MRSEC

Interdisciplinary Education Group

Smart Paper Activity Worksheet

After you finish the Smart Paper Activity, answer the following questions about what you learned.

1. Why is the order of the papers important when using carbonless copy paper?

2. List three different ways you can break a microcapsule.

3. How big are microcapsules?

4. What do smart paper microcapsules contain?

5. Why do we use microcapsules?

6. Why did we break paintballs in the splatter box?

7. What is missing from a thermal printer?

8. How does the invisible ink become visible?

Smart Paper Worksheet Answers

1. Why is the order of the papers important when using carbonless copy paper?
   The papers are coated with ink in a certain way and on certain sides of the paper.

2. List three different ways you can break a microcapsule.
   Mechanically (using pressure), using heat, or dissolving (medicine)

3. How big are microcapsules?
   They are really small, microscopic in size (1-20 microns generally)

4. What do smart paper microcapsules contain?
   Colorless ink

5. Why do we use microcapsules?
   They keep the ink separate and colorless until we want to use it.

6. Why are we breaking paintballs in the splatter box?
   It's a model for what your pen does to the capsules in the paper when you write.

7. What is missing from a thermal printer?
   A print head and ink

8. How does the invisible ink become visible?
   A chemical reaction

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