

Kitchen Crisis



Smithsonian
Science Education Center

HOW CAN WE IDENTIFY MATERIALS BASED ON THEIR PROPERTIES?
Kitchen Crisis
Smithsonian Science for the Classroom™
©Smithsonian Institution
CREDIT: Smithsonian Science Education Center

Your Challenge



Chef Ana is head chef at the Tasty Meal diner in Hong Kong. She has an important event coming up at the restaurant in one week. However, when she came in to work today, she found that a water pipe in the kitchen had burst, flooding the kitchen. The water caused the labels to fall off some jars. Ana knows that the solids in the jars are either sugar, salt, cornstarch, baking soda, or alum. She doesn't know which solid is which, though, and needs your help! She has heard that your team has experience identifying materials based on their properties. She would like you to help identify the solids in the jars. She needs your analysis quickly so she can start preparing for the event.



Smithsonian
Science Education Center

HOW CAN WE IDENTIFY MATERIALS BASED ON THEIR PROPERTIES?
Kitchen Crisis
Smithsonian Science for the Classroom™
©Smithsonian Institution
CREDIT: Smithsonian Science Education Center

Whats in the Jar?

Jar	Sample numbers (by group)							
	1	2	3	4	5	6	7	8
A	11	22	33	44	54	63	72	81
B	12	23	34	41	53	62	71	84
C	13	22	31	42	52	61	74	83
D	14	21	32	43	51	64	73	82



Smithsonian
Science Education Center

HOW CAN WE IDENTIFY MATERIALS BASED ON THEIR PROPERTIES?
Kitchen Crisis
Smithsonian Science for the Classroom™
©Smithsonian Institution
CREDIT: Smithsonian Science Education Center

Scientists Present

Prepare a presentation of your conclusions for Chef Ana. Your presentation must include:

- Your group's plan
- The tests your group carried out
- The results of your tests
- Your group's claim for what is in each jar
- Evidence to support your claim



Smithsonian
Science Education Center

HOW CAN WE IDENTIFY MATERIALS BASED ON THEIR PROPERTIES?
Kitchen Crisis
Smithsonian Science for the Classroom™
©Smithsonian Institution
CREDIT: Smithsonian Science Education Center