

ARCHERY



THE INVENTION OF THE BOW AND ARROW was a game changer—and for more reasons than experts first realized. Prehistoric humans replaced their old spear-throwers with more accurate bows at least 11,000 years ago in Europe and probably much earlier in Africa. These more effective hunting tools helped them expand their diets, adding small animals to the mix. The shift to bows also occurred as individuals became specialists at doing certain tasks in society. Before bows, all members of a community may have hunted. But using bows took more strength and experience—in other words, the most expert hunters. When people divided tasks by who could do what best, all of society changed. Think of that the next time you're asked to do a chore.

ARCHIMEDES PALIMPSEST



IN 1998, a book collector paid \$2 million for this old prayer book. Why? Part of the 13th-century book was written on top of a 10th-century manuscript that included important works by the brilliant ancient Greek scientist Archimedes. Parchment is made from specially treated, stretched, and dried animal skin. And it cost a lot back when it was used: something like \$20 a sheet, if you bought it today. So writers washed or scraped off old text and reused parchment over and over for years, even centuries. (A reused parchment book is a palimpsest.) Lucky for us, traces of the old text could be seen with special, advanced imaging equipment.

CHRYSLER BUILDING

ART DECO



THIS CREATIVE MOVEMENT, popular in the United States and western Europe from about 1925 into the 1930s, transformed urban architecture and had a major impact on art, fashion, and even furniture. The movement is known for simple and streamlined designs, sleek geometric ornamentations, edgy sunrise and floral patterns, and shapes inspired by Native American artwork. Often used on public buildings, including the Chrysler Building in New York City, and apartment buildings, it was both cool-looking and practical: Its fancy features could be mass-produced for much less cost than earlier ornamentation, which was often hand-carved by artists.



AUGMENTED REALITY BRINGS 2D IMAGES TO LIFE.

AUGMENTED REALITY



TAKE REAL LIFE and add a layer of computer-generated information, and you've got augmented reality (AR). If you've ever seen Pokémon GO, you already know about AR: You're exploring a real scene and find a computer-generated Squirtle or Eevee. Augmented reality ("augment" means to add) isn't just fun and games, but it is plenty awesome. It can give you a deeper experience of the world by adding details about the scene you're viewing. You could view an archaeological site full of ruins, and AR could layer on a computer-generated image of the houses and people who lived there when it was a thriving community. AR also could help turn 2D drawings into 3D images that you can move around and explore. AR is becoming more available. Some AR requires special equipment, but some requires only the smartphone you hold in your hand.

AVALANCHE MAPPING



DURING AN AVALANCHE, a huge slab of snow breaks loose and slides down a mountain at speeds up to 80 miles an hour (130 km/h). It's the last thing you want to experience when you're out skiing in the backcountry. Avalanches are most common when a winter storm dumps a lot of fresh snow on top of existing snowpack, which cracks the weaker layers underneath. Luckily, avalanche forecasters predict which areas are most at risk for avalanches—and sometimes have snow blasted loose when nobody's around. They traditionally rely on their knowledge of terrain, snowpack conditions, weather forecasts—and their experience—to determine avalanche risks. But new, high-tech equipment, including radar and even satellite imagery, can look into the layers of snow, help identify likely avalanches, and map their locations.

AXOLOTL



AXOLOTLS, rare Mexican salamanders, never grow up. Unlike other amphibians, such as frogs, which transform from tadpoles to much different-looking adults, axolotls (pronounced ACK-suh-LAH-tuhls) keep their tadpole-like fins and external gills all their lives. But that's not the only awesome thing about these water dwellers. They also can regrow body parts that get damaged—their legs, tails, jaws, even skin and spinal cords! Those amazing feats have attracted the attention of scientific researchers, who wonder if we can learn any lessons from the axolotl to help people heal better. No wonder the ancient Aztec revered them.

