The Romans were innovative builders. Today's society is indebted to ancient Roman architects for their perfection of the dome and arch, development of concrete, and advanced use of fired bricks. Ancient Roman engineering achieved phenomenal feats such as aqueducts that brought water supplies to the city and the roads and bridges that are still in use today both in Italy and countries that once were Roman colonies, such as France, Britain, and Germany.

Have students use the accompanying Building and Engineering Marvels activity sheet (page 145) to search for local and national examples of ancient Roman building and engineering innovations. As a follow-up discussion, have students share their discoveries. To culminate this activity, have students create brochures that list all of the Roman building and engineering marvels in their neighborhood. Students may also want to include the ancient Greek architectural elements (see Architectural Adventure activity, page 136) in their brochure. Then, have students share their brochures with their families on a walking tour as they point out their town's ancient "sources."
Find examples of ancient Roman architectural and engineering innovations in your neighborhood! Can you think of other examples found in famous buildings and/or monuments across the country?

**round (Classical) arch:** A structure over an opening that is semi-circular in shape.

*Location:*

**barrel vault:** An arched interior roofing made of stone or brick that is cylindrical or semi-circular in section, like a tunnel.

*Location:*

**barrel intersecting (groined) vault:** A segmented barrel vault used at the point of multiple passageways.

*Location:*

**dome:** A convex rounded roof covering part or all of a building.

*Location:*

**arena (multipurpose):** An enclosed area used for public entertainment.

*Location:
aqueduct: A conduit for carrying large amounts of flowing water; a structure for conveying a canal over a river or stream.

Location:

concrete: (from the Latin word *concretus* meaning “grown or run together”) One of the oldest man-made building materials—composed of sand, stone, cement, and water—that can be applied and molded and gradually hardens. The Romans built concrete walls and vaults of massive thickness which would resist stress, but added relieving arches or used lightweight materials (porous volcanic rock or earthenware jars) to the concrete mixture to alleviate problems of weight.

Location: