



# Civil Engineering

**If you can dream it, civil engineers can build it!** Almost every piece of infrastructure you see (and lots you don't) were designed by civil engineers: buildings, bridges, tunnels, dams, highways, airports, water and sewer systems. Civil engineers meet the needs of the future by balancing human demands with the requirements for healthy, natural environments.

## **Where do Civil Engineers Work?**

Civil engineers work in a variety of organizations, including:

- Structural Design Firms
- Geotechnical Consulting Firms
- Commercial Construction Firms
- Residential Development Firms
- Departments of Transportation

## **Explore Our Civil Curriculum**

### **Grades 3-5:**

Dam Forces  
Test & Improve: Making Tall & Strong Recycled...  
Building Our Bridge to Fun!

### **Grades 6-8:**

Protecting Our City with Levees  
Breaking Beams  
Construction Technologies: Create the Strongest...

### **Grades 9-12:**

Preventing Potholes  
Pump It! Design-Build-Test Helpful Village Water...  
Boom Construction

## **Civil engineering spans many disciplines, but is generally broken into a few subfields:**

built environments, architectural, construction, geotechnical and earthquakes, transportation and water resources.

## **What do Civil Engineers Study?**

To address the complex problems we face with designing and implementing infrastructure to serve a growing population, civil engineers need to understand a wide array of systems and how they interact. Designing energy and resource efficient structures, roads, bridges and treatment systems requires engineers to have an understanding of properties of materials, computer-aided design, environmental factors, statics and dynamics. Civil engineers collaborate with other engineers on heating and cooling systems, electrical systems and finding ways to minimize environmental impact of new construction.