affects the length of sl	leep for mice. Sh	e sets up four ca	ges with a mous	e in each cage.	
	Mouse 1	Mouse 2	Mouse 3	Mouse 4	
Size of cage	30cm x 30cm	30cm x 30cm	30cm x 30cm	30cm x 30cm	
Amount of Water per Day	50 mL	50 mL	50 mL	50 mL	
Amount of food per day	1 serving per day, 25 grams	1 serving per day, 25 grams	1 serving per day, 25 grams	1 serving per day, 25 grams	
Temperature in cage	20 °C	20 °C	20 °C	20 °C	
Amount of Sunlight per Day	12 hours	8 hours	15 hours	18 hours	
Exercise wheel?	Yes	yes	Yes	yes	
What is the independen	t variable?				
What is the dependen What data do you nee Experiment Scenar	t variable? d to collect during io 2: A Biology	ng this experimen	o conduct a study	of how the amo	unt of fo
What is the dependen What data do you nee Experiment Scenar affects the weight gair	t variable? d to collect during io 2: A Biology for mice. He se	ng this experiments to student wants to ets up four cages	o conduct a study	of how the amo	unt of fo
What is the dependen What data do you nee	t variable? d to collect during io 2: A Biology for mice. He se	ng this experiments to student wants to ets up four cages	o conduct a study with a mouse in tudy correctly.	of how the amo	unt of fo
What is the dependen What data do you nee Experiment Scenar affects the weight gair	t variable? ed to collect during rio 2: A Biology of for mice. He se	student wants to	o conduct a study with a mouse in tudy correctly.	of how the amo	unt of fo
What is the dependen What data do you nee Experiment Scenar affects the weight gair that would allow the b	t variable? ed to collect during rio 2: A Biology of for mice. He septiology student to	student wants to	o conduct a study with a mouse in tudy correctly.	of how the amo	unt of fo
What is the dependent What data do you nee Experiment Scenar affects the weight gair that would allow the build Size of cage Amount of Water per Day	rio 2: A Biology of for mice. He septiology student to Mouse 1 30cm x 30cm	student wants to	o conduct a study with a mouse in tudy correctly.	of how the amo	unt of fo
What is the dependent What data do you nee Experiment Scenar affects the weight gair that would allow the build Size of cage Amount of Water per Day	rio 2: A Biology of for mice. He serviology student to Mouse 1 30cm x 30cm 50 mL	student wants to	o conduct a study with a mouse in tudy correctly.	of how the amo	unt of fo
What is the dependent What data do you need Experiment Scenar affects the weight gain that would allow the building and the Size of cage Amount of Water per Day Amount of food per day Temperature in cage Amount of Sunlight per Day	rio 2: A Biology of for mice. He servings per day 25 grams each	student wants to	o conduct a study with a mouse in tudy correctly.	of how the amo	unt of fo
What is the dependent What data do you need Experiment Scenare affects the weight gain that would allow the business of cage Amount of Water per Day Amount of food per day Temperature in cage Amount of Sunlight per Day Exercise wheel?	rio 2: A Biology of for mice. He servings per day 25 grams each 20 °C 12 hours	student wants to complete the s	o conduct a study with a mouse in tudy correctly.	of how the amo each cage. Fill in	unt of fo
What is the dependent What data do you need Experiment Scenar affects the weight gain that would allow the business of cage Amount of Water per Day Amount of Sunlight per Day Exercise wheel? What are the constant	rio 2: A Biology of for mice. He servings per day 25 grams each 20 °C 12 hours yes ts (variables that	student wants to sts up four cages to complete the s	o conduct a study with a mouse in tudy correctly. Mouse	of how the amoreach cage. Fill in More	unt of fo
What is the dependen What data do you nee Experiment Scenar affects the weight gair that would allow the best of cage Amount of Water per Day Amount of food per day Temperature in cage Amount of Sunlight per Day Exercise wheel?	rio 2: A Biology of for mice. He servings per day 25 grams each 20 °C 12 hours yes ts (variables that	student wants to ets up four cages to complete the s	o conduct a study with a mouse in tudy correctly. Mouse list of the control of t	of how the amoreach cage. Fill in Moreach cage. Black Moreach cage	unt of fo the boxe

Mice 1, 2, 3		Mice 4, 5, 6, 7		1ice 8, 9
14 hours of light per day		14 hours of light per day		of light per day
Food one time/day – 5 oz.		Food one time/day – 5 o		time/day – 5 oz
Temp. 70 °		Temp. 85 ° F		np. 50 ° F
Wheel for exer		Wheel for exercise		for exercise
Cage size: 3 feet b		Cage size: 3 feet by 1 foo		3 feet by 1 foot
fter the study, which		ays, the same data about th		
Mouse Number		/eight (grams)		h (cm)
1	Before 352	After 392	Before 24.7	After 25.4
2	346	392	25.1	25.8
3	355	410	24.9	25.4
4	353	385	24.9	25.3
5	359	382	25.0	25.7
6	357	386	24.8	25.3
7	349	378	25.0	25.3
8	345	365	22.9	22.9
9	352	361	24.3	24.5
What is the indepe	endent variab dent variable	es that stay the same-		
		ct during this experime		
vnat flaw in the d	esign of the 6	experiment can you find	ar Explain.	
				support your conclus

xperiment Scen	ario 3: A	biolog	ist s et up an expe	eriment to stu	dy nine mice. On day 1	of the
tudy, the mice wer	e measure	d for a	variety of charac	teristics. Ther	the mice were put int	o individua
ages and kept unde	er the follo	wing c	onditions:			
Mice 1, 2, 3	· · · · · · · · · · · · · · · · · · ·	Mice 4, 5, 6, 7		 1	Mice 8, 9	
14 hours of light pe			hours of light per da	v 14	nours of light per day	
Food one time/day			Food one time/day – 5 oz		d one time/day – 5 oz	
Temp. 70 ° F		Temp. 85 ° F			Temp. 50 ° F	
Wheel for exerc		***************************************	Wheel for exercise		Wheel for exercise	
Cage size: 3 feet by	1 foot		e size: 3 feet by 1 fo		size: 3 feet by 1 foot	
		Weight	-		Length (cm)]
Mouse Number	Before		After	Before	After	1
1	352		392	24.7	25.4	1
2	346		395	25.1	25.8	1
3	355		410	24.9	25.4	4
4	353		385	24.9	25.3	4
5	359		382	25.0	25.7	4
6	357		386	24.8	25.3	_
7	349		378	25.0	25.3	4
8	345		365	22.9	22.9	4
9	352		361	24.3	24.5	J
			at stay the same	also called co	entrolled variables)?	·
What is the indepe	ndent varia	ioie!_				
What is the depend	dent variab	le?				
What data do you r	need to col	lect du	ring this experim	ent?		
What flaw in the d	esign of the	e expe	iment can you fi	nd? Explain.		

What conclusion(s) can be drawn from the data? Explain, using data to support your conclusion(s).

- F		ww. 8				
lame:		Date:		Period:		
xperiment Scer	ario 3: A	biologist set up an expe	riment to study nir	ne mice. On day 1 o	f the	
		d for a variety of charact				
ages and kept und				•		
Mice 1, 2, 3		Mice 4, 5, 6, 7	<u>M</u>	ice 8, 9		
14 hours of light per day		14 hours of light per day	14 hours	of light per day		
Food one time/day – 5 oz.		Food one time/day – 5 o		time/day – 5 oz		
Temp. 70 ° F		Temp. 85 ° F		np. 50 ° F		
Wheel for exercise		Wheel for exercise		for exercise		
Cage size: 3 feet by	1 foot	Cage size: 3 feet by 1 foo	t Cage size:	3 feet by 1 foot		
fter the study, which l	asted for 28 o	days, the same data about the	e mice was collected.	Some of the data is give	en below:	
	Weight (grams)		Lengt	h (cm)		
Mouse Number	Before		Before	After		
1	352	392	24.7	25.4		
2	346	395	25.1	25.8		
3	355	410	24.9	25.4		
4	353	385	24.9	25.3		
5	359	382	25.0	25.7		
6 7	357	386	24.8	25.3		
8	349 345	378 365	25.0	25.3		
9	352	361	22.9	22.9		
		oles that stay the same-	also called control			
What is the indepe						
What is the depend	dent variab	le?				
What data do you	need to col	lect during this experime	ent?			
What flaw in the d	esign of the	experiment can you fin	d? Explain.			

What conclusion(s) can be drawn from the data? Explain, using data to support your conclusion(s).