



**Science Grade 5
Scoring Guide for
Released Item #11
Claire and Her Mixture
Fall 2007**



ANSWER THE FOLLOWING CONSTRUCTED-RESPONSE ITEM IN YOUR ANSWER DOCUMENT.

**11 Constructed-Response
(3 points)**

Claire is given a mixture of iron filings, gravel, and sand. She is asked to separate the mixture into its three parts.

- List two tools Claire should use to separate the mixture into its three parts.
- Describe the steps for using these tools in order to separate the mixture.

NOTHING WRITTEN IN THIS TEST BOOKLET WILL BE SCORED.

Science Rubric for Claire and Her Mixture

Scoring Guide:

Bullet 1: (0-2 points)

The student will list 2 tools that are adequate for separating the components of the described mixture; 1 point per distinct tool.

- Filtration sieves, strainer, screens, net
- Magnets
- Tweezers
- Sticks, toothpicks (tongue depressor or like items to separate large objects)
- Forced air

Bullet 2: (0-1 point)

The student will state how the tools are used to separate the components

- Tweezers to grab and remove gravel
- Sticks to push large objects (e.g., gravel) from the smaller components (e.g., iron filings, sand)
- Magnets for the iron filings
- Sieves to separate gravel and sand

Note: Magnet must be listed and used for a 3 point answer

Anchor Paper 1 – Score Point 3

Claire could use a magnet & a strainer.

1. You put the 3 things on a plate.
2. Use the magnet to attract the iron filings & take them out of the bowl.
3. Use a strainer so the sand goes through & the gravel doesn't.

**Anchor Paper 1
Score Point 3**

The student correctly identifies two tools that are adequate for separating the components of the mixture (*a magnet & a strainer*). The student describes the steps used to separate the mixture using these tools (...*2. Use the magnet to attract the iron filings...*...*3. Use a strainer so the sand goes through & the gravel doesn't.*).

Anchor Paper 2 – Score Point 2

• A filter

• Tweezers

filter out sand with filter
 separate iron and gravel with
 tweezers.

**Anchor Paper 2
 Score Point 2**

The student identifies two tools that are adequate for separating the components of the mixture (*A filter Tweezers*). The student describes the steps used to separate the mixture using these tools (*filter out sand with filter separate iron and gravel with tweezers.*). The student does not mention a magnet. A magnet is the only acceptable tool to separate the iron filings from the mixture.

Anchor Paper 3 – Score Point 1

Claire should use tweezers to pull out the gravel and iron fillings and a hand lense to search for smaller parts of the fillings or gravel.

**Anchor Paper 3
Score Point 1**

The student identifies one tool that is adequate for separating the components of the mixture (*tweezers*). A (*hand lense*) is not an acceptable tool for the separation of the mixture.

Anchor Paper 4 – Score Point 0

a shovel and a magnifying glass
You can look through the magnifying glass and
separate with the shovel.

**Anchor Paper 4
Score Point 0**

The student fails to identify any tool that is adequate for separating the components of the mixture. (a shovel and a magnifying glass) are not acceptable tools for the separation of the mixture.