

Conglomerates & Breccia

Chapter 7

Clastic rocks contain broken bits and pieces of older rocks. The previous chapters dealt with small rock fragments that could be as fine as dust or as large as a grain of sand. In this chapter, you will be learning about rocks that contain clasts larger than 2 mm in diameter.



Conglomerate

Conglomerates also contain a fine-grained matrix of sand or silt. The matrix of a rock is the fine-grained material that surrounds larger grains in conglomerates that looks like cement in the picture. Conglomerate rocks are cemented together by calcite, iron oxide, silica, or hardened clay. Conglomerates are gravels in dried river beds and other areas that have turned to stone.

What is a conglomerate

Conglomerates are clastic rocks that contain pebbles, cobbles, and boulders with rounded clasts. These large rocks have space between them that is filled with sand, silt, and clay particles. Minerals dissolved in water precipitate between the rocks where they crystallize and cement the clasts into a conglomerate.

The picture of the conglomerate above shows a variety of different sized clasts with a matrix filled with much smaller fragments of sand, silt and clay.

Conglomerates & Breccia

Quiz 7

Fill in the blanks using words from the Word Bank

1. Conglomerates are rocks with _____ larger than 2 mm in diameter.
2. Puddingstone is a _____ rock and easily distinguished from concrete by its extreme hardness and the pebbles.
3. Quartz is a _____ and durable mineral that binds the matrix together in some sedimentary rocks.
4. Fault movement breaks rocks apart creating sharp edges on rock fragments that create _____.
5. The _____ or groundmass of conglomerates is the finer-grained mass of material that surrounds the larger clasts.
6. Puddingstone pebbles were originally _____ nodules that formed in sedimentary beds of chalk.
7. Oxbow lakes, dried river beds, _____, and beaches all have places where conglomerates form.
8. Conglomerates and breccia are cemented together with, quartz, clay, _____, and other dissolved minerals.
9. Rounded river rocks can be broken fragments of sedimentary, metamorphic, and _____.
10. Conglomerates are clastic rocks that contain pebbles, boulders, and _____ with rounded clasts.

Word Bank

calcite	unique	playas	igneous	clasts
matrix	cobbles	breccia	hard	flint

Puddingstone Cookies

Activity 7

Background information

Puddingstones cookies are created using a butter cookie recipe. These cookies are easy to make. Add fun pieces of candy or sprinkles to the cookies to make bright colored additions to the dough so they will look like puddingstones.



Materials

- Butter or margarine 225 g (8 oz.)
- Granulated sugar 18 cl ($\frac{3}{4}$ cup)
- Egg yolk
- Flour 48 cl (2 cups)
- Cookie sprinkles
- Parchment paper (optional)
- Plastic wrap

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