

# BACKPACKS

	BLUE	GREEN	PURPLE	3RD PERIOD	LUNCH	5TH PERIOD
SAM						
SAL						
SEAN						
3RD PERIOD						
LUNCH						
5TH PERIOD						

Last week three CLASSMATES (one named SAM), all Lost there backpacks( one was colored green), during the school day( one little boy lost his at lunch.) . From the clues provided can you determine which boy had which color backpack and when he lost it?

## CLUES:

1. Sam did not lose his back pack before lunch.
2. Sal's backpack which was not green, was lost during 3rd period.
3. Sean lost sight of his purple backpack during lunch.

(See page 2 for detailed solution)

## SOLUTION

NAME	BACKPACK COLOR	PERIOD LOST
<b>SAM</b>	<b>green</b>	<b>5th</b>
<b>SAL</b>	<b>blue</b>	<b>3rd</b>
<b>SEAN</b>	<b>purple</b>	<b>lunch</b>

### step-by-step

Lets look at the first clue "***Sam did not lose his backpack before lunch.***"

Locate SAM in the chart and find the columns with 3rd

Now locate grid square[**Sam-3rd**] and pencil in a 'red xx' .

(Because from this clue, we only know he had it before lunch, and nothing else).

Lets look at the next clue "***Sal's backpack which was not green was lost during 3rd period.***"

We are actually looking at two clues here :

- ..1. ***which was not green*** and,
- .2 ***lost during 3rd period.***

For **clue 1** look in the chart and find the column with Sal and green

Now find the grid square[**Sal-green**] and pencil in a 'red xx' .

For **clue 2** Find [**Sal-3rd**] and pencil in a check mark,

**\*NOTE:\***(This clue is actually quite useful because it allows us to eliminate some other grid-squares as follows.)

Locate the following [**Sal-Lunch,Sal-5th,Sean-3rd, green-3rd**]--eliminate these squares by pencil in a 'red xx' . their respective boxes.

Lets look at the final clue : "***Sean lost sight of his purple backpack during lunch.***"

We should immediately fill the grid squares[**Sean-purple, Sean-Lunch, lunch-purple**] with 'check marks'.

**\*NOTE:\***This is by far our most valuable clue yet, because it will allow us to complete ***Sean's row, the purple column, and the Lunch row*** as follows:

Locate the following grid squares[**Sean-blue,Sean-green, Sean-5th**] and [**Sam-purple,Sal-purple,3rd-purple,5th-purple**]

as well as the Lunch grid squares [**Lunch-blue,Lunch-green, Sam-Lunch**] fill ALL of them with 'red xx' now.

This in turn leads to other logic conclusions : (in no particular order)

[**Sam-fifth**], the only remaining period in which a backpack can be lost, so go ahead and fill in that square with a 'check mark'.

[**Sal-blue,3rd-blue**],the only remaining possible combinations for Sal's backpack.

(Which in turn eliminates [**Sam-blue,5th-blue**], and leaves only two possible combinations to solve the entire grid:

[**Sam-green,5th-green**] once those squares are filled with check marks, we have our solution as follows:

Congratulations!  
Puzzle solved.

To summarize:

**SAM: lost his green backpack sometime during 5th period.**

**SAL: lost his blue backpack sometime during 3rd period.**

**SEAN: lost his purple backpack sometime during the lunch period.**