



Iggy Peck Bridge Design and Build Challenge

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Target Grade: 3rd Visual Arts (can be scaled for K-5)

Time Required: Two 45 minute classes

Standards:

TN State Art Standards:

- TN 3 Visual Art Create 1A: Elaborate on an imaginative idea
- TN 3 Visual Art Create 2B: Demonstrate an understanding of safe use of materials, tools and equipment for a variety of artistic processes

Lesson Objectives:

Students will:

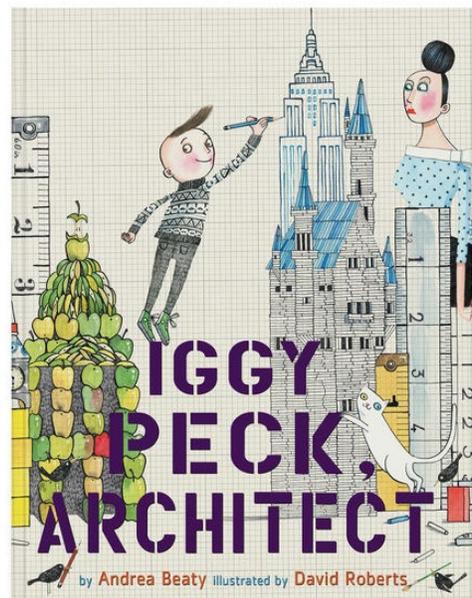
- Explore new areas of the art room supply centers (makerspace).
- Work together collaboratively to design and construct a ways for characters in a story to cross a 12 inch valley.

Central Focus:

Using the story *Iggy Peck Architect*, students will engage in a makerspace design challenge to get Iggy and his classmates safely across the river. Within the challenge students will be engaged in design, engineering, collaboration, and being introduced to new materials in the makerspace.

Materials

- *Iggy Peck Architect* book
- 2 bowls (for each group)
- Ruler (for each group)
- Assortment of supplies, such as, but not limited to:
 - String
 - Cardboard
 - Toilet paper tubes
 - Several types of paper
 - Popsicle sticks
 - Pipe cleaners
 - Tape
 - Glue





Classroom Configuration:

My art classroom has an entire wall of open storage of assorted materials that we call the supply centers, but they function similarly to a maker space. Supplies are organized by theme. We have a paper center, a collage center (cutting and gluing supplies), a drawing center, a sewing/fibers center, a sculpture center, a paint center, a recycled materials center, a cardboard center, and a building/architecture center (Legos, wooden blocks, etc). Centers are opened gradually throughout the year to allow the teacher to focus on skills related to the materials in various centers. Once a center is open, the students have access to the tools and materials and can add them to their art projects as they need. This project is designed to introduce students to the materials in the sculpture, recycled materials, and cardboard centers.

Instruction

Lesson Plan Class 1:

Introduction and Reading (Class 1/10 minutes): Teacher will gather the students at the carpet/active board area to introduce the lesson and read the book “Iggy Peck, Architect” to the students. Teacher will stop reading the story when she arrives at the design challenge, the part of the book where Iggy and his classmates are stranded and need a way to reach the other side of a river.

Instructions (Class 1/ 5 minutes): The teacher will give the following instructions to the students. First, they will have 5 minutes to familiarize themselves with the newly opened “sculpture center” of the art room maker space. Then they are to return to their work space where each student will have 5 minutes to quickly sketch their initial design idea. Finally, the teacher will give each student 10 minutes to pair and share their initial idea with a table mate (groups of 2 or 3 depending on table configuration). Each group will need to decide on their group approach to the design challenge by the end of their 10 minute pair and share time.

Students Plan, Pair and Share (Class 1/ 20 minutes): As described in the instructions above, students will have a total of 20 minutes to explore the materials, sketch their initial designs, pair and share, and decide on a group approach to the design challenge.

Presentation of Ideas (Class 1/ 10 minutes): Class 1 will conclude with students coming together as a whole group at the carpet/active board area. Each small group will explain their plan to the whole group. The teacher will note materials choices to aid in planning areas where the students might need support, such as methods for connecting materials that might be new to the students.

Exit Ticket: Each group will turn in their plan to the teacher as an exit ticket at the end of class.



Lesson Plan Class 2:

Introduction (Class 2/ 10 minutes): Teacher will greet the class and remind them of the previous design challenge. Teacher will demonstrate three techniques that will help support students based on the designs they presented at the last class meeting. (Example: “many of you are planning to use cardboard, so I would like to show you all the best way to cut cardboard before we begin.”) Students will be reminded of the supplies and center in the makerspace that they can use. Students will be told that they will have 20 minutes to execute their design.

Student work Time (Class 2/ 20 minutes): Students will work in their small groups at their tables, gathering supplies as needed from the maker space centers. The teacher will circulate around the room offering advice as needed. Teacher will signal the end of work time by playing the 3 minute “clean up song” that is part of normal class procedures. Students know to stop working when the song begins and that they should be finished cleaning up by the end of the song. Students will be told to leave their creations on their tables.

Gallery Walk (Class 2/ 5 minutes): Students will walk around the room and look at what each team created in response to the design challenge.

Closure (Class 2/ 10 minutes): The teacher will gather students at the carpet/active board area to read the end of the story and see how Iggy Peck solved the design challenge.

Exit Ticket: Students will be given a “3,2,1 Exit Ticket” Where they are asked to write 3 things they learned, 2 new materials that they used, and 1 design idea (not from their own group) that they really liked.

Assessment

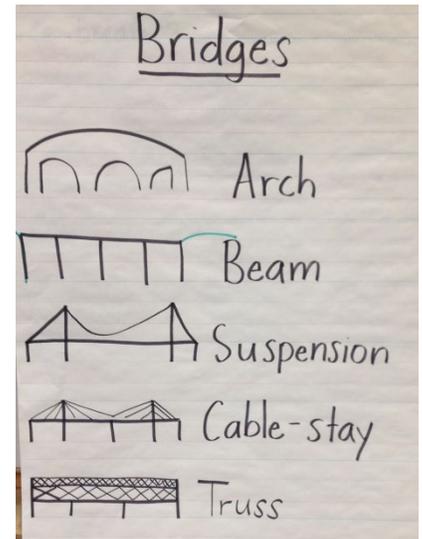
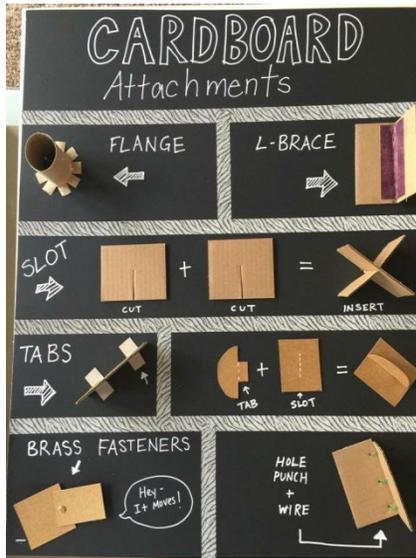
During Class 1, students will be assessed based on both the individual plan and the group plan that they created. During class 2, students will be assessed based on participation, as noted during teacher observation of student work, and completion of the design challenge.

Differentiation

Groups have been set up to aid struggling students by insuring that lower performing students and higher performing students are spread throughout the groups. However, students can be further supported through optional design “menus” that show connection techniques for various materials in the maker space. These menus show pictures of different connections so they are accessible to many different levels of students. If needed, the distance that the design must span can be shortened to further support students who struggle.



Below are examples of the types of design “menus” that show connection techniques for various materials in the maker space. (I did not create these menus. Photos of similar menus for a variety of materials are found on the internet and reproduced or recreated as needed to serve student needs.)



Exit Ticket

3	Things I learned today.....
2	New materials that I used today.....
1	Design idea that I really liked.....

A photograph of my art classroom, showing the supply centers on the left side of the room, under the windows. Centers are color coordinated and each supply bin in a center is color coded to match. This makes it very easy for the teacher to direct students to supplies and very easy for students to return their supplies to the correct location.

