

Dog Biscuit Delivery

Based on the book
Clifford's Family by Norman Bridwell



Background: We enjoyed reading the book Clifford's Family by Norman Bridwell. You have met Clifford's mom, dad, and the rest of his family. In the book, Clifford visits each of his family members. He wants to visit them again and take each of them one of his big, yummy dog biscuits.

Design Challenge: Design and construct a dog-biscuit container for Clifford to use when he takes dog biscuits to his family. You must choose one family member and design the container especially for that person.

Criteria:

Your container must

- be the correct size to hold the biscuit supplied by the teacher
- close tightly to protect the biscuit
- be decorated for one special family member
- be designed so that Clifford can carry it while he is walking.

Materials: You may select from the items below.

- any recycled materials
- tag board
- construction paper
- fabric scraps
- yarn or string
- pipe cleaners
- twelve inches of masking tape
- rulers
- glue
- general art supplies
- cardboard cylinders
- scissors

Targeted Standard of Learning: English 2.8
Supporting Standards of Learning: Mathematics 2.12
English 2.3, 2.11
Science 2.1

Targeted Standard for Technological Literacy: 18
Supporting Standard for Technological Literacy: 8, 10, 11

Dog Biscuit Delivery



Targeted Standard of Learning: English 2.8

- The student will read and demonstrate comprehension of fiction and nonfiction.

Targeted Standard for Technological Literacy: Standard 18

- Students will develop an understanding of and be able to select and use transportation technologies.

| Prior Knowledge & Skill | Materials & Preparation | Safety Issues | Class Management | Materials Provided | Time Management |
|--|--|--|---|---|---|
| <ul style="list-style-type: none"> • Understanding of targeted English Standard of Learning 2.8 • Some understanding of the design process | <ul style="list-style-type: none"> • <u>Clifford's Family</u> by Norman Bridwell • See Design Brief for recommended materials. • Teacher may substitute materials. • Teacher should give one large dog biscuit to each group of students | <ul style="list-style-type: none"> • Insure cleanliness of recycled materials. • Caution students not to eat dog biscuits. | <ul style="list-style-type: none"> • Two to three students per group | <ul style="list-style-type: none"> • Design Brief • Guided Portfolio • Rubric Assessment | <ul style="list-style-type: none"> • Session 1: Introducing Design Brief & Portfolio • Sessions 2 & 3: Building (30 min. each) • Session 4: Sharing and evaluating (30 min.) |

Name _____



Dog Biscuit Delivery

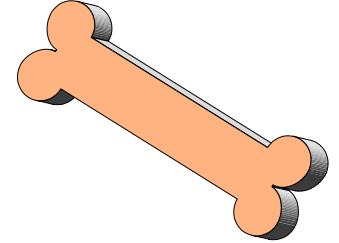
Group Members:

1. What is the problem? State the problem in *your own words*.

Targeted Standards of Learning: English 2.8
Supporting Standards of Learning: Mathematics 2.12
English 2.3, 2.11
Science 2.1

Targeted Standard for Technological Literacy: 18
Supporting Standard for Technological Literacy: 8, 10, 11

Name _____

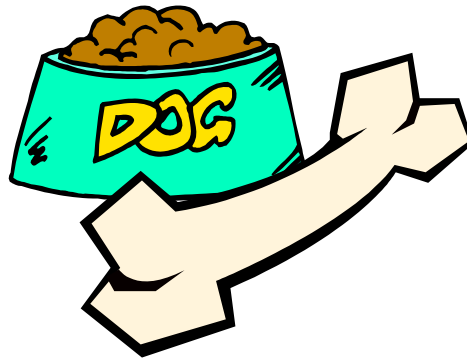


2. Brainstorm solutions.

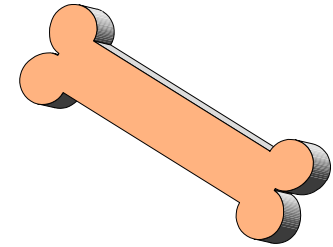
Draw or describe some possible solutions.

4. Test your solution.

- Is your container the correct size to hold Clifford's dog biscuit? YES NO
- Does your container close tightly? YES NO
- Is your container decorated neatly for a special family member? YES NO
- Can Clifford easily carry your container while walking? YES NO



Name _____



5. Evaluate your solution.

Was it the best solution? Would one of your other ideas have been better? Why or why not?

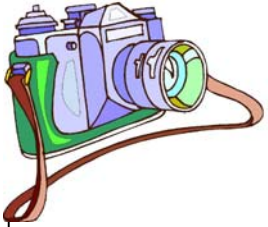
What would you have done differently?

Could you add to it to make it better? What would you add to it?

Guided Portfolio—6

Name _____

Attach a photograph of your final project here. If you do not have a photograph, draw a picture of your final project.



A large, empty rounded rectangular box for attaching a photograph or drawing a picture of the final project.

How would you make your project better? Draw a picture showing how it would look after you have made changes to it.



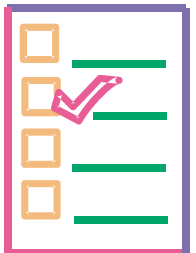
A large, empty rounded rectangular box for drawing a picture showing how the project would look after improvements.

Rubric for *Dog Biscuit Delivery*

Name _____

Date _____

| Design Brief Rubric | no evidence 0 | limited understanding 1 | some understanding with room for improvement 2 | good understanding with room for improvement 3 | substantial understanding 4 |
|--|------------------|----------------------------|---|---|--------------------------------|
| The student restated the problem in his/her own words. | | | | | |
| The student brainstormed more than one idea. | | | | | |
| The student created and labeled a sketch to use as a "blueprint." | | | | | |
| The student included notes about problems that occurred and their solutions. | | | | | |
| The student tested the container to make sure <ul style="list-style-type: none"> • it was the correct size • it closed tightly to protect the biscuit • it was decorated neatly for one family member • it was designed so Clifford could carry it while walking. | | | | | |
| The student completed the graph. | | | | | |
| The student evaluated how he/she could make it better next time. | | | | | |



Rubric for *Dog Biscuit Delivery*

Name _____

Date _____

| <p style="text-align: center;">Oral Communication Rubric</p> | <p style="text-align: center;">no evidence 0</p> | <p style="text-align: center;">limited understanding 1</p> | <p style="text-align: center;">some understanding with room for improvement 2</p> | <p style="text-align: center;">good understanding with room for improvement 3</p> | <p style="text-align: center;">substantial understanding 4</p> |
|--|---|---|--|--|---|
| <p>2.1 The student will demonstrate an understanding of oral language structure.</p> <p>a) Create oral stories to share with others.</p> <p>b) Create and participate in oral dramatic activities.</p> <p>c) Use correct verb tenses in oral communication.</p> <p>d) Use increasingly complex sentence structures in oral communication.</p> | | | | | |
| <p>2.2 The student will continue to expand listening and speaking vocabularies.</p> <p>a) Use words that reflect a growing range of interests and knowledge.</p> <p>b) Clarify and explain words and ideas orally.</p> <p>c) Follow oral directions with three or four steps.</p> <p>d) Give three- and four-step directions.</p> <p>e) Identify and use synonyms and antonyms in oral communication.</p> | | | | | |
| <p>2.3 The student will use oral communication skills.</p> <p>a) Use oral language for different purposes: to inform, to persuade, and to entertain.</p> <p>b) Share stories or information orally with an audience.</p> <p>c) Participates as a contributor and leader in a group.</p> <p>d) Summarize information shared orally by others.</p> | | | | | |
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Standards of Learning

English (2002)

Oral Language

- 2.3 The student will use oral communication skills.
- a) Use oral language for different purposes: to inform, to persuade, and to entertain.
 - b) Share stories or information orally with an audience.
 - c) Participate as a contributor and leader in a group.
 - d) Summarize information shared orally by others.

Reading

- 2.8 The student will read and demonstrate comprehension of fiction and nonfiction.
- a) Make predictions about content.
 - b) Read to confirm predictions.
 - c) Relate previous experiences to the topic.
 - d) Ask and answer questions about what is read.
 - e) Locate information to answer questions.
 - f) Describe characters, setting, and important events in fiction and poetry.
 - g) Identify the problem, solution, and main idea.

Writing

- 2.11 The student will write stories, letters, and simple explanations.
- a) Generate ideas before writing.
 - b) Organize writing to include a beginning, middle, and end.
 - c) Revise writing for clarity.
 - d) Use available technology.

Science (2003)

Scientific Investigation, Reasoning, and Logic

- 2.1 The student will conduct investigations in which
- a) observation is differentiated from personal interpretation, and conclusions are drawn based on observations;
 - b) observations are repeated to ensure accuracy;
 - c) two or more attributes are used to classify items;
 - d) conditions that influence a change are defined;
 - e) length, volume, mass, and temperature measurements are made in metric (centimeters, meters, liters, degrees Celsius, grams, kilograms) and standard English units (inches, feet, yards, cups, pints, quarts, gallons, degrees Fahrenheit, ounces, pounds);
 - f) pictures and bar graphs are constructed using numbered axes;
 - g) unexpected or unusual quantitative data are recognized.
 - h) simple physical models are constructed;

Mathematics (2001)

Measurement

- 2.12 The student will estimate and then use a ruler to make linear measurements to the nearest centimeter and inch, including measuring the distance around a polygon in order to determine perimeter.

Standards for Technological Literacy

- Standard 8: Students will develop an understanding of the attributes of design.
- Standard 10: Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.
- Standard 11: Students will develop the abilities to apply the design process.
- Standard 18: Students will develop an understanding of and be able to select and use transportation technologies.