Rock Star

NCSO Sample Event
2010 Elementary Tournament
STATION 1

Identify.

1.

2.

3.

(NCSCoS S4.2.01)
STATION 2

Put these in order from softest to hardest

4. Softest
   a. Small clear/white rock

5. Medium Soft
   b. Flat dark rock

6. Medium Hard
   c. Large white rock

7. Hardest
   d. Orange rock

(NCSCoS S4.2.02, S4.2.04)
STATION 3

Identify the luster as glassy, metallic, or dull

8. (Amethyst)

9. (Wood)

10. (Pyrite)

11. (Calcite)

12. (Sapphire)

(NCSCoS S4.2.02, S4.2.04)
STATION 4

Fill in the blanks

The whole earth is made of rocks and minerals. Minerals are made from ____13____ - either a single one or a combination of several. Rocks are made up of two or more ____14____. You need minerals to make rocks, but you don't need rocks to make minerals. Rocks are constantly being formed, worn down and then formed again. This is known as ____15____. It takes thousands of years for rocks to change. Rocks are divided into 3 types, ____16____, metamorphic, and ____17____. 

Word Bank:

Chemicals        Mantle        Sedimentary
Crystals         Minerals      The Rock Cycle
Geode            Mountain      Volcano
Igneous          Sand          Weathering

(NCSCoS S4.2.03)
Iron is magnetic. Identify if each sample contains iron (yes or no).

18. [Image of a sample]

19. [Image of another sample]

20. [Image of a third sample]

21. [Image of a fourth sample]

22. [Image of a fifth sample]

(NCSCoS S4.2.01, S4.2.02)
STATION 6

Match the rocks to their uses

23. Granite
   a. Used in electronics such as capacitors.
   b. Used as a solid fuel to produce electricity and heat through combustion

24. Obsidian
   c. Used widely in construction for floors, countertops, and monuments.

25. Mica
   d. Used largely for decorative or ornamental purposes

26. Coal
STATION 7

Identify:

27. 

28. 

29. 

30. 

31. 

Word bank: Amethyst  Citrine  Gneiss  Sandstone  Slate

(NCSCoS S4.2.01)
HCl reacts with calcium carbonate, which is the main component of shells of marine organisms, snails, and pearls. Identify if each sample contains calcium carbonate or not by placing a drop of HCl on each one.

32.

33.

34.

35.

36.

(NCSCoS S4.2.01, S4.2.02)
STATION 9

Use the bedrock map to determine where each group of rocks and minerals would likely be found.

37. Mountains
   a. Coal, Limestone, Sandstone

38. Piedmont
   b. Granite, Alaskite, Pegmatite, Obsidian

39. Coast
   c. Gneiss, Schist, Slate, Marble

(CNCSCoS S4.2.07)
STATION 10

Choose the best match for each number

40. Formed when heat and pressure act on another type of rock, changing its properties.  
a. Sedimentary

41. A naturally occurring solid formed through geological processes with a specific chemical composition, a highly ordered structure, and specific physical properties.  
b. Metamorphic

42. Formed when weathering and erosion break down a rock into loose material, then the particles are deposited out of air, ice, wind, gravity, or water.  
c. Igneous
d. Mineral

43. Formed by magma cooling and becoming solid.

44. An aggregate of minerals, does not have a specific chemical composition.  
e. Rock

(NCSCoS S4.2.02, S4.2.03)
# 2010 Rock Star

**NCSO Sample Event** - Student Response Sheet

**Names:** ________________________, ________________________  
**School:** __________________________________________________________

**Station 1:**

1. ________  
2. ________  
3. ________  

**Station 2:**

4. ________  
5. ________  
6. ________  
7. ________  

**Station 3:**

8. ________  
9. ________  
10. ________  
11. ________  
12. ________  

**Station 4:**

13. ________  
14. ________  
15. ________  
16. ________  
17. ________  

**Station 5:**

18. Yes or No  
19. Yes or No  
20. Yes or No  
21. Yes or No  
22. Yes or No

**Station 6:**

23. ________  
24. ________  
25. ________  
26. ________  

**Station 7:**

27. ________  
28. ________  
29. ________  
30. ________  
31. ________  

**Station 8:**

32. Yes or No  
33. Yes or No  
34. Yes or No  
35. Yes or No  
36. Yes or No

**Station 9:**

37. ________  
38. ________  
39. ________  

**Station 10:**

40. ________  
41. ________  
42. ________  
43. ________  
44. ________
2010 Rock Star

NCSO Sample Event- Student Response Sheet

ANSWER KEY

Station 1:
1. orbicular rhyolite
2. tigers eye
3. olivine

Station 2:
4. _____ C _____
5. _____ B _____
6. _____ A _____
7. _____ D _____

Station 3:
8. Glassy
9. Dull
10. Metallic
11. Dull
12. Glassy

Station 4:
13. Chemicals
14. Minerals
15. The Rock Cycle
16. Igneous or Sedimentary
17. Igneous or Sedimentary

Station 5:
18. Yes or No
19. Yes or No
20. Yes or No
21. Yes or No
22. Yes or No

Station 6:
23. _____ C _____
24. _____ D _____
25. _____ A _____
26. _____ B _____

Station 7:
27. Sandstone
28. Citrine
29. Slate
30. Amethyst
31. Gneiss

Station 8:
32. Yes or No
33. Yes or No
34. Yes or No
35. Yes or No
36. Yes or No

Station 9:
37. _____ C _____
38. _____ B _____
39. _____ A _____

Station 10:
40. _____ B _____
41. _____ D _____
42. _____ A _____
43. _____ C _____
44. _____ E _____