



National Engineer's Week!

Unscramble the letters below to spell materials used to build roads! (Hint: Use the bolded words in the text on the right)

Do you love to build, create and solve problems? You should check out the field of engineering! Engineers use their knowledge of math, technology and science to design and build things like roads, bridges and tunnels that help cars and trucks safely get where they need to go. National Engineers Week is celebrated each year during the week of President George Washington's birthday (Feb. 22). Not only was Washington the first president of the United States, he was also an engineer who surveyed land on the frontier.

Today's highways are designed and built by **civil engineers** and other construction experts, like **geotechnical engineers**.

Do you wonder how a road gets built? The first part of road construction is the earthwork. Huge earth-moving machines are used to build up a solid foundation. Bulldozers and graders move around the **dirt** delivered by dump trucks to make a level surface. **Gravel** is added in layers and machines roll over it to make it flat and compact.

Here are some of the materials used to build roads:

- Asphalt uses an oil-based substance called **bitumen** to make sand and crushed rock stick together like glue.
- **Concrete** also uses **sand** and crushed rock, but it's held together with **cement**.
- **Steel bars (rebar)** are used to reinforce the concrete.

Next time you are riding on a freeway, you can think about the engineers who helped build it! Visit azdot.gov/ADOTKids for more activities and videos about engineering and transportation!

ONTCEREC

SNDA

VEALGR

ETINUBM

MCENET

AREBR

ITRD

ELTSE



Now write the letters in the circles in order on the lines below.
Who can we thank each year the week of Feb. 22 for roads and bridges?

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