Matter Unit Outline

Day One

- What's Matter Video
    - On slide 2
    - Clarify that weight and mass are not equivalent, even though the video repeatedly says weight

Day Two

- Read about Matter/Mass
    - Take notes as needed
    - You could use any related books from the library. Here are some we will use
        - What is Smaller than a Pygmy Shrew? by Robert E. Wells
        - What is Mass? by Don L. Curry
        - Atoms and Molecules by Tracy Maurer

Day Three

- Matter slides 3-8
    - Take notes as needed

Day Four

- States of Matter Phet Exploration Lab
    - Only need the paper and a computer

Day Five

- Properties of Matter Slides 9-11
    - Take notes as needed
- Part(icles) of Your World Video
    - On slide 12

Day Six

- States of Matter Reading Guide
    - Written to go with Splat! Wile E Coyote Experiments with States of Water, but other books could probably be used

Day Seven

- Read other books about the states of matter
    - You could use any related books from the library. Here are some we will use
        - The Solid Truth about States of Matter with Max Axiom by Agnieszka Jozefina Biskup
        - Werewolves and States of Matter by Janet Slingerland

Day Eight

- Conservation of Matter Lab
    - Will Need
        - Balance
        - Empty balloon
        - Fizzing Antacid tablet
        - 1 liter bottle of water or soda
        - Empty plastic bottle with lid (you can clean and reuse the 1 liter bottle)
        - Water

Day Nine

- Finish Conservation of Matter Lab
- Slides 13-19
    - Take notes as needed

Day Ten

- Watch Bill Nye Phases of Matter (our library has this or you can find it on YouTube)
    - Take notes as needed

Day Eleven

- Chemical and Physical Changes Reading Guide
    - Written to go with Kaboom! Wile E. Coyote Experiments with Chemical Reactions by Mark Andrew Weakland

Day Twelve

- Read other books about physical and chemical changes
    - You could use any related books from the library. Here are some we will use
        - The Dynamic World of Chemical Reactions with Max Axiom, Super Scientist by Agnieszka Jozefina Biskup
        - Chemical Reactions: It Matters by Rachael Morlock
        - Mixtures and Solutions: It Matters by Barbara Martina Linde

Day Thirteen

- Slides 20-26
    - Take notes as needed
- Physical and Chemical Changes Practice worksheet

Day Fourteen

- Physical and Chemical Changes Investigation
    - Will Need:
        - 2 small plastic cups
        - 2 tablespoon water
        - ¼ teaspoon borax
        - 3 popsicle sticks
        - 1 tablespoon school glue
        - 2 tablespoons cornstarch
        - 1 tablespoon water
        - Small dish or bowl (like a custard cup)
        - 1 tsp citric acid (grocery store)
        - 1 tsp baking soda
        - Zipper storage bag
        - water

Day Fifteen

- Identifying Substances Lab
    - No answer key because it will depend on what you choose for your unknown. For a simpler lab, eliminate the salt and sugar and make the unknown just one of the original powders.
    - Will Need:
        - Data Chart
        - Salt
        - Baking Soda

        - Cream of Tartar
        - Sugar
        - Cornstarch
        - Baking Powder
        - Vinegar
        - Iodine Solution (Iodine and distilled water)
        - Art Trays (or cookie sheets)
        - 3 eye droppers
        - 7 spoons, popsicle sticks or scoops (keep separate for each powder)
        - Black construction paper
        - Data Chart
        - Optional: 7 baby food jars to put the powders in
    - Could be done without the salt and sugar for fewer materials

Day Sixteen

- Bill Nye Chemical Reactions
    - Season 2 episode 4

Day Seventeen

- Chemical Reactions Phet Simulation - Conservation of Matter
    - Only need the paper and a computer
- Slide 27 (after lab)
    - Take notes as needed

Day Eighteen

- Assessment
- After grading, go back and clarify any misconceptions

Bonus During the Unit:

- Rock and Learn Physical Science DVD
- Popular Mechanics for Kids: Ice
- Season 3 Episode12