

Kite Construction Investigation

Authors:**Title of Lesson:** Kite Construction**Date of Lesson:** Week 3**Length of Lesson:** 4 days**Concepts:** Review, revisions, and completion of kite**Objectives:**

- Students will be able to make final additions/corrections to their kite blueprint.
- Students will be able to select the final materials for their groups kite
- Students will be able to finish the prototype of their kite
- Students will be able to test their kite
- Students will be able to make final revisions to their kite

Safety: Students must use safety equipment when working with selected materials.**Materials List and Advanced Preparations:** Purchase a variety of kite materials and display many options for the students. Kite fabric, glue, dowels, etc. Attempt to have a large selection for the students. Student math journals, Group blueprints, material check out lists. Project rubric, measuring tool**Accommodations:** Students diagnosed with ADHD will be provided with a checklist to complete during every day's events. These students must display their journals to the instructors after each day to show accomplishments.

English Language Learners will be provided with goals and instructions on the board for completion goals of the day.

Vision impaired students will be provided will be grouped with students who will help with the disability. The vision impaired students will be able to feel the materials and be a key part to the material selection.

Gifted and talented students will be required to keep a journal about their everyday tasks and goals for the project. They will also make comments on how they feel they will improve the kite personal.

ENGAGEMENT		Time:10 Minutes
What the Teacher Will Do	Probing/Eliciting Questions	Student Responses and Misconceptions
Day 1 Have students split into their work groups. Groups will have revised and completed blueprints from earlier work times. At this point, students will be told the materials allotted and asked to revise blueprints accordingly.	“What changes are you making to your blueprint, if any?” “Why did you change this about your blueprint?”	answers will vary answers will vary

EXPLORATION		Time: Minutes
What the Teacher Will Do	Probing/Eliciting Questions	Student Responses and Misconceptions
<p>Provide students with options for materials. State that each material taken must be noted on the material checklist. Points will be deducted for the careless waist of undocumented materials.</p> <p>Groups will have this time to work on kite construction.</p> <p>Day 2 Groups will have this time to work on kite construction. Students have prototype finished by the start of day 3.</p> <p>Day 3 Groups will use this time to test the kites at field trip. Students must take notes of what works/doesn't work in their math journals. If time allows, students may use the remainder of the day to work on kite construction.</p> <p>Day 4 Final day of kite construction. Groups will work to turn the prototype into a final product. Students may also use this time to complete the kite measurements required for the project. Students must have completed kite by the start of day 5.</p>	<p>“What materials did you pick for your kite and why?”</p> <p>“How do you feel about your prototype kite?”</p> <p>“How do you think your kite will work?”</p> <p>“How much do you think your kite will be affected by the current weather?”</p> <p>“What did you learn after testing your kite?”</p> <p>“What do you plan on changing during the next class?”</p> <p>“What revisions have you made, or are going to make, on your kite today”</p> <p>“What measurements are you making on your completed kite?”</p>	<p> answers will vary </p> <p> answers will vary </p> <p> answers will vary </p> <p> The kite will fly better with more constant and controlled wind </p> <p> answers will vary </p> <p> answers will vary </p> <p> answers will vary </p> <p> area of the kite perimeter of the kite </p>

<p>Day 5 Kite flying contest! Groups will choose who will fly the kite, who will record the needed data, who will use the tools, and who will lead the team. At this point, kites will be completed and ready to fly. Instructor will bring all measuring tools needed to complete the objectives. Instructor must follow rubric to judge the groups kites accordingly.</p>		
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EVALUATION		Time: Minutes
What the Teacher Will Do	Probing/Eliciting Questions	Student Responses and Misconceptions
<p>Students will be graded on completion of math journal and spending time wisely.</p> <p>After completion of kite contest Hold a class wise discussion talking about each kite. What went well, didn't go well, and what can be done to improve the kite</p>	<p>“What went well with your kite?” “Did your kite fly as well as expected? If so, how?” “What didn't work the way you expected?” “What would you change on your kite after completing the competition?” “What did you really like about the construction of your kite?”</p>	