

How emissions affect the air we breathe

Activity 3 - Smog in a jar

Our air is one of the earth's most precious resources. We need to take care of it to preserve the environment and protect the health of everybody. This investigation will help you learn about smog. Smog is visible air pollution from emissions reacting with sunlight. It can be seen in some industrial areas and remains a familiar sight in cities today.

Complete the following experiment...

Materials:

- 1x glass jar (e.g - an old jar jam)
- 3x ice cubes per group
- 1x piece of aluminium foil (big enough to cover the lid of the jar)
- 1x small piece of paper (twist it together to make a spiral stick)
- 1x lighter/match sticks (teacher/guardian guidance needed)

Instructions:

Step 1: Gather all materials and have them ready to go!

Step 2: Before starting the investigation, ensure:

- » The aluminium foil has been moulded around the lid of the jar -then take it off and put it aside.
- » Ensure there is a little water in the jar (to do this, act as though you are rinsing the jar then shake off the water very briefly so a small amount of moisture remains, and it is visibly noticeable)

Step 3: Now you are ready to go! Put the ice cubes on top of the aluminium foil to get the foil nice and cold.

Step 4: Grab the piece of paper you twirled to make a spiral stick

Step 5: This then needs to be lit up with fire **(by a teacher/guardian)**

Step 6: Place the piece of paper in the jar

Step 7: As quickly as possible, put the aluminium foil on top of the jar to trap the smoke in.

Step 8: Observe and reflect - what do you see?



After doing the investigation, answer the following questions:

1. Why can smog appear in industrial areas or crowded cities?

2. Why is it important to help reduce air pollution?

3. Imagine smog in your neighbourhood. What do you think smog can do to our air and to humans?

4. What do you think people can do to reduce smog?



Did you know?

New Delhi (India) and Beijing (China) are some of the world's most polluted cities.

Take this lesson further!

Do your own research on a city that experiences high rates of air pollution. List 5 facts you've learnt about that city's issues around pollution. Share it with a friend!



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