#### **Lab 8 Worksheet**

#### **Exercise 1**

Answer the loop questions for this sketch. Also label specifically what changes using the picture in that row.

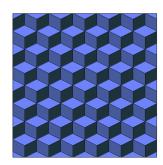


single loop, multiple lone after another, or nested loops?	oops	
if multiple loops or ne loops, what are the gi	ested roups?	
what is repeated?		
what changes from one repetition to the next?		
(be specific!)		
how do things start?		
how do things change?		
when do you keep going?		
is this a counting loop or a repeat-as- long-as pattern?		

# **Exercise 2a**

The tumbling blocks quilt is made up of a repeated pattern involving several shapes. This calls for a drawing function.

For "how is it drawn?" label the "what differs?" and each of the values needed for drawing the three quads.



what is being drawn?	what differs from one copy to the next?	how is it drawn?
a tumbling block		

# **Exercise 2b**

Now, draw the entire pattern. Hint: consider two blocks arranged as shown as the unit of repetition.

single loop, multiple loops one after another, and/or nested loops?	
if multiple loops or nested loops, what are the groups?	

Address the loop questions for each group identified.

what is the group?	
what is repeated?	
what changes from one repetition to the next?	
(be specific!)	
how do things start?	
how do things change?	
when do you keep going?	
is this a counting loop or a repeat-as- long-as pattern?	

Exercise 3a					
Start with the background pattern.					
single loop, multiple loops one after another, and/or nested loops?					
if multiple loops or nested loops, what are the groups?					

Address the loop questions for each group identified.

what is the group?	
what is repeated?	
what changes from one repetition to the next?	
(be specific!)	
how do things start?	
how do things change?	
when do you keep going?	
is this a counting loop or a repeat-as- long-as pattern?	

Exercise 3b  Next, add the white	squares.	
single loop, multiple loops one after another, and/or nested loops?		
if multiple loops or nested loops, what are the groups	5?	
Address the loop qu	estions for each group identified.	
what is the group?		
what is repeated?		
what changes from one repetition to the next? (be specific!)		
how do things start?		
how do things change?		

when do you keep going?

is this a counting loop or a repeat-aslong-as pattern?

Exercise 3c  Next, add the bl	lack so	quares.	
single loop, multiple lo one after another, and nested loops?	oops d/or		
if multiple loops or ne loops, what are the gr	sted oups?		
Address the loo	p ques	stions for each group identified.	
what is the group?			
what is repeated?			
what changes from one repetition to the next?			
(be specific!)			
how do things start?			
how do things change?			

when do you keep going?

is this a counting loop or a repeat-aslong-as pattern?

### **Exercise 3d**

Finally, add the white quads. Use the second copy of the loop questions table on the next page if you need more than two loops.

single loop, multiple loops one after another, and/or nested loops?	
if multiple loops or nested loops, what are the groups?	

Address the loop questions for each group identified.

what is the group?	
what is repeated?	
what changes from one repetition to the next?	
(be specific!)	
how do things start?	
how do things change?	
when do you keep going?	
is this a counting loop or a repeat-as- long-as pattern?	

what is the group?	
what is repeated?	
what changes from one repetition to the next? (be specific!)	
how do things start?	
how do things change?	
when do you keep going?	
is this a counting loop or a repeat-as- long-as pattern?	

Exercise 4										
Use the next p for each loop. and answer th	Draw t	he patteri	n in the	box —	oe drawr	by lo	ops – on	e page		
single loop, multiple one after another, ar nested loops?	loops nd/or									
if multiple loops or n loops, what are the o										
Address the lo	op ques	tions for	each gr	oup ide	entified.					
what is the group?										
what is repeated?										
what changes from one repetition to the next?										
(be specific!)										
how do things start?										
how do things change?										
when do you keep going?										
is this a counting loop or a repeat-as- long-as pattern?										

Use this page to Draw the patter and answer the	ern in the	box ——		by loop(s)	<u>'.</u> →	
single loop, multiple one after another, ar nested loops?	loops nd/or					
if multiple loops or no loops, what are the g						
Address the lo	op questi	ons for eacl	n group ide	ntified.		
what is the group?						
what is repeated?						
what changes from one repetition to the next? (be specific!)						
how do things start?						
how do things change?						
when do you keep going?						
is this a counting loop or a repeat-as- long-as pattern?						

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Draw the patte	for a patterns that will be drawn by loop( ern in the box e loop questions in the tables.	(s). ►
single loop, multiple one after another, ar nested loops?	loops nd/or	
if multiple loops or no loops, what are the g	ested groups?	
Address the lo	op questions for each group identified.	
what is the group?		
what is repeated?		
what changes from one repetition to the next? (be specific!)		
how do things start?		
how do things change?		
when do you keep going?		
is this a counting loop or a repeat-as- long-as pattern?		

Draw the patte	for a patterns that will be drawn by loop(s).  In in the box  e loop questions in the tables.	
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if multiple loops or no loops, what are the g		
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