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		(60=)	(60=)		(60 =)		
*	"T"						
0.795	0.261	1.095	2.767	1.649	2.833	6	
0.548	0.603	2.441	4.850	2.703	5.133	11	
0.676	0.418	1.439	2.617	1.610	2.500	8	
0.509	0.662	1.398	1.250	1.061	1.400	6	
0.577	0.559	1.052	1.750	1.519	1.617	9	
0.780	0.280	4.155	13.233	5.534	13.483	40	

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8:3):): 9:3 (SPSS) -1 .(Independent t-test) -2 -3 MANOVA .Wilk's Lambda

.Sidak post- hoc test

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 $(0.05 = \alpha)$

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(3) Wilk's Lambda MANOVA (4)

:(3)

2.783	4.100	2.767	
5.683	6.650	4.850	
3.300	5.083	2.617	
3.183	3.417	1.250	
4.483	5.283	1.750	
19.433	24.533	13.233	

MANOVA :(4)

: Wilk's Lambda

			F		
*0.00001	58	2	34.767	0.455	
*0.00001	58	2	13.082	0.689	
*0.00001	58	2	72.652	0.285	
*0.00001	58	2	36.071	0.446	
*0.00001	58	2	79.143	0.268	
*0.00001	58	2	199.061	0.127	

(0.05 =α) *

 α) (4)

(0.05 =

. (5) Sidak post- hoc test

:(5)

0.0167-	*1.333-		
*1.317			
0.833-	*1.800-		
*0.967			
0.683-	*2.500-		
*1.817			
*1.933-	*2.167-		
0.233			
*2.733-	*3.533-		
*0.800			
*6.200-	*11.333-		
*5.133			

 $(0.05 = \alpha)$

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 $(0.05 = \alpha)$

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(6) Wilk's Lambda MANOVA

. (7)

: :(6)

2.867 3.883 2.833 6.233 6.533 5.133 3.400 4.250 2.500 2.217 2.667 1.400 3.483 1.617 4.267 18.200 21.600 13.483

MANOVA :(7)

: Wilk's Lambda

			F		
*0.00001	58.00	2.00	9.444	0.754	
0.306	58.00	2.00	1.209	0.960	
*0.001	58.00	2.00	8.587	0.772	
0.056	58.00	2.00	3.309	0.905	
*0.00001	58.00	2.00	12.207	0.704	
*0.0001	58.00	2.00	12.809	0.694	

(0.05 =α) *

$$\alpha$$
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(Sidak post -hoc test)

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0.005	*0.967-		
*0.917			
0.867	*0.850-		
*1.717			
0.717	*1.517-		
*0.800			
2.333-	*5.583-		
*3.250			

(0.05 =α) *

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 $(0.05 = \alpha)$

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Independent t-test

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		(60=)		(60 =)		
*	"T"					
0.523	0.640	2.233	3.883	1.374	4.100	
0.823	0.224	3.275	6.533	2.349	6.650	
*0.042	2.059	2.729	4.250	1.788	5.083	
*0.009	2.648	1.612	2.667	1.487	3.417	
*0.016	2.441	2.510	4.267	2.026	5.283	
*0.046	2.019	9.287	21.600	6.573	24.533	

(1.96) (118) $(0.05 = \alpha)$ *

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 $(0.05 = \alpha)$

Independent t-

. (10) test

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		(60=)		(60 =)		
*	"T"					
0.822	0.226	2.004	2.867	2.034	2.783	
0.281	1.083	2.971	6.233	2.581	5.683	
0.831	0.214	2.644	3.400	2.479	3.300	
*0.001	3.519	1.627	2.217	1.372	3.183	
*0.009	2.650	1.935	3.483	2.190	4.483	
0.397	0.851	8.324	18.200	7.536	19.433	

(1.96) (118) $(0.05 = \alpha)$ *

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 $(0.05 = \alpha)$

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MANOVA

: Wilk's Lmabda

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MANOVA

: Wilk's Lambda

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Barbara, Radin. (1995). Dramatic techniques in ESL instruction.

Journal of Instruction Delivery Systems, V11, N4, p 14-18.

Cooper, Susan, Mccord (1995). Content decision making through two teaching methods simulations/ traditional lectures and their effectiveness on students, achievement in social studies classes. **Dissertation Abstract International,** Vol.26, No, 2, p. 178.

Goodman, J.Rose (1991) A naturalistic investigation of the relationship between literacy development and dramatic play in 5 year-old children. Ed. D, College for teachers of Vanderbilt University, **Dissertation Abstracts International**, Vol. 51, No. 12, p 113-117.

Ivory, J. & Mc Collum, J. (1999). Effects of social and isolate toys on social play in an inclusive setting. **Journal of special Education**, 32 (4), p 238-245.

Olesen, J. (1992). Evaluating young children, cognitive capacities through computer versus hand drawing Scandinavian, **Journal of Psychology**, 33, p193-203.

Richards, F. (2000). Role Playing in the Classroom: A tourism experience, Last revision: 20 Feb. 2002. Curtin University of Technology. http://lsn.curtin.edu.au/tlf/t1f2000/richards.html.

Rosalinda, Flynn. (1997). Developing and using curriculum based creative drama in fifth class reading and language arts instruction: A drama specialist and a classroom teacher collaborate, **Touth Theatre Journal**, v11, p47-69.

Rost, H. & Bruyn, E. (2000), Depression and play in early childhood. **Journal of Emotional and Behavioral Disorder**, 8 (4), p249-260.

Taylor, S.I. & Steel, C.R. (2002). The relationship between playfulness and creativity of Japanese preschool children article 24.2001, **from http Journals apa.org**, volume 33 pqd web.

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%100	%22.5	%15	%20	%27.5	%15	
9		6		3		Past simple-ed is / was
3			3			Yes, he did No, he didn't
5			3	2		Was/were Yes, I was No, Iwasn't
2	2					Were you? On/in + place
5	3				2	Parts of body
3				3		Possessive adjectives His/here
4					4	Numbers How many?
5			2	3		Must/mustn't
4	4					Cousequence
40	9	6	8	11	6	

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$$.\%20 = \%100 \times 40 \div 8 =$$

$$.\%15 = \%100 \times 40 \div 6 =$$

$$.\%22.5 = \%100 \times 40 \div 9 =$$

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• Complete these sentences using, *his or her:*



1-It's ----- bag.



2-It's ----- apple.



3-It's ----- book.

• Choose the correct numbers:

	Books	bags	apples		
January	25	34	41		
February	42	52	69		
Example:					
In February, we sold fourty two books					
1-In January, we sold bags.					
2-In February, we sold apples.					
3-In February, we sold bags.					

4-In January, we sold ----- books.

• Complete these sentences using, must or mustn't:
You turn right.
You ride a bike.
You eat.
• Use these two words in two sentences:
Today:
Can't:

• Answer these questions:
1- Did you go to school yesterday?
2- Did you visit your aunt yesterday?
3- Did you watch TV yesterday?
• Choose and complete:
Murad (crash/crashed) into a tree,
he (bange/banged) his knee,
Ali (bange/banged) his elbow.
•
• Make sentences:
1- Was my I bike on
2- Nablus in was Salma
. A consequently a College in a consequence
• Answer the following questions:

1- Were you in Ramallah yesterday?

2- Were you in Jerusalem yesterday?
3- Were you in Nablus yesterday?
• Complete using Yes, I was or No, I wasn't:
1 happy yesterday.
2 sick yesterday.
•
• Order these sentences:
Today I am better
Yesterday I was tired
Dear friend
I can't come to the party

- Compare between these two verbs by saying, past or present:
- 1- Was ----- is -----
- 2- Cook ----- cooked -----
- 3- Happen ----- happened -----
- Write the missed letters:

What is number 6?

What is number 2?



ملحق رقم (3)

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ملحق رقم (5)

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.Unit 5_ lesson 1

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.(past events)

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Did you visit your aunt yesterday?/ Did you study yesterday?

- Did Murad crash into a tree?	
- Did Murad bang his eye?	
- Did Ali crash into the tree?	
- Did you visit your sister yesterday?	
- Did you play football yesterday?	
- Did you bang your head yesterday?	
- Did you come to school yesterday?	
	:
. Unit 5_lesson 2	
	:
Were you in school were you?	

		yetsrday?
((at the market ,in the park	, at school, in Nablus)
		:
School, park, Market	t.)	
, 1	,	(Nablus
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		:
		:
:		
at school, on the	bike, in the park, at the 1	market, in a car, in Nablus
	:	
Were you in Na	blus yesterday?, Were you	on the bike yesterday?
No, I /Yes, Iwas)		
		(wasn't
Nablus	:	
	Market	
:	Market	
Nablu	18	

were you on the bike? were you in the car? .Unit 5_ lesson 3 his/her -1

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her his -3

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. Hand

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Point to your head

It's her head It's his head:

:

Her/his
nose nose

nose

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. Unit 6_ lesson 1

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Thirty-six(36) One(1) -1

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flashcardsfourty, thirty, twenty
nine one

twenty two

twenty two

22

one

thirty – six

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How many stones did you need to build the home?
:

.Uint 6- lesson 2

don 't turn left, turn right, stop -

Read

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Please stand up

Please dont eat, pleace count to ten

You mustn't wear your hat

Read

Please start

You go on turn left

You must sit down must stand up

You must turn right You mustn 't drink water

No radios Read

You mustn 't turn left

:

. Unit 6- lesson 3

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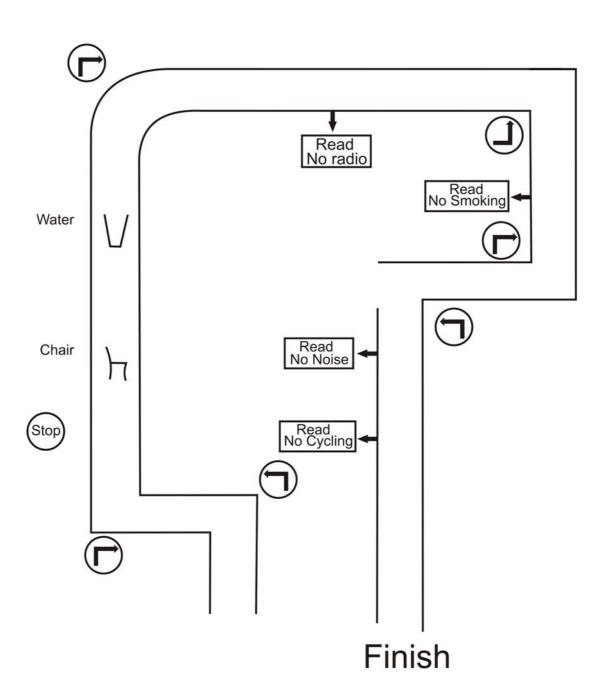
good
Oh!

No thats not right

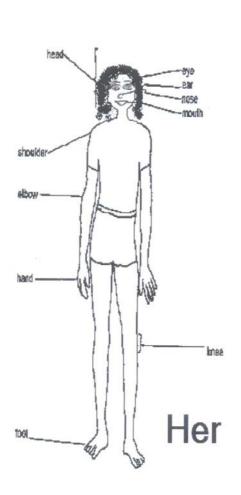
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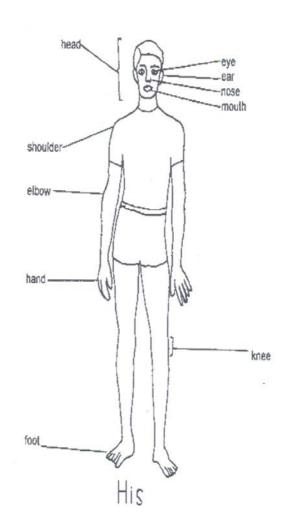


School Park Market 95



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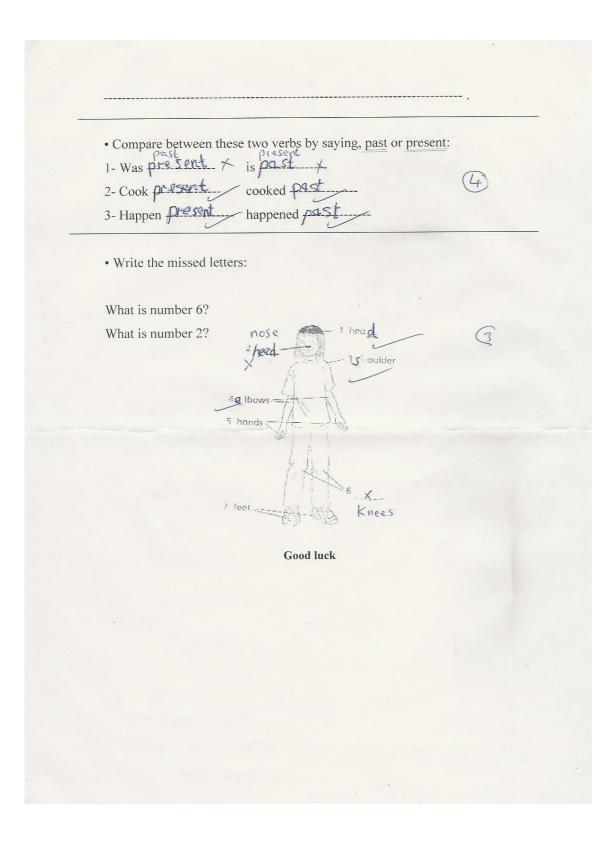




Name: 2005 Gra Date: 3/Vov. 2005 Sc	الرابع ب وي يوى طوفات: hool
• Complete these sentences using, <u>his or her:</u>	
1-lt's his bag.	
2-It's her-apple.	\$3
3-It's his-book.	
Choose the correct numbers:	
Books bags apples	
January 25 34 41	4
February 42 52 69	
Example:	
In February, we sold fourty two books	
1-In January, we sold - thirty four-bags.	
2-In February, we sold - Slaty - Line apples.	
3-In February, we sold - fifty- two bags.	
4-In January, we sold -twenty -tive- books.	

• Complete these sentences using, must or mustn't:
You must turn right.
tour right.
You must_ride a bike.
You must eat.
• Use these two words in two sentences:
Today Today is Monday
Can't
• Answer these questions:
Thomas diede quedicino
1- Did you go to school yesterday?
Yes, Idid
2- Did you visit your aunt yesterday?
3- Did you watch TV yesterday?
 Yes, I did
• Choose and complete:
Murad (crash/crashed) into a tree,
he (bange banged) his knee,
Ali (bange/banged his elbow.

1- Was my I bike of 2- Nablus in was Salma	on on was I my bike X. Nablus in was salm X.
• Answer the following question 1- Were you in Ramallah yester	ns: rday? No, Iwasn't
2- Were you in Jerusalem yeste	orday? Nos Iwas of was of say? Yos Iwas
3- Were you in Nablus yesterda	ay? Yes I was
• Complete using Yes, I was or 1 Yes, I was or happy yesterday. 2- Ne, Iwa Setsick yesterday.	
• Order these sentences: Today I am better	Yesterday I was tired
	Dear friend



(9)

An-Najah National University Faculty of Graduate Studies

The Effect of Using Educational Games in the Academic Achievement and Retention for the Fourth Grade Students at Nablus Governmental Schools.

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Abstract

The purpose of this study was to examine the effect of using educational games in the academic achievement and retention of English for the fourth grade students at Nablus governmental schools, in comparison with traditional method.

The study tool (exam of achievement) was prepared after having a look at the fifth and sixth units of the English curriculum for the fourth basic grade. The educational essence of these units was analyzed. The vocabularies of the exam of achievement were defined. Also six educational games were designed to teach the context. To make sure of the availability of the tool (exam of achievement) it was shown to six experienced university professors who teach at the faculty of educational college at An-najah National University, besides, the researcher calculated the exam's stability which was (0.89) and this is a good value that achieves the aims of the study. In addition to that, the factors of difficulty and distinction for each of the exams items were calculated.

The sample was consisted of 120 students, of the fourth basic grade at Nablus governmental schools. They were divided into two groups, the experimental group which was taught with the educational games, and the

control group which was taught traditionally. The application lasted for two weeks. The researcher used the (SPSS) program to analyze the data.

The results of the study have shown the followings:

- 1- There were statistically significant differences at $(\alpha=0.05)$ between the pre, post and retention measures, of achievement of the experimental group. The differences between levels were as follows:
- Pupils' achievement concerning the level of remembering, comprehension and application in the post measure was better than their achievement concerning the same level in the pre and retention measures.
- Pupils' achievement concerning the level of analysis and construction in the post and retention measures was better than their achievement concerning the same level in the pre measure. In addition to that, the pupils' achievement concerning the level of construction in the post measure was better than their achievement in the retention measure.
- Pupils' achievement in the post and retention measures was better than their achievement in the pre measure. Besides, the pupils' achievement in the post measure was better than their achievement in the retention measure.
- 2- There were statistically significant differences at (α =0.05) in the control group, between the pre-post and retention measures, the differences were shown on these levels, (remembering, application, construction, and the total degree), The pupils' achievement concerning these levels in the post measure was better than their achievement of the same level in the pre and retention measures.

3- There were no statistically significant differences at (α =0.05) between the two groups in the post measure at the remembering and comprehension levels, also results have shown that the experimental group did better than the control group at the application, analysis, construction and the post measure levels.

4- There were no statistically significant differences at (α =0.05) in retention between the two groups concerning these levels: remembering, comprehension, application, and the total degree, while there were statistically significant differences concerning the levels of analysis and construction in the retention measure for the benefit of the experimental group.

The researcher recommended to use the educational games in teaching English as an integrated strategy to facilitate the students understanding, and to achieve the desired educational goals.

