

THE WRIGHT STUFF

Grade Level: Kindergarten
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Length of Unit: Seven lessons (approximately 30 minutes each)

I. ABSTRACT

This unit integrating math, reading, and writing skills with the Core Knowledge science content for the Wright brothers allows students the opportunity to experience authentic life skills such as goal setting and experimentation that is age level appropriate. Specific skills include measurement, comparing and contrasting, distinguishing between fact and fiction, and constructing and flying paper airplanes.

II. OVERVIEW

A. Concept Objectives

1. Understand interrelationships among science, technology, and human activity, and how they can affect the world. [**Colorado State Standard Science 5**]
2. Recognize literature as a record of human experiences. [**CSS Language Arts 6**]
3. Gain an understanding of how using a variety of tools and techniques can be used to measure and apply the results in problem solving situations. [**CSS Math 1**]

B. Content from the *Core Knowledge Sequence*

1. **Science:** Wilbur and Orville Wright (p. 20)
2. **Math:** Compare objects according to linear measure (p. 18)
 - a. Measure length using non-standard units
 - b. Begin to measure length in inches
3. **Math:** Compare objects according to time (p. 18)
 - a. Sequence events: before and after; first, next, last.
 - b. Compare duration of events: which takes more or less time.
4. **Language Arts:** Understand and follow oral directions. (p. 8)
5. **Language Arts:** Distinguish fantasy from realistic text. (p. 8)
6. **Language Arts:** Listen to and understand a variety of texts, both fiction and non-fiction. (p. 8)
7. **Language Arts:** Use letter-sound knowledge to write simple words and messages, consistently representing initial and final consonant sounds (for example, writing “boat” as “bot”). (p. 8)
8. **Language Arts:** Know parts of a story (for example, title, beginning, end) and their functions. (p. 7)
9. **Language Arts:** Poem: “Star Light, Star Bright” (p. 8)
10. **Language Arts:** Sayings and Phrases (p. 10)
 - a. Practice makes perfect.
 - b. Where there’s a will there’s a way.

C. Skill Objectives

1. Students will actively participate in reciting the poem “Star Light, Star Bright.”
2. Students will write their thoughts about a wish or dream that they have.
3. Students will be able to use initial and final consonants in their writing.
4. Students will discuss a story.
5. Students will actively participate in learning a song about the Wright brothers.
6. Students will compare and contrast fiction and non-fiction.
7. Students will draw a fiction picture.
8. Students will draw a non-fiction picture.
9. Students will create a paper airplane.

10. Students will realize that background knowledge makes a difference when performing a skill.
11. Students will measure the length of their paper airplane's flight using non-standard units.
12. Students will measure the length of their paper airplane's flight using inches.
13. Students will be able to record their measurements.
14. Students will be able to perform a variety of activities in twelve seconds.
15. Students will be able to perform a variety of activities in fifty-nine seconds.
16. Students will be able to correctly arrange a sequence of events on paper.
17. Students will be able to discuss how the Wright brothers have impacted our lives.
18. Students will be able to answer questions on paper about the Wright brothers.

III. BACKGROUND KNOWLEDGE

- A. For Teachers
 1. Freedman, R. *The Wright Brothers: How They Invented the Airplane*. New York: Holiday House, 1991. 0-8234-0875-2.
 2. Marquardt, M. *Wilbur and Orville and the Flying Machine*. Milwaukee: Raintree Publishers, 1989. 0-8172-3530-2.
 3. Tames, R. *Lifetimes: The Wright Brothers*. New York: Franklin Watts Inc., 1990. 0-531-14002-4.
- B. For Students
 1. Writing and sounding out words.
 2. Putting thoughts onto paper.

IV. RESOURCES

- A. Bini, R. *A World Treasury of Myths, Legends, and Folktales: Stories From Six Continents*. New York, NY: Harry N. Abrams, Inc., 2000. 0-8109-4554-1. (Lesson Three)
- B. Blackburn, K. & Lammers, J. *The World Record Paper Airplane Book*. New York, NY: Workman Publishing, 1994. 1-56305-631-3. (Lesson Four)
- C. Hirsch, E.D., Jr. & Holdren, J. *What Your Kindergartner Needs to Know*. New York, NY: Dell Publishing, 1996. 0-385-31841-3. (Lesson One)
- D. Marquardt, M. *Wilbur and Orville and the Flying Machine*. Milwaukee, WI: Raintree Publishers, 1989. 0-8172-3530-2. (Lessons Two and Seven)
- E. McCaughrean, G. *Greek Myths*. New York, NY: Macmillan Publishing Co., 1992. 0-689-50583-3. (Lesson Three)
- F. Schulz, C. "The Wright Brothers At Kitty Hawk." *This is America Charlie Brown Video Series-Volume 2*. Hollywood, CA: Charles M. Schulz Creative Associates and United Feature Syndicates Inc., 1994. (Lesson Seven)
- G. Schulz, W. *Will and Orv*. Minneapolis, MN: Carolrhoda Books, Inc., 1991. 0-87614-669-8. (Lesson Three)
- H. Stein, R.C. *The Story of The Flight At Kitty Hawk*. Chicago, IL: Regensteiner Publishing Enterprises, Inc., 1981. 0-516-04614-4. (Lesson Six)
- I. Tames, R. *Lifetimes: The Wright Brothers*. New York, NY: Franklin Watts, 1990. 0-531-14002-4. (Lesson Two)
- J. Vinge, J. *The Random House Book of Greek Myths*. New York, NY: Random House, 1999. 0-679-82377-8. (Lesson Three)

V. LESSONS

Lesson One: What is Your Dream?

A. Daily Objectives

1. Concept Objective(s)
 - a. Recognize literature as a record of human experiences.
2. Lesson Content
 - a. Poem: “Star Light, Star Bright”
 - b. Understand and follow oral directions.
 - c. Use letter-sound knowledge to write simple words and messages, consistently representing initial and final consonant sounds (for example, writing “boat” as “bot”).
3. Skill Objective(s)
 - a. Students will actively participate in reciting the poem “Star Light, Star Bright.”
 - b. Students will write their thoughts about a wish or dream that they have.
 - c. Students will be able to use initial and final consonants in their writing.

B. Materials

1. A copy of the poem “Star Light, Star Bright” (from *What Your Kindergartner Needs to Know* by E.D. Hirsch Jr. and John Holdren) on chart paper
2. One copy of Appendices B and C per student
3. Pencils

C. Key Vocabulary

1. Wish - something that a person wants
2. Dream - a goal or aim

D. Procedures/Activities

1. Display the chart of “Star Light, Star Bright” and read the poem to the students, pointing to the words as you read.
2. Have the students join you in reading the poem a second time.
3. Discuss the poem. Possible discussion questions are:
 - a. *What object is in this poem?* A star.
 - b. *Does someone see the star? If so, who?* Yes, the person saying the poem sees it.
 - c. *What does the person do with the star?* They wish on it.
4. Ask the students if they know what a “wish” is. Accept all answers, but also give the correct definition.
5. Compare the word “wish” to the word “dream.” Explain that they are very similar and give the correct definition for “dream.”
6. Ask the students to tell you what their dreams are. Accept all answers and write them on the board.
7. *Today you are going to write about one of your most exciting dreams. I want you to think about something that you have always wanted to do, but didn’t think that it would ever be possible and write about that.*
8. Give the students a copy of Appendix B and have them write about a wish or dream. Please remind the students that they need to sound out their words.
9. Write the translation for what the students write underneath their work.
10. If there is time have the students share their work with one another.
11. After everyone has finished writing you can finish the lesson by reciting the poem, “Star Light, Star Bright.”

E. Assessment/Evaluation

1. Teacher observation (Student participation in reciting the poem “Star Light, Star Bright.”)

2. Use checklist from Appendix C for writing

Lesson Two: Who Are The Wright Brothers?

A. *Daily Objectives*

1. Concept Objective(s)
 - a. Recognize literature as a record of human experiences.
2. Lesson Content
 - a. Wilbur and Orville Wright
 - b. Listen to and understand a variety of texts, non-fiction.
 - c. Know parts of a story (for example, title, beginning, end) and their functions.
3. Skill Objective(s)
 - a. Students will discuss a story.
 - b. Students will actively participate in learning a song about the Wright brothers.

B. *Materials*

1. *Wilbur and Orville and the Flying Machine*, by Max Marquardt; if you are unable to find this book read from excerpts of *Lifetimes: The Wright Brothers*, by Richard Tames or from *What Your Kindergartner Needs to Know* by E.D. Hirsch and John Holdren, pgs. 277-278
2. A copy of the “Wright Brothers” song from Appendix A on chart paper
3. A copy of Appendix D for the teacher

C. *Key Vocabulary*

1. Author - someone who writes a story
2. Illustrator - someone who draws the pictures for a story
3. Title - the name of a book
4. Prediction - to make a guess about what will happen next based on observations

D. *Procedures/Activities*

1. Review yesterday’s lesson. Possible discussion questions are:
 - a. *What is a dream?* Something that someone wants to do.
 - b. *What were some of the dreams that we talked about yesterday?* Accept all answers.
 - c. *Today we are going to hear about two people who have a dream of their own. While you are listening to the story, I want you to try and figure out what their dream is.*
2. Show the book that you will be reading to the students. Here is a possible way to introduce the book:
 - a. *The title of this book is: Wilbur and Orville and the Flying Machine. What is a title?* The name of a book.
 - b. *What do you think the story might be about?* Accept all answers.
 - c. *The author of this book is Max Marquardt. What does the author do?* Writes the story.
 - d. *The illustrator of this book is Mike Eagle. What does the illustrator do?* Draws the pictures.
3. Take the students on a picture walk of the story. You will page through the book stopping to show key pictures. Have the students predict what they think will happen in the story.
4. Read the story *Wilbur and Orville and the Flying Machine* by Max Marquardt. If you are unable to find this book read from excerpts of *Lifetimes: The Wright Brothers*, by Richard Tames or from *What Your Kindergartner Needs to Know* by E.D. Hirsch and John Holdren.

5. Discuss what the Wright brothers' dream was. Possible discussion questions are:
 - a. Did the Wright brothers have a dream? *Yes.*
 - d. What was their dream? *They wanted to fly.*
 - e. Were people able to fly back then? *No.*
 - f. Explain why flying was a good dream to have. *There was no way to fly back then. People didn't know how and they didn't have airplanes.*
 - g. What do you think people thought of the Wright brothers back then if no one had ever flown before? *Accept all answers.*
 6. Display the "Wright Brothers" song on chart paper and teach the students the song.
- E. *Assessment/Evaluation*
1. Teacher observation (Discussion of the story and participation in singing the song about the Wright brothers.)
 2. Appendix D- anecdotal notes

Lesson Three: Are The Wright Brothers For Real?

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Recognize literature as a record of human experiences.
 2. Lesson Content
 - a. Wilbur and Orville Wright
 - b. Distinguish fantasy from realistic text.
 - c. Listen to and understand a variety of texts, both fiction and non-fiction.
 - d. Understand and follow oral directions.
 3. Skill Objective(s)
 - a. Students will compare and contrast fiction and non-fiction.
 - b. Students will draw a fiction picture.
 - c. Students will draw a non-fiction picture.
- B. *Materials*
1. *Will and Orv* by Walter A. Schulz
 2. One of the following books:
 - a. *Greek Myths* by Geraldine McCaughrean, pgs. 26-31
 - b. *The Random House Book of Greek Myths* by Joan D. Vinge, pgs. 121-125
 - c. *A World Treasury of Myths, Legends, and Folktales: Stories From Six Continents* by Renata Bini, pgs. 14-17
 3. A copy of the "Wright Brothers" song from Appendix A on chart paper
 4. A copy of the "Fly, Fly, Fly Away" song from Appendix A on chart paper
 5. One copy of Appendices E and F for each child
 6. Pencils and crayons
- C. *Key Vocabulary*
1. Fiction or fantasy writing - a piece of writing that is make-believe
 2. Non-fiction or realistic writing - a piece of writing that is a true story
- D. *Procedures/Activities*
1. Sing the "Wright Brothers" song that was taught in the previous lesson.
 2. Review what you learned in the previous lesson. Possible discussion questions are:
 - a. *Who were the Wright brothers?* They were brothers who wanted to fly.
 - b. *What was their dream?* To fly.
 - c. *What is something else that you learned yesterday?* Accept all answers.

3. Tell the students that you are going to read another story about Orville and Wilbur Wright. Read *Will and Orv* by Walter A. Schulz.
4. Ask the students a few questions about the book. Here are a few possible questions:
 - a. *What was different about this book that I read to you today and the book we read yesterday?* This book was from a little boy's perspective.
 - b. *Did you learn something different from this book?* Accept all answers.
5. *Now, I am going to read another story to you. I want you to listen to see if this story is the same or different from the Wright Brothers story that we listened to today.*
6. Choose one of the following Greek mythology books to read the story of Daedalus and Icarus:
 - a. *Greek Myths* by Geraldine McCaughrean, pgs. 26-31
 - b. *The Random House Book of Greek Myths* by Joan D. Vinge, pgs. 121-125
 - c. *A World Treasury of Myths, Legends, and Folktales: Stories From Six Continents* by Renata Bini, pgs. 14-17
7. Discuss the story. Some possible discussion questions are:
 - a. *Was this story about the Wright brothers?* No.
 - b. *Who was this story about?* Daedalus and Icarus.
 - c. *What is something that Daedalus and Icarus wanted to do?* They wanted to escape from the island.
 - d. *How did Daedalus and Icarus escape?* They created wings from feathers and wax and taught themselves how to fly.
 - e. *Do you think this story really could have happened? Why or Why not?* No, people can't attach wings to themselves and fly.
 - f. *Do you think the story about the Wright brothers could have really happened? Why or why not?* Yes, because they were people and they didn't do anything silly. They really could have created a plane.
8. *The story of Daedalus and Icarus was not a true story; it never happened. Stories that can't really happen are called fiction or fantasy.* Have the students say the word *fiction*.
9. Draw a table on the board. One side should say fiction and one side should say non-fiction.
10. *What are some other fiction or fantasy stories that you can think of?* Accept all answers as long as they are fiction and write them on the board.
11. *The story of the Wright brothers was a true story; it really happened. When a story really happened it is called non-fiction or realistic writing.* Have the students say the word *non-fiction*.
12. *What are some other non-fiction or realistic stories that you can think of?* Accept all answers as long as they are non-fiction and write them on the board.
13. If the students are having trouble coming up with examples, provide examples for them and have the students tell you whether they are fiction or non-fiction. Here are a few examples:
 - a. Fiction: Winnie-the-Pooh, Bugs Bunny, Daedalus and Icarus, Cinderella, etc.
 - b. Non-fiction: Wright brothers, something from the newspaper, Christopher Columbus, George Washington, etc.
14. *I am going to give you each a piece of paper. On one side it says fiction. On the other it says non-fiction. On the fiction side I want you to draw a picture of*

something that is not real or could never happen. On the non-fiction side I want you to draw a picture of something is real or that could happen.

15. Hand out Appendix E to each student. Draw the students' attention to the pictures on this page. *Look at the picture of the sun wearing sunglasses. Do you think that this could really happen? No. So is this a fiction picture or a non-fiction picture?* Fiction.
 16. *Look at the picture of the little girl on the scooter. Could this really happen? Yes. Is this a fiction picture or a non-fiction picture?* Non-fiction.
 17. Explain to the students that they should use these drawings to help them remember which side says fiction and which side says non-fiction. Let them know that they can't copy the pictures on the page. They have to come up with their own pictures. This is important!
 18. When the students finish make sure that you identify their drawings in writing, so that you can evaluate them later.
 19. If there is time let the students share their work with one another.
 20. Teach the students the "Fly, Fly, Fly Away" song.
- E. *Assessment/Evaluation*
1. Appendix F- checklist for drawings

Lesson Four: Practice Makes Perfect-Why Experiment?

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Understand interrelationships among science, technology, and human activity, and how they can affect the world.
 2. Lesson Content
 - a. Understand and follow oral directions.
 - b. Sayings and Phrases: Practice makes perfect.
 - c. Wilbur and Orville Wright
 3. Skill Objective(s)
 - a. Students will create a paper airplane.
 - b. Students will realize that background knowledge makes a difference when performing a skill.
- B. *Materials*
1. Several piece of paper for each student
 2. Sentence strip with "Practice makes perfect" written on it
 3. Crayons and markers
 4. Stamps and stickers
 5. A copy of the "Wright Brothers" song from Appendix A on chart paper
 6. A copy of the "Fly, Fly, Fly Away" song from Appendix A on chart paper
 7. *The World Record Paper Airplane Book* by Ken Blackburn & Jeff Lammers, pgs. 32-33 or any other book on making paper airplanes
- C. *Key Vocabulary*
1. Practice - to try something over and over so that you can get more experience and skill
- D. *Procedures/Activities*
1. Sing the songs "Wright Brothers" and "Fly, Fly, Fly Away" which were taught in previous lessons.
 2. *When the Wright brothers were trying to build a flying machine, did it work on their first try?* No. (If the students are having a hard time remembering, reread excerpts from previously read stories about the many times the Wright brothers practiced flying.)

3. *Why do you think they didn't quit after the first time?* They wanted to fly and they knew if they kept trying, that they would eventually get it.
4. Display the sentence strip with the saying "Practice makes perfect" on it.
5. Read the saying to the students.
6. *What do you think this saying means?* The more you practice, the better you will get.
7. *Do you think that this saying is something that the Wright brothers would like? Why or why not?* Yes, because they kept practicing when they needed to get their plane to work.
8. *If this saying could work for the Wright brothers could it work for you too? Why or why not?* Accept all answers, but try to guide students into thinking of times that they practiced to get better such as handwriting or learning to tie their shoes.
9. *Making a plane was very difficult especially since one had never been made before. Today, you are going to make your own plane out of paper.*
10. *First, I am going to give you each a piece of paper and I want you to try and make a paper airplane, but you can't have help from anyone.*
11. Hand out the paper and give the students approximately five minutes to work on their planes. Many students will have difficulties because they have never done this before. That is okay. You are trying to provide an experience in which they will come to understand how difficult it can be to make something without prior knowledge.
12. Stop the students and ask how they are doing.
13. *Is this a difficult thing to do? I am noticing several of you are having problems making these planes. Would you like me to show you an easy way to make a paper airplane?*
14. Show the students how to make a basic dart plane. Use directions from *The World Record Paper Airplane Book* by Ken Blackburn & Jeff Lammers, pgs. 32-33 or any other book on making paper airplanes.
15. When showing the students how to make the airplane, make sure you go slowly, step by step. Give the students plenty of time for practice in making their planes.
16. When the students are finished making their planes they may decorate them with crayons, markers, stamps, or stickers. Make sure that your students have their names on the airplanes!
17. When all the students are finished ask them the following questions:
 - a. *Which was easier, making a plane with or without directions?* Making a plane with directions.
 - b. *Did your planes get better the more you practiced making them? Why or why not?* Yes, because practice makes perfect.
 - c. *Was there anyone who seemed to have an easier time making his or her plane?* (Most likely, you will have at least one student who has had experience in making planes. Try to direct your students into noticing that this particular student had an easier time. If no one has had this experience, lead the students into noticing your plane making efforts.)
 - d. *Why do you think this person had an easier time?* They have done this before (they have had more practice), and we are still learning.
18. Save the students' paper airplanes for the following lesson.
19. If you have time lead the students in the songs "Wright Brothers" and "Fly, Fly, Fly Away."

E. *Assessment/Evaluation*

1. Teacher observation (Student discussion on how difficult or easy the plane construction may have been according to prior experience.)

2. Plane completion

Lesson Five: Measuring the Length of a Flight

A. *Daily Objectives*

1. Concept Objective(s)
 - a. Gain an understanding of how using a variety of tools and techniques can be used to measure and apply the results in problem solving situations.
2. Lesson Content
 - a. Compare objects according to linear measure: measure length using non-standard units.
 - b. Compare objects according to linear measure: begin to measure length in inches.
 - c. Understand and follow oral directions.
3. Skill Objective(s)
 - a. Realize that background knowledge makes a difference when performing a skill.
 - b. Students will measure the length of their paper airplane's flight using non-standard units.
 - c. Students will measure the length of their paper airplane's flight using inches.
 - d. Students will be able to record their measurements.

B. *Materials*

1. One copy of Appendix G for each student
2. One copy of Appendix H for every two students (cut these apart beforehand)
3. A copy of the "Wright Brothers" song from Appendix A on chart paper
4. A copy of the "Fly, Fly, Fly Away" song from Appendix A on chart paper
5. Student made paper airplanes from the previous lesson
6. One ruler that has inches on it for each student or group of students

C. *Key Vocabulary*

1. Measure - is a way to compare objects in terms of the quality of length (taken from *What Your Kindergartner Needs to Know*)
2. Inches - something that we use to measure objects

D. *Procedures/Activities*

1. Sing the songs "Wright Brothers" and "Fly, Fly, Fly Away" which were taught in previous lessons.
2. *Yesterday we made paper airplanes. Today we are going to fly our planes to see how far they will go.*
3. Hand the students their planes from the previous lesson and allow them to practice flying their planes for a moment.
4. Divide the students into groups of approximately eight. Each group will take turns.
5. Have the students from the first group stand in a line and throw their planes. Determine which plane flew the farthest and record this on the board.
6. Have the same group do this two more times. Each time record the results.
7. After the first group finishes, repeat steps 5-6 with the remaining groups.
8. Review and discuss the results, using the information recorded on the board.
9. Now you will be dividing the students into groups of four and they will be working together to measure how far their plane actually flies. First, they will measure using the plane on Appendix G and then they will measure using inches.

10. Model how this will occur. Throw your own plane making sure you are on a spot that you can mark. Have three students stand next to you to be your model group. Once you have thrown your plane use your Appendix G, as well as those of your group, to measure how far you threw your plane. (*I threw my plane 6 planes long.*) Then you will record your length on Appendix H.
 11. You will do the same thing in inches. Using the same distance as before, use a ruler to measure how far your paper airplane flew. Record your answer on Appendix H for the students to see.
 12. Make sure that the students understand how you measured the distances using both the ruler and the airplane sheet. Please encourage the students to help one another in their groups.
 13. If there are no questions, hand out a copy of Appendix G, the precut pages from Appendix H, and a ruler for each student.
 14. Let the students conduct their measuring experiment. You may want to mark a starting spot for each individual group.
 15. Make sure that you circulate throughout the room to ensure that the students are measuring correctly. Give help where it is needed.
 16. When students are finished, make a graph on the board and record their results.
 17. As a group discuss the results on the graph. What was the farthest a plane went in inches? What was the farthest a plane went in planes?
 18. If you have time lead the students in the songs “Wright Brothers” and “Fly, Fly, Fly Away.”
 19. Note: The paper airplanes would make a great display hanging from the classroom ceiling!
- E. *Assessment/Evaluation*
1. Teacher observation (Student discussion on how difficult or easy the plane construction may have been according to prior experience and student ability to measure the length of their paper airplane’s flight using standard and non-standard units.)
 2. Reviewing individual copies of Appendix H

Lesson Six: Success: Where There’s A Will There’s A Way!

A. *Daily Objectives*

1. Concept Objective(s)
 - a. Gain an understanding of how using a variety of tools and techniques can be used to measure and apply the results in problem solving situations.
2. Lesson Content
 - a. Compare duration of events: which takes more or less time.
 - b. Sequence events: before and after; first, next, last.
 - c. Wilbur and Orville Wright
 - d. Understand and follow oral directions.
 - e. Listen to and understand a variety of texts, non-fiction.
 - f. Sayings and Phrases: Where there’s a will there’s a way.
 - g. Use letter-sound knowledge to write simple words and messages, consistently representing initial and final consonant sounds (for example, writing “boat” as “bot”).
3. Skill Objective(s)
 - a. Students will be able to perform a variety of activities in twelve seconds.
 - b. Students will be able to perform a variety of activities in fifty-nine seconds.
 - c. Students will be able to correctly arrange a sequence of events on paper.

- d. Students will be able to use initial and final consonants in their writing.
- B. *Materials*
1. Stopwatch or second hand on a clock
 2. *The Story of The Flight At Kitty Hawk* by R. Conrad Stein, pgs. 5-6, & 24
 3. One piece of paper for each child
 4. Pencils and other writing materials
 5. Sentence strip with the phrase “Where there is a will there is a way” printed on it
 6. One copy of Appendix I for each student
- C. *Key Vocabulary*
1. Sequence - the order of events
 2. Will - the determination or spirit within a person
 2. Failure - to not succeed
- D. *Procedures/Activities*
1. Sing the songs “Wright Brothers” and “Fly, Fly, Fly Away” which were taught in previous lessons.
 2. Display the sentence strip “Where there’s a will there’s a way.”
 3. Read the phrase to the students.
 4. *What do you think this phrase means?* Accept all answers, but lead students into the understanding that this phrase means: if you put your mind to it, you can accomplish anything.
 5. *Do you think that the Wright brothers had the will to fly? Why or Why not?* Yes, because even when they failed they kept trying.
 6. *I am going to read a couple pages from the book The Story of The Flight At Kitty Hawk.*
 7. Read pages 5-6 of *The Story of The Flight At Kitty Hawk*. The pages talk about their first attempt and failure at powered flight. (If you are unable to find this book, any book that describes the Wright brother’s first attempt will work.)
 8. Discuss with the students what happened in these pages. Possible discussion questions are:
 - a. *What happened in this story?* The Wright brothers tried to fly.
 - b. *Did they succeed?* No.
 - c. *Did they give up?* No.
 - d. *What do you think they were going to do next?* Figure out what went wrong and try again.
 9. Read page 24 of *The Story of The Flight At Kitty Hawk*. This page talks about their first successful flight and the last flight of that same day.
 10. Discuss what happened on this page. Possible discussion questions are:
 - a. *What happened in this story?* The Wright brothers flew a plane.
 - b. *How long did their first flight last?* Twelve seconds.
 - c. *Is twelve seconds a long time?* No.
 11. To help the students understand how long 12 seconds is, have them do a variety of activities in 12 seconds. (Use a stopwatch or second hand to keep track of the time.) For example:
 - a. Jump up and down.
 - b. Hold their breath.
 - c. Be as quiet as possible.
 - d. Be as loud as possible.
 - e. Dance.
 12. After you have done several activities in 12 seconds, ask the students if they think it is a long time.
 13. Refer back to page 24 and talk about the last flight of the day.

- a. *How long was their last flight for the day?* Fifty-nine seconds.
 - b. *Do you think that 59 seconds is longer or shorter than 12 seconds?*
Longer.
 14. Have the students do some of the same activities for 59 seconds.
 15. Discuss how much longer 59 seconds seems than 12 seconds.
 16. *We have learned a lot of things about the Wright brothers. What are some things that you have learned?* Accept all answers.
 17. *We are going to be writing a short story about the Wright brothers. I want you to think of three things that we have learned about the Wright brothers. When you write your story, you have to put those three things into the correct order.*
 18. *You are all going to get a piece of paper and you are going to fold it twice.* Show the students how to fold a piece of paper so that there are three equal sections to the paper just like you would fold a letter.
 19. *On this piece of paper you are going to draw your story in order.* Draw a piece of paper on the board showing the three different sections.
 20. Give the students the following example of correct order and draw it on the paper that you drew on the board.
 - a. First, you come to school.
 - b. Next, you hang up your backpack.
 - c. Finally, you come into the classroom.
 21. Next, tell the students the following events out of order.
 - a. Put away your toothbrush.
 - b. Brush your teeth.
 - c. Put toothpaste on your toothbrush.
 22. As a group, have the students help you put the pictures in order on the board.
 23. If the students understand how to put things in order give them each a page and, as a group, fold your papers into three sections.
 24. Have the students write a short story about the Wright brothers including three events, which have been sequenced correctly. Remind them to sound out their words.
 25. Make sure that you write the translations for the students' writing beneath their work.
 26. If there is time the students may share their work with one another.
- E. *Assessment/Evaluation*
1. Teacher observation (Student participation for activities completed in both twelve seconds and fifty-nine seconds.)
 2. Appendix I- rubric for sequenced stories

Lesson Seven: What a Difference!

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Understand interrelationships among science, technology, and human activity, and how they can affect the world.
 2. Lesson Content
 - a. Wilbur and Orville Wright
 - b. Sayings and Phrases: Practice makes perfect.
 - c. Sayings and Phrases: Where there's a will there's a way.
 3. Skill Objective(s)
 - a. Students will be able to discuss how the Wright brothers have impacted our lives.

- b. Students will be able to answer questions on paper about the Wright brothers.
- B. *Materials*
 - 1. One copy of Appendix J for each student
 - 2. Pencils
 - 3. *Wilbur and Orville and the Flying Machine* by Max Marquardt
 - 4. *The Wright Brothers at Kitty Hawk-This is America Charlie Brown* video
 - 5. Sentence strip with the phrase “Practice makes perfect” printed on it
 - 6. Sentence strip with the phrase “Where there’s a will there’s a way” printed on it
- C. *Key Vocabulary*
 - 1. None
- D. *Procedures/Activities*
 - 1. Sing the songs “Wright Brothers” and “Fly, Fly, Fly Away” which were taught in previous lessons.
 - 2. Review the previous lesson. (The Wright brothers’ first flight lasted 12 seconds and they flew for 59 seconds that same day.)
 - 3. Display the sentence strips and read “Practice makes perfect.”
 - 4. Have one of your students explain why this phrase fits with the Wright brothers. (The Wright brothers kept practicing until they could fly.)
 - 5. Read “Where there’s a will there’s a way.”
 - 6. Have one of your students explain why this phrase fits with the Wright brothers. (Even when the Wright brothers failed they continued to work until they got it right.)
 - 7. *Who thinks that the Wright brothers were important and why?* Accept all answers.
 - 8. Read page 30 of *Wilbur and Orville and the Flying Machine*. (This page talks about the things we are now able to do because of the Wright brothers.)
 - 9. *What are some things we have now because of the Wright brothers?* Accept all reasonable answers. Here are some examples:
 - a. Fast planes
 - b. Space ships
 - c. Jets
 - d. Flights across the country
 - 10. Read the entire story of *Wilbur and Orville and the Flying Machine* as a review.
 - 11. Give the students Appendix I. This is a quiz and you will need to make sure that you have their full attention when you go through it. Go through each question slowly, making sure that all students have answered before you go on.
 - 12. Optional activity: Watch the video *The Wright Brothers at Kitty Hawk-This is America Charlie Brown*. This is an excellent video and includes some actual photographs of the Wright brothers. The video is 24 minutes long.
- E. *Assessment/Evaluation*
 - 1. Teacher observation (Student able to discuss how the Wright brothers have impacted our lives.)
 - 2. Appendix J- quiz

VI. CULMINATING ACTIVITY (Optional)

- A. Go to a small airport that runs non-commercial flights for a field trip.

VII. HANDOUTS/WORKSHEETS

- A. Appendix A: Songs about the Wright brothers
- B. Appendix B: Writing paper

- C. Appendix C: Checklist for writing, Lesson One
- D. Appendix D: Anecdotal notes, Lesson Two
- E. Appendix E: Fiction/non-fiction drawing page
- F. Appendix F: Checklist for fiction/non-fiction drawings
- G. Appendix G: Airplane for measuring
- H. Appendix H: Measurement recording sheet
- I. Appendix I: Rubric for sequenced story
- J. Appendix J: Quiz (2 pages)

VIII. BIBLIOGRAPHY

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Appendix A-The Wright Stuff

Wright Brothers Song
Tune: Where is Thumbkin?

Where are the Wright Brothers:
Orville and Wilber?
In Kitty Hawk,
North Carolina!
What are they doing there,
In Kitty
Inventing a plane
And learning to fly!

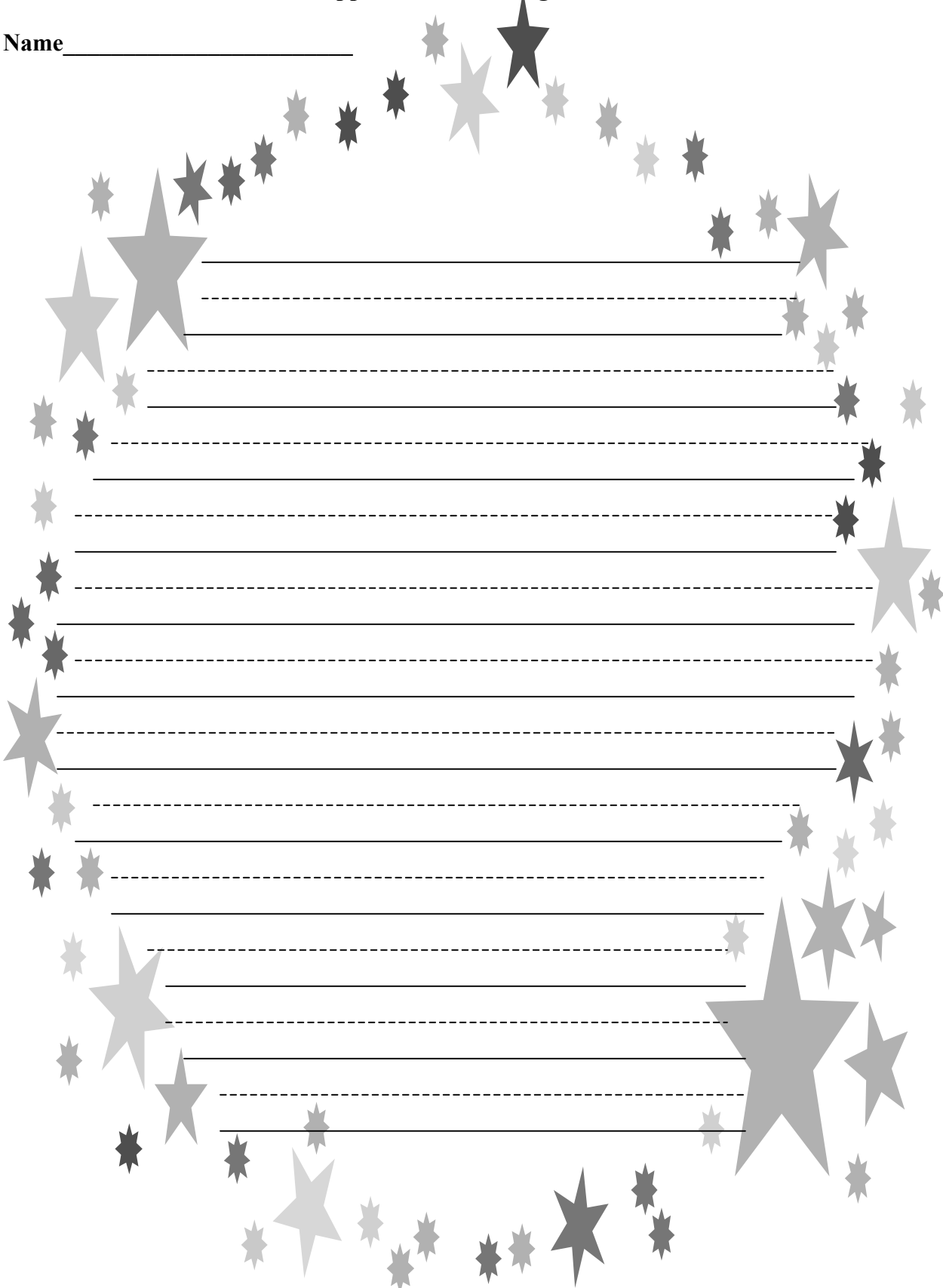
Fly, Fly, Fly Your Plane
Tune: Row, Row, Row Your Boat

Fly, fly, fly your plane,
In Kitty Hawk!
That is where the Wright Brothers
Started it all!

Inventing the first plane
Was their goal.
The first in flight. Oh what a sight!
In Kitty Hawk!

Appendix B-The Wright Stuff

Name _____



Handwriting practice lines consisting of ten sets of three horizontal lines: a solid top line, a dashed middle line, and a solid bottom line. Each set is intended for a single line of handwriting practice.

Appendix C-The Wright Stuff

Checklist for writing

Student Evaluated: _____

Date of Evaluation: _____

Did the student's writing include a hope or dream?
Yes _____ No _____

Did the student correctly understand what a dream is?
Yes _____ No _____

Did the student use initial and final consonants in their words?
Yes _____ No _____

Comments:

What were the student's strengths or weaknesses?

Appendix D-The Wright Stuff

Anecdotal Notes for Wright Brothers Introduction:

Date _____

As a class, were the students able to accurately answer the questions?

Were there any questions that the students did not understand?

Are there any students that did not participate in the discussion?

Are there students who seem to have a strong grasp of the content taught in this lesson?

Comments:

Appendix E-The Wright Stuff

Name _____



Fiction

Non-Fiction



Appendix F-The Wright Stuff

Checklist for Fiction/Non-fiction Drawings

Student evaluated: _____

Date of drawing: _____

1. Did the student draw a picture on the fiction side?
Yes ___ No ___
2. Did the student draw a picture on the non-fiction side?
Yes ___ No ___
3. Was the student's fiction picture really fiction?
Yes ___ No ___
4. Was the student's non-fiction picture really non-fiction?
Yes ___ No ___
5. Does the student seem to understand the difference between fiction and non-fiction?
Yes ___ No ___

Following directions: Questions 1 & 2. pts. /2 pts.

Distinguishing between fantasy and reality:
Questions 3-5. pts. /3 pts.

Appendix G-The Wright Stuff



Appendix H-The Wright Stuff

Name _____

How many planes far did your paper airplane fly? _____ planes

How many inches did your paper airplane fly? _____ inches

Name _____

How many planes far did your paper airplane fly? _____ planes

How many inches did your paper airplane fly? _____ inches

Name _____

How many planes far did your paper airplane fly? _____ planes

How many inches did your paper airplane fly? _____ inches

Name _____

How many planes far did your paper airplane fly? _____ planes

How many inches did your paper airplane fly? _____ inches

Appendix I-The Wright Stuff

Rubric For Sequenced Story

Student Evaluated _____ Date of Story _____

1. Did the student include three events in their story? Yes No
2. Were the events of the story in the proper sequence? Yes No
3. Were all of the events in the story from the lives of the Wright brothers? Yes No
4. Did the student use final and initial consonants in his/her writing? Yes No

Comments:

_____/4pts.

Name _____

The Wright Brothers Quiz

1. The Wright brothers were names Jim and George.



2. The Wright brothers are your teacher's brothers.



3. The Wright brothers loved to fly kites and dreamed of flying like birds.



4. The Wright brothers went into outer space.



5. The Wright brothers sold bikes when they grew up.



6. The Wright brothers loved to sail ships.



7. The Wright brothers are famous for working with:



airplanes



boats



cars

8. The Wright brothers tested their plane in Kitty Hawk, North Carolina.



9. The Wright brothers gave up after their first failure.



10. The Wright brothers were:

men



women

