Read the Summary at the end of the chapter.

NOTES

Week 6

Chapter 3. KINDS OF ENERGY



CONTENT

DAY 1

Pick one section of Chapter 3 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 3. Repeat the experiment if necessary. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about how we know about “stored energy.” Who do they think discovered “stored energy?” [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw “stored energy.”



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 3.

NOTES

Week 7

Chapter 4. WHEN THINGS MOVE



CONTENT

DAY 1

Read Chapter 4 Sections 4.1-4.5 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 4: Rolling marbles. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 24 and discuss the word "inertia." Ask your child where they think the word "inertia" comes from. [You can look up the word "inertia" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about acids and bases. Read the Summary at the end of the chapter.

NOTES

Week 8

Chapter 4. WHEN THINGS MOVE



CONTENT

DAY 1

Pick one section of Chapter 4 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 4. Repeat the experiment if necessary. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about how we found out about inertia. Who discovered inertia? How do we know inertia exists? [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw "inertia." [This is open inquiry; use this opportunity to explore.]



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 4.

NOTES

Week 9

Chapter 5. CHEMICAL ENERGY



CONTENT

DAY 1

Read Chapter 5 Sections 5.1-5.5 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 5: Lemon energy. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 40 and discuss the word "battery." Ask your child where they think the word "battery" comes from. [You can look up the word "battery" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week 10

Chapter 5. GROWING A PLANT



CONTENT

DAY 1

Pick one section of Chapter 5 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 5. If the seedlings are still growing make observations and record the results. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about the discovery of chemical energy. Who discovered chemical energy and when? [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw “chemical energy.” [This is open inquiry; use this opportunity to explore.]



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 5.

NOTES

Week 11

Chapter 6. ELECTRICITY



CONTENT

DAY 1

Read Chapter 6 Sections 6.1-6.5 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 6: Sticky balloons. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 37 and discuss the word "electricity." Ask your child where they think the word "electricity" comes from. [You can look up the word "electricity" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week 12

Chapter 6. ELECTRICITY



CONTENT

DAY 1

Pick one section of Chapter 6 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 6. Repeat the experiment if necessary. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about how we know about electricity. Who discovered electricity? When was electricity discovered. [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw “electricity.” [This is open inquiry; use this opportunity to explore.]



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 6.

NOTES

Week 13

Chapter 7. MOVING ELECTRONS



CONTENT

DAY 1

Read Chapter 7 Sections 7.1-7.4 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 7: Moving electrons. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 44 and discuss the word "conduct." Ask your child where they think the word "conduct" comes from. [You can look up the word "conduct" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week **14**Chapter **7. MOVING ELECTRONS****CONTENT****DAY 1**

Pick one section of Chapter 7 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.

**EXPERIMENT****DAY 2**

Discuss the results from Experiment 7. Repeat the experiment with items your child chooses. This is open inquiry and will help your child explore observations.

**CONNECTIONS****DAY 3**

Ask your child about who discovered that electrons move. [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw “moving electrons.” [This is open inquiry; use this opportunity to explore.]

**REVIEW****DAY 5**

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 7.

NOTES

Week 15

Chapter 8. MAGNETS



CONTENT

DAY 1

Read Chapter 8 Sections 8.1-8.4 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 8: Magnet poles. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 52 and discuss the word "magnet". Ask your child where they think the word "magnet" comes from. [You can look up the word "magnet" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week 16

Chapter 8. FOOD AND TASTE



CONTENT

DAY 1

Pick one section of Chapter 8 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 8. Repeat the experiment with items your child chooses. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about the history of magnets. Where did we find out about magnets? (answer - by doing experiments). [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw a magnet pole. [This is open inquiry; use this opportunity to explore.]



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 8.

NOTES

Week 17

Chapter 9. LIGHT AND SOUND



CONTENT

DAY 1

Read Chapter 9 Sections 9.1-9.4 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 9: Splitting light. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 61 and discuss the word "electromagnetic." Ask your child where they think the word "electromagnetic." comes from. [You can look up the word "electromagnetic." in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week 18

Chapter 9. LIGHT AND SOUND



CONTENT

DAY 1

Pick one section of Chapter 9 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.



EXPERIMENT

DAY 2

Discuss the results from Experiment 9. Repeat the experiment if necessary. This is open inquiry and will help your child explore observations.



CONNECTIONS

DAY 3

Ask your child about light and sound. Where did we find out about light and sound? (answer - by doing experiments). [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child "sound." [This is open inquiry; use this opportunity to explore.]



REVIEW

DAY 5

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 9.

NOTES

Week 19

Chapter 10. SAVING ENERGY



CONTENT

DAY 1

Read Chapter 10 Sections 10.1-10.5 to your child. Allow open discussion and let your child ask questions. Explore questions using the internet or library.



EXPERIMENT

DAY 2

Perform Experiment 10: Playing with physics. Follow the teacher's manual for this experiment. The teacher's manual will walk you through each step of the experiment.



CONNECTIONS

DAY 3

Open the text book to page 68 and discuss the word "converted." Ask your child where they think the word "converted" comes from. [You can look up the word "converted" in a dictionary or on the internet.]

DAY 4

Take a break.



REVIEW

DAY 5

Review the text with your child. Ask if they have any questions about how acids and bases react. Read the Summary at the end of the chapter.

NOTES

Week **20**Chapter **10. SAVING ENERGY****CONTENT****DAY 1**

Pick one section of Chapter 10 that interests your student. Spend 30 minutes discussing this section and looking up additional information in the library or on the internet.

**EXPERIMENT****DAY 2**

Discuss the results from Experiment 10. Repeat the experiment if necessary. This is open inquiry and will help your child explore observations.

**CONNECTIONS****DAY 3**

Ask your child about the history energy on Earth. Where do we get energy? [This is open inquiry; use this opportunity to explore.]

DAY 4

Have your child draw “energy converting from one form to another.” [This is open inquiry; use this opportunity to explore.]

**REVIEW****DAY 5**

Exam.

Take the RS4K online or print test for Pre-Level I Chapter 10.

NOTES