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Resources: Building Big (and Small)

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Recommended Citation
An introduction to building big structures and their significance in our daily lives. The text highlights the importance of construction projects such as roads, bridges, and skyscrapers, and discusses the resources available for exploring these topics in the classroom. The text also features a set of excellent videos and web resources that could be used in the classroom to help students explore different structures and understand the role of engineering in our lives.
the modern world. However, few people are aware of how engineers design dams to redirect massive rivers. The Hoover Dam, the Aswan Dam in Egypt, and the great Johnstown flood of 1889 are all featured in this segment. Finally, central features to any major city skyline are the massive skyscrapers that serve as home to major businesses, hotel patrons, and apartment dwellers. Famous skyscrapers like the Empire State Building and the Eiffel Tower capture our imagination and cause us to marvel at the technology used to "build big." You will learn how builders keep erecting structures to reach new heights, as demonstrated in Japan's plan to build a new "Supertower." The Building Big video series will bring you details of how technology has helped us construct modern marvels and engineer structures to massive heights.

**Hands-On Activities**

One of my favorite features of the video series is a hands-on component designed for kids called "Building Small." It is a bonus segment highlighted on each video featuring Kenny and Caroline from the hit PBS show ZOOM. Kenny and Caroline present a hands-on activity geared to kids, ages 8 to 13. Building Small activities allow children to explore the building concepts they learned in the video segment by using common household items and basic tools found in the home or school in order to build small models of the featured structure. One such activity guides students in the construction of a geodesic dome made from rolls of recycled newspapers. The finished structure is large enough for a small child to play in. A small brochure insert provides a brief description of the activity, a list of required tools and materials, and an estimated time for construction, as well as tips to implement the activity in the classroom. The Building Small segments have also highlighted parents working with their children to demonstrate the construction of each hands-on activity.

**Website**

In connection to the Building Small segment, visit [www.pbs.org/buildingbig](http://www.pbs.org/buildingbig) for more information about building structures. You will find interactive activities, material labs, additional challenges, and resources for teachers. Through interactive scientific "labs," you will discover how loads, forces, materials, and geometric shapes are critical elements to consider when designing structures. Explore the "Wonders of the World" database section of the website to find fun facts about the world's most famous "super structures." You will also find additional design challenges around the five structure topics. These challenges teach you more about necessary constraints and criteria to consider when building big structures for a community. These design challenge scenarios also cause students to consider both the positive and negative impacts that are generated when building super structures. Best of all, these challenges can be completed right at your computer desktop. You can also learn about the various domains of engineering through the biographies of ten practicing engineers featured on this website.

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**Product Information for Building Big Video Series:**

http://shop.pbs.org/product/show/9206

**Building Big with David Macaulay**

Box Set

Series: Building Big

Grade level: Grade 4+

Closed captioned: Yes

327 min on 5 VHS

List Price: $69.95

**Product Information for: Building Big companion book**

http://shop.pbs.org/product/show/8022

**Building Big with David Macaulay**

David Macaulay

Hardcover; 192 pages; color illustrations

Series: Building Big

Grade level: Grade 4+

192 pps in 1 Book

List Price: $30.00

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