

Mac Side Up by Bob Elsdale

Second Grade Science Lesson – 2/40 minute lessons

Created by: Cherie Brogan and Nicole Myers

Science Objectives:

2.1 Use inquiry skills to conduct an activity and investigation

VBO 2.4.1 Use scientific terms and process skills

Language Arts Objectives:

2.2 Use listening skills to develop and support comprehension

2.8 Explain cause and effect relationships and support with text references

2.9 Organize and record information by graphing

2.11 Write daily across the curriculum using a variety of formats

Preassessment Consideration for Virginia Beach Teachers: Fowler Test

Material:

Scientific Method Sort pages (1 per pair)

Scissors

Chart Paper (Steps of Scientific Method written out)

Markers

Mac Side Up by Bob Elsdale

Tub of butter

Butter knives (one per pair of students)

Two loaves of bread

Chart Paper (set up for bar graph of class results)\

Science Journal

Procedure:

Day 1:

Introduction:

1. Each pair of students will receive a sorting page that has the scientific method scrambled on it.
2. As a review of the previous lessons, the teams will cut and sort the strips into the correct order.
3. T will facilitate a review discussion of the correct order while students self-check their sort.

Main Lesson:

1. Before reading, T will set purpose for reading. S will be actively listening to hear and identify the different parts of the scientific method within the story.
2. T introduces Mac Side Up . S will make predictions based on the book cover focusing on what the science problem may be.
3. T will read the story. Stopping at the following pages, S will discuss with their partner what step of the scientific method they believe is happening:
  - pg. 5 second paragraph “Mac wondered...” (prediction/problem)
  - pg. 5 third paragraph “What if...” (hypothesis)

- pg. 7 (materials, safety, procedure)
  - pg. 10 (safety)
  - pg. 12 (additional procedures)
  - pg. 13 (additional procedures)
  - pg. 23 (conclusion)
4. After partner discussion, T will choose 2-3 students to share with the group as the teacher records their answer on the chart paper in the appropriate step.
  5. After the book is finished, T will ask S what step was missing from the story (data collection).

### Closure

Exit Ticket - S will brainstorm ideas on how they could test how often bread will land “butter side up” by doing a quick write on their exit ticket.

### Day 2:

#### Introduction:

1. T will display several exit ticket ideas to reintroduce today’s lesson
2. S will discuss which exit ticket would best test the “butter side up” question
3. T will tell students that they will be testing Mac’s theory.

#### Main Lesson:

1. T will focus the S ideas by showing them today’s material and stating that the experiment must take place in the classroom. S will again discuss their ideas.
2. After S have shared their thoughts, T will distribute the experiment sheet (\* differentiation option: provide varied support through sheet: listed steps with sentence starters (NQRG), listed steps (JRG/RTG)
3. S will work in pairs to complete the problem/question and hypothesis section of their experiment sheet.

4. Before experimenting, T will discuss safety with the entire class. S will record safety information on their experiment sheet (use of butter knives).
5. T will distribute materials to each pair. S will add the materials to their experiment sheet.
6. T will review Mac's steps to testing the buttered bread theory.
7. S test their hypothesis and record data (S will need to butter one side of the bread and drop from their desk and record the results)
8. T will observe and monitor S while they create their own procedure and test their hypothesis.
9. S will share their conclusions with the class and T will record their data on a class bar graph.

Closure:

1. T will lead the class in a discussion about their findings. T will also introduce the concept of "variables" and discuss what may have affected the results between groups. Reflect on exit tickets from previous day.
2. S will do journal writing on today's experiment focusing on one particular step in the scientific process that they think is most important. T will use this as an assessment.

Differentiation notes: NQRG – Not quite ready group

JRG – Just ready group

RTG – Ready to go group

Scientific Method Scramble

Data Collection

Procedure for Experiment

Materials

Hypothesis

Conclusion

Safety

Define Problem/Question



Names: \_\_\_\_\_

The problem is \_\_\_\_\_

\_\_\_\_\_

My hypothesis is \_\_\_\_\_

\_\_\_\_\_

The materials I will need are:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

I should \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ to be safe during the experiment.

This is what I am going to do to test my hypothesis:

1. \_\_\_\_\_
2. \_\_\_\_\_

3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

Data Collection – Draw or write your findings:

I found out that \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Names: \_\_\_\_\_

Problem: \_\_\_\_\_

\_\_\_\_\_

Hypothesis: \_\_\_\_\_

\_\_\_\_\_

Materials:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

Safety: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Procedure for Experiment:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

Data Collection – Draw or write your findings:

Conclusion: \_\_\_\_\_

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JRG/RTG

