Web Resources:

(I will put links to these at my web page http://www.math.wisc.edu/~wilson)

Lots of images of tilings in art, pottery, wall and floor tiles, etc., from many cultures and time periods:
http://www2.spsu.edu/math/tile/grammar/index.html

Lots of tiling pictures:
http://www2.spsu.edu/math/tiling

Lots of Escher tessellations by pictures:
http://www.tessellations.org/eschergallery1thumbs.htm

NCTM Illuminations:
http://illuminations.nctm.org

Discussion and Proofs of the Pythagorean Theorem:
http://www.cut-the-knot.org/pythagoras/index.shtml

Rep-Tile worksheet for class:
http://illuminations.nctm.org/lessons/6-8/reptiles/reptileworksheet.htm

Lesson plan on Rep-Tiles:
http://illuminations.nctm.org/index_d.aspx?id=251

MathWorld:
http://mathworld.wolfram.com

MathWorld on Tessellations:
http://mathworld.wolfram.com/Tessellation.html

MathWorld on Regular Tessellations:
http://mathworld.wolfram.com/RegularTessellation.html

Ohio Resource Center:
http://www.ohiorc.org/

Ohio Resource Center on covering the plane with Rep-Tiles:
http://www.ohiorc.org/ohiorc_resource_display/0,3820,1150,00.shtm

“Tiling the Chair”, more mathematical:
http://math.wcupa.edu/~nitica/webchair/webchair.html

Nice article on Nets:
http://gwydir.demon.co.uk/jo/solid

More on Nets:
http://mathworld.wolfram.com/pdf/Icosahedron.pdf
http://mathworld.wolfram.com/pdf/Dodecahedron.pdf
http://mathworld.wolfram.com/pdf/TruncatedDodecahedron.pdf
http://mathworld.wolfram.com/pdf/Tetrahedron.pdf

Math Forum:
Project on Rep-Tiles:
http://mathforum.org/pom/project4.95.html

Project on tessellations:
http://mathforum.org/sum95/suzanne/whattess.html

One person's page on tessellations:
http://www.jimloy.com/geometry/tess.htm

A page comparing regular and semi-regular tilings:
http://www.counton.org/explorer/morphing/03regularandsemiregulartiling.shtml

If you want to stretch your mind, tilings on surfaces other than the plane:
http://www.ieeta.pt/~tos/animals.html

Back to the plane, but still mind-stretching:
http://www.uwgb.edu/dutchs/symmetry/archtil.htm

Tilings in architectural and historic images:
http://www.dartmouth.edu/~matc/math5.geometry/unit5/unit5.html

Generalizations of tilings:
http://math.arizona.edu/~lega/195/Fall00/lectnotes/lect2_3/tilings.html

Notes from a college course, with interesting web links and more technical details:
http://www.humboldt.edu/~mef2/Courses/m103n2_1_05.html

A research paper, if you want to see what mathematicians write about things like this! (You will need Adobe's Acrobat Reader, go to

http://www.adobe.com/products/acrobat/readstep2.html for download.)
http://www-mat.pfmb.uni-mb.si/personal/klavzar/preprints/tilings.pdf