	Judges' 2019 Engineering Not	ebook :	Score S	Sheet			An J
Offensiv	e and defensive evaluation - Analysis of gaming strategies and design					····	JVV
21-25)	Evaluation of offensive/defensive strategies is explicitly identified, g knowledge of the game.				d, disc	cussion sho	ws a deep
16-20	Evaluation is identified, goals are discernible, discussion shows a known	vulodgo	of the g	200			
11-15	Evaluation is not identified, there is some notion of goals and game			arne.			
6-10	Discussion of goals and game knowledge are minimal.	KIIOWIEG	ige.				
1-5	There is some slight mention of strategy.	0	No di	scernible evaluation.			
Comme			1 NO UI.	secritore evaluation.		25	21
Softwar	e Development Process (Evidence that a software development pr	ocess w	as effect	tively used)			
21-25	Process is explicitly identified; steps are obvious and explanation is t				e iden	tified and	explained
16-20	Process is identified; steps are discernible and there is some explana						
11-15	There is some discussion of a development process or design metho			Process is mentione		minimal de	tail.
1-5	You can tell there were some software design methods used.		0	No discernible softw	/are d	evelopmen	t process
Comme	ents:					25	20
	Evidence that safety training occurred and safe practices were followed result in personal injury or damage to property	to prevei	nt studer	nts' misuse of tools a	nd oth	er devices/	equipmen
(17-20)	Clear evidence that safety training occurred, clear evidence that the	team ve	rified sa	fety procedures wer	e folic	wed.	
13-16	Clear evidence of safety training, some evidence procedures were ve	erified.					
9-12	Some evidence of safety training, some procedures were verified.	5-8	Some	evidence safety train	ning, r	no verifying	procedu
1-4	Safety was mentioned; unsafe methods might be visible in photos.	0	No me	ention of safety.			
Comme	nts:					20	20
Support 20 doub!	Documentation - Team organization, meeting inutes, CAD/other drawir e -sided pages); +5pts bonus for BEST National Registry proof,	ngs, phot	tos, test	results, etc. that supp	ort th	e main doc	
16-20	Clearly identifies ALL categories mentioned above; references made	from pri	imarv do	ocument.			
11-15	Identifies items from the list above; but missing one or two categories					-	
1-5	Includes items from at least 2 categories; but not identified.	(6-10)	Items	from at least 3 categ	zories	above are	included.
0	No items from listed categories are included.	+5		ded National Registry			
Comme		I			1	25	19
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Well line						7.4	学的特殊
Organiz	ation and appearance - Table of contents, summary, page numbe						
21-30)	Well organized, looks good, includes Table of Contents, summary, pa	ige numi	bers, dis	cussion of evaluation	n poin	ts (e.g. Iter	ns on the
\sim	score sheet), linkage to appendices.						
11-20	Reasonably organized, looks good, missing one or two items from lis						
1-10	Poorly organized, no attention to looks, missing multiple items from	list abov	re. 0	Disorganized,	missin	ng most ite	ms.
Comme	nts:					30	30
Cover sl	ce to specifications neet and/or title page that identifies the school team name, teacher contact int ns, Business font no smaller than 12 pt., double-spaced (single spaced ok						
per Hub	option, Softcopy Format = PDF or Hardcopy in Standard Binder, 35 one-side	d page ma	ax for ma	in section, 20 double-s	ided p	age max for	appendice
21-30	Adheres to the specifications listed above.						
11-20	Violates one of the specifications listed above.						
1-10	Violates two or three of the specifications listed above.	0	Violat	es for or more specs.			
Comme	nts:					30	15
Quality o	f content - Well written, clear photo labels, lack of extraneous material such a	as commu	inity or pi	romotional efforts, spirit	t devel	opment, tea	
21-30	Everything is well written/clear/logical, everything is clearly labeled,						
11-20	You can follow everything with some effort, one or two things that a	re unnec	cessary.				
1-10	Hard to understand in places, labels missing in places, unnecessary n	naterial.	0	Very difficult to fol	llow, ι	ınnecessar	y materia
Comme					\Box	30	25
SCORE (CALCULATION and Additional Comments:	Total				300	1227

Judge name/number (print): 4

Team Number: 0804 School: Decated Heritage Chlistian Academy

Final Score

÷10

30 max

÷10

Purpose: To document the process used to design, build, and test the robot. (30 pts.)

	Réséarch Paper (4 pts.)				(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	3.41	Possible Points	Points Awarded
Correlat	on between the game and how the science/technology is being used at a compa	any/inde	ustry/resear	ch la	b in the	team's	state or r	egion
8-10)	In-depth discussion of how this year's game theme relates to industry in thi							
4-7	General discussion of how this year's game theme relates to industry in this	region	l <u>. </u>	_				
1-3	General discussion of this year's game theme, but no ties to the region			0	No disc	ussion	of game	theme.
Comme	ents:						10	8
Any rela	ted information of the game theme such as history, famous inventor(s), major m	ileston	es, etc.					
(4-5)	In-depth discussion of history and people related to this year's game theme	:						
2-3	General discussion of history and people related to this year's game theme.							
1	Some mention of history or people.			0	No disc	ussion	of relate	d info
Comme	ents:						5	
							_	\mathcal{O}
	of the game theme/problem & related technology's impact on the human experi							solutions.
4-5	In-depth historical account of the effects to human experience, needs, adap							· · · · · · · · · · · · · · · · · · ·
2-3	Some discussion about the effects of the theme/problem/technology on hu							
1	Mentioned the effects to human experience, needs, adaptation or progress	. 0	No menti	on o	f history	/effect	s to hum	anity.
Comme	nts:						5	4
Creativit	y in linking the game to appropriately related science content							<u> </u>
8-10	Very creative in linking this year's game theme to other science/technology	•						
4-7	Attempted to link this year's game theme to other science/technology.							
1-3	Mentioned other science/technology.	0	No discus	sion	of other	scienc	e/techno	ology.
Comme	nts:						10	4
Proper fo	ormal writing - Proper use of grammar & composition throughout; source cita	tions u	sed to gathe	er in	ormation	n: with	in 2-5 pag	e limit
8-10	Very few grammar mistakes/misspellings, included citations, 2-5 pages.		oon to gunit		<u> </u>	.,	in z o pag	o mine
4-7	Noticeable grammar mistakes/misspellings or did not include citations, 2-5	pages.						
1-3	Many grammar mistakes/misspellings, no citations, or not within 2-5 pages.			0	Incomp	rehens	ible or m	issing
Comme								4
							10	8
	Design Process (17 pt	s.)			in the		對於法	35 - 10 - 10
Impleme	ntation of the Engineering Design Process (Evidence that the engineering des		cess was eff	ecti	elv usec	11	<u> </u>	
21-25	Process is explicitly identified; steps are obvious and explanation is thoroug							
16-20	Process is identified; steps are discernible and there is some explanation.							
11-15	Process is not identified; there is some discussion of a design process.	6-10	Discussion	n of	process	is mini	mal.	
1-5	You can tell there was a design process of some sort.	0	No discer			-		
Comme	nts:						25	16
Brainsto	rming Approaches - How well organized and productive was the brainstorming a	approac	h? How w	ell v	as it doc	ument	ed?	••
21-25	Approach is explicitly identified, organization &productivity are obvious, exp							ons made.
16-20	Approach is identified, organization and productivity are discernible, there i							
11-15	Approach is not identified, there is some discussion of brainstorming.	6-10	Discussion		approacl	h is mii	nimal.	
1-5	You can tell there were ideas generated.	0	No discer					
Comme	nts:							(1)
Amabala		-1 7 - 17					25	4
	at evaluation of design alternatives - Use of analytical and mathematical skills in						<u>ın alterna</u>	tives
21-25	Evaluation is explicitly identified, analytic/mathematical approach is obviou					ined.		
16-20	Evaluation is identified, analytic/mathematical approach is discernible, alter							
11-15	Evaluation is not identifiable, alternative designs are identified.	6-10	Discussion				igns is mi	nimal.
1-5	You can tell there were alternatives.	0	No discer	nible	evaluat	ion.		
Comme	nts:						25	160

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Offensiv	e and defensive evaluation - Analysis of gaming strategies and design	elements	used t	o achieve team goals	·		
21-25	Evaluation of offensive/defensive strategies is explicitly identified, goals of this team are clearly identified, discussion shows a deep knowledge of the game.						
16-20	Evaluation is identified, goals are discernible, discussion shows a known	owledge o	of the	game.			
11-15	Evaluation is not identified, there is some notion of goals and game	knowledg	ge.				
6-10	Discussion of goals and game knowledge are minimal.	1					
1-5	There is some slight mention of strategy.	0	No c	liscernible evaluation.			
Comme		··			25	20	
	e Development Process (Evidence that a software development pr				· · · · · · · · · · · · · · · · · · ·		
21-25	Process is explicitly identified; steps are obvious and explanation is t					xplained.	
16-20	Process is identified; steps are discernible and there is some explana						
11-15	There is some discussion of a development process or design metho		6-10	Process is mentioned but			
1-5	You can tell there were some software design methods used.		0	No discernible software of	levelopment	process.	
Comme	ents:				25	18	
Safety -	Evidence that safety training occurred and safe practices were followed	to preven	t stud	ents' misuse of tools and of	har davicaele	auinment	
that may	result in personal injury or damage to property						
17-20	Clear evidence that safety training occurred, clear evidence that the		rified s	afety procedures were foll	owed.		
13-16	Clear evidence of safety training, some evidence procedures were ve				40.		
9-12	Some evidence of safety training, some procedures were verified.	5-8		e evidence safety training,	no verifying	procedur	
1-4	Safety was mentioned; unsafe methods might be visible in photos.	0	No n	nention of safety.			
Comme	ents:				20	_ 18	
	Documentation - Team organization, meeting minutes, CAD/other drawing e-sided pages); +5pts bonus for BEST National Registry proof,	ngs, <u>phot</u>	os, tes	t results, etc. that support ti	ne main docu	ment (max	
16-20	Clearly identifies ALL categories mentioned above; references made	from pri	mary c	locument.			
11-15	Identifies items from the list above; but missing one or two categories		-				
1-5	Includes items from at least 2 categories; but not identified.	6-10	Item	s from at least 3 categories	above are i	ncluded.	
0	No items from listed categories are included.	+5)		ided National Registry prod			
Comme			•		25	20	
स्त्री की तहा. इ.स.च्या				L ZELEZ A JERNA	1-41, (1-41, 6)		
Africa Con				book (3 pts.)	图775年186359	(最上海)	
Organia	ration and appearance - Table of contents, summary, page numbe						
21-30	Well organized, looks good, includes Table of Contents, summary, pascore sheet), linkage to appendices.	age numb	ers, d	iscussion of evaluation poi	nts (e.g. Iten	ns on the	
11-20	Reasonably organized, looks good, missing one or two items from lis	t above.					
1-10	Poorly organized, no attention to looks, missing multiple items from	list abov	e.	0 Disorganized, missi	ng most iter	ns.	
Comme	ents:				30	20	
Adheren	ce to specifications						
	heet and/or title page that identifies the school team name, teacher contact in	formation,	and te	am number			
	ins, Business font no smaller than 12 pt., double-spaced (single spaced ok						
per Hub	option, Softcopy Format = PDF or Hardcopy in Standard Binder, 35 one-side	d page ma	ax for n	nain section, 20 double-sided	page max for	appendices	
21-30	Adheres to the specifications listed above.						
11-20	Violates one of the specifications listed above.						
1-10	Violates two or three of the specifications listed above.	0	Viola	ites for or more specs.			
Comme	ents:				30	30	
Quality o	of content - Well written, clear photo labels, lack of extraneous material such	as commu	nity or	promotional efforts, spirit deve	elopment, tear	n building	
21-30	Everything is well written/clear/logical, everything is clearly labeled,	no exces	s mate	erial.			
11-20	You can follow everything with some effort, one or two things that a	re unnec	essary	1.			
1-10	Hard to understand in places, labels missing in places, unnecessary r	naterial.		0 Very difficult to follow,	unnecessary	material.	
Comme	ents:				30	22	
SCORE	CALCULATION and Additional Comments:	Total			300	239	
					÷10	÷10	
·		Final S	core		30 max	23.9	
ludas =	ama/number (print):	<u> </u>				239 V	
Juuge N	name/number (print):		. 1	O+ +	^		
Team N	lumber: #0864 School: Decate	ar M	evit	age Christian	Heade	my	

	Research Paper (4 pts.)				14	Possible Points	Points Awarded
Correlat	ion between the game and how the science/technology is being used at a comp	any/ind	ustry/resea	rch la	ab in the te	am's state or	region
8-10	In-depth discussion of how this year's game theme relates to industry in the						
1-3	General discussion of how this year's game theme relates to industry in this General discussion of this year's game theme, but no ties to the region	s region	<u>. </u>		No disau	asian of same	46
		•		0	ivo aiscu	ssion of game	tneme.
Comme	ens.					10	9
An y-re la	ted information of the game theme such as history, famous inventor(s), major m	nileston	es, etc.				
(4-5)	In-depth discussion of history and people related to this year's game theme	2.					
2-3	General discussion of history and people related to this year's game theme	•					
1	Some mention of history or people.			0	No discu	ssion of relate	d info
Comme	ents:					5	5
Analysis	of the game theme/problem & related technology's impact on the human exper	ience, o	ur needs. a	adapt	ations, and	d progress with	
(4)-5	In-depth historical account of the effects to human experience, needs, adapt						
2-3	Some discussion about the effects of the theme/problem/technology on hu						ess.
1	Mentioned the effects to human experience, needs, adaptation or progress					effects to hum	
Comme	ents:					5	4
Creativit	y in linking the game to appropriately related science content						' ' '
8 10	Very creative in linking this year's game theme to other science/technology	,					
4-7	Attempted to link this year's game theme to other science/technology.	•					
1-3	Mentioned other science/technology.	0	No discu	ssion	of other s	science/techn	nlogy
Comme			1 10 0.000	00.011	Or Other S	10	(2)
Broner 6	armal suriting . Dranay was of grammar 9 compacition throughout a course sit				fa41 a.u.		
8)10	ormal writing - Proper use of grammar & composition throughout; source cital Very few grammar mistakes/misspellings, included citations, 2-5 pages.	ations u	sea to gatr	ter in	formation;	Witnin 2-5 pag	ge ilmit
4-7	Noticeable grammar mistakes/misspellings or did not include citations, 2-5	nages					
1-3	Many grammar mistakes/misspellings, no citations, or not within 2-5 pages	 		ΙοΤ	Income	shanaihla an m	in the second
Comme		•		101	incompre	ehensible or m	ussing.
Comme	nts.	····				10	ව
	Design Process (17 pt	s.)	143			统制制	
Impleme	ntation of the Engineering Design Process (Evidence that the engineering des		cess was e	ffecti	velv used)	Charles Ser
21-25	Process is explicitly identified; steps are obvious and explanation is thoroug				<u></u>		
16-20	Process is identified; steps are discernible and there is some explanation.						
11-15	Process is not identified; there is some discussion of a design process.	6-10	Discussion	on of	process is	minimal.	
1-5	You can tell there was a design process of some sort.	0			e design p		
Comme	nts:					25	21
Brainsto	rming Approaches - How well organized and productive was the brainstorming	approac	h? How	well w	as it docu	mented?	<u> </u>
21-25	Approach is explicitly identified, organization &productivity are obvious, ex						ons made.
16-20	Approach is identified, organization and productivity are discernible, there						
11-15	Approach is not identified, there is some discussion of brainstorming.	6-10	Discussion	on of	approach	is minimal.	
1-5	You can tell there were ideas generated.	0			e brainsto		
Comme	nts:					25	18
Anglide	ol publication of decign alternatives. Her of analytical and mathematical abilla in	docidi		d inc	lamantin	dealer alta-	_
21-25	al evaluation of design alternatives - Use of analytical and mathematical skills in Evaluation is explicitly identified, analytic/mathematical approach is obviou						ITIVES
16-20	Evaluation is explicitly identified, analytic/mathematical approach is discernible, alte					ieu.	
11-15	Evaluation is identified, affairyttc/mathematical approach is discernible, after Evaluation is not identifiable, alternative designs are identified.	6-10	T			o dociano is	inimal
1-15	You can tell there were alternatives.	0-10			e evaluation	e designs is m	ıııımaı.
Comme		<u> </u>	140 disce		- evaluatit	JII.	
						25	18

21-25	ve and defensive evaluation - Analysis of gaming strategies and design of Evaluation of offensive/defensive strategies is explicitly identified, g						scussion sh	ows a deep
	knowledge of the game.							
16-20	Evaluation is identified, goals are discernible, discussion shows a known as the state of the st			game.				31
11-15	Evaluation is not identified, there is some notion of goals and game	knowled	ge.		44,			
6-10	Discussion of goals and game knowledge are minimal.	T -	т			1 27 7		
1-5	There is some slight mention of strategy.	0	Noc	discern	ible evalua	tion.	Т	160
Comme	ents:						25	125/
Softwar	re Development Process (Evidence that a software development pr							
21-25	Process is explicitly identified; steps are obvious and explanation is t							explained.
16-20	Process is identified; steps are discernible and there is some explana		Section 2	T				
11-15	There is some discussion of a development process or design metho	ds.	6-10		ess is ment			
1-5	You can tell there were some software design methods used.		0	No d	iscernible s	oftware	developme	ent process.
Comme	ents:						25	(20)
Safety -	Evidence that safety training occurred and safe practices were followed	to prevei	nt stud	ents' n	nisuse of to	ols and of	ther devices	s/equipment
	y result in personal injury or damage to property		343 34		1.28			or equipment
17-20	Clear evidence that safety training occurred, clear evidence that the	team ve	rified s	safety	procedures	were fol	lowed.	
13-16	Clear evidence of safety training, some evidence procedures were ve	erified.						1 1382
9-12	Some evidence of safety training, some procedures were verified.	5-8	Som	e evid	ence safety	training,	no verifyir	ng procedur
1-4	Safety was mentioned; unsafe methods might be visible in photos.	0	No r	nentio	n of safety	2 2 1	1.00	(
Comme	ents:	./					20	(18)
Support	Documentation - Team organization, meeting minutes, CAD/other drawin	ngs, phot	os, tes	t resul	ts, etc. that	support t	he main do	cument (max
	le -sided pages); +5pts bonus for BEST National Registry proof,				2 2 2 2 3 4 5 5 5 5			
16-20	Clearly identifies ALL categories mentioned above; references made		mary c	docum	ent.			
11-15	Identifies items from the list above; but missing one or two categories							11 11
1-5	Includes items from at least 2 categories; but not identified.	6-10						e included.
0	No items from listed categories are included.	+5	Prov	rided N	lational Re	gistry pro	of per tear	n member
Comme								
PERMITTERATION			Degrada de Ser			and the same transfer	25	(20)
		ss of I	lote	book	(9 pts.)		25	1(20)
					CONT. CARLO PROPERTY CARLO	A STATE OF THE PARTY OF		ndices
Organi	Twerall Quality and completene zation and appearance - Table of contents, summary, page number Well organized, looks good, includes Table of Contents, summary, page	ers, discu	ssion c	of eval	uation poi	nts, linka	ge to appe	
Organi:	verall Quality and completene zation and appearance - Table of contents, summary, page number Well organized, looks good, includes Table of Contents, summary, page score sheet), linkage to appendices.	e rs, discu age num	ssion c	of eval	uation poi	nts, linka	ge to appe	
Organi 21-30 11-20	Well organized, looks good, includes Table of Contents, summary, page number score sheet), linkage to appendices. Reasonably organized, looks good, missing one or two items from list	e rs, discu age num at above.	bers, d	of eval	uation poil	nts, linkag lation poi	ge to appe ints (e.g. Ite	ems on the
Organi: 21-30 11-20 1-10	Well organized, looks good, includes Table of Contents, summary, page number score sheet), linkage to appendices. Reasonably organized, looks good, missing one or two items from list Poorly organized, no attention to looks, missing multiple items from	e rs, discu age num at above.	bers, d	of eval	uation poil	nts, linkag lation poi	ge to appe ints (e.g. Ite	ems on the
Organi: 21-30 11-20 1-10	Well organized, looks good, includes Table of Contents, summary, page number score sheet), linkage to appendices. Reasonably organized, looks good, missing one or two items from list Poorly organized, no attention to looks, missing multiple items from ents:	e rs, discu age num at above.	bers, d	of eval	uation poil	nts, linkag lation poi	ge to appe ints (e.g. Ite	ems on the
Organi: 21-30 11-20 1-10 Comme	Well organized, looks good, includes Table of Contents, summary, page number score sheet), linkage to appendices. Reasonably organized, looks good, missing one or two items from list Poorly organized, no attention to looks, missing multiple items from ents:	ers, discu age num et above. list abov	bers, d	of eval	Disorgani	nts, linkag lation poi	ge to appe ints (e.g. Ite	ems on the
Organia 21-30 11-20 1-10 Comme Adheren Cover s	Well organized, looks good, includes Table of Contents, summary, page number score sheet), linkage to appendices. Reasonably organized, looks good, missing one or two items from list Poorly organized, no attention to looks, missing multiple items from ents: Ince to specifications Sheet and/or title page that identifies the school team name, teacher contact in the contents of t	ers, discu age num at above. list above	bers, d	of eval	Disorgani	nts, linkag lation poi	ge to appe ints (e.g. Ite	ems on the
Organia 21-30 11-20 1-10 Comme Adheren Cover s 1" marg	Well organized, looks good, includes Table of Contents, summary, page number when the score sheet), linkage to appendices. Reasonably organized, looks good, missing one or two items from list poorly organized, no attention to looks, missing multiple items from ents: Ince to specifications wheet and/or title page that identifies the school team name, teacher contact in gins, Business font no smaller than 12 pt., double-spaced (single spaced ok	ers, discu age num at above. list above formation	bers, d	of eval	Disorgani	nts, linkag lation poi zed, miss	ge to appe ints (e.g. Ite ing most it	ems on the
Organia 21-30 11-20 1-10 Comme Adheren Cover s 1" marg per Hub	Well organized, looks good, includes Table of Contents, summary, page number with the score sheet), linkage to appendices. Reasonably organized, looks good, missing one or two items from list poorly organized, no attention to looks, missing multiple items from tents: Ince to specifications wheet and/or title page that identifies the school team name, teacher contact in the specification in the specification of the specifica	ers, discu age num at above. list above formation	bers, d	of eval	Disorgani	nts, linkag lation poi zed, miss	ge to appe ints (e.g. Ite ing most it	ems on the
Organia 21-30 11-20 1-10 Comme Adheren Cover s 1" marg per Hub 21-30	Well organized, looks good, includes Table of Contents, summary, page number with the score sheet), linkage to appendices. Reasonably organized, looks good, missing one or two items from list Poorly organized, no attention to looks, missing multiple items from ents: Inceto specifications wheet and/or title page that identifies the school team name, teacher contact interest in the specification of the specification of the specification of the specifications of the specifications in the specifications of the specifications of the specifications listed above.	ers, discu age num at above. list above formation	bers, d	of eval	Disorgani	nts, linkag lation poi zed, miss	ge to appe ints (e.g. Ite ing most it	ems on the
Organia 21-30 11-20 1-10 Comme Adheren Cover s 1" marg per Hub	Well organized, looks good, includes Table of Contents, summary, page number with score sheet), linkage to appendices. Reasonably organized, looks good, missing one or two items from list Poorly organized, no attention to looks, missing multiple items from ents: Ince to specifications Sheet and/or title page that identifies the school team name, teacher contact in the specification in the specifications option, Softcopy Format = PDF or Hardcopy in Standard Binder, 35 one-side Adheres to the specifications listed above. Violates one of the specifications listed above.	ers, discu age num at above. list above formation	bers, d	of eval	Disorgani mber	nts, linkag lation poi zed, miss uble-sided	ge to appe ints (e.g. Ite ing most it	ems on the
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	Research Paper (4 pts.)			Possible Points	Points Awarded
Correlat	ion between the game and how the science/technology is being used at a comp	any/ind	ustry/research lab in the tear	n's state o	
8-10	In-depth discussion of how this year's game theme relates to industry in th				
4-7	General discussion of how this year's game theme relates to industry in this	s region	1.		
1-3	General discussion of this year's game theme, but no ties to the region		0 No discuss	on of gan	ne theme.
Comme	ents:			(10)	
Any rela	ted information of the game theme such as history, famous inventor(s), major n	nileston	es, etc.		
4-5	In-depth discussion of history and people related to this year's game theme	⊋.			
2-3	General discussion of history and people related to this year's game theme	•			
1	Some mention of history or people.		0 No discussi	on offela	ted info
Comme	ents:			5	
Analysis	s of the game theme/problem & related technology's impact on the human exper	ience, o	our needs, adaptations, and p	rogress w	ith solutions.
4-5	In-depth historical account of the effects to human experience, needs, adapted	otation	and progress toward solution	ons.	
2-3	Some discussion about the effects of the theme/problem/technology on hu	ıman ex	periences, needs, adaptation	ons or pro	gress.
1	Mentioned the effects to human experience, needs, adaptation or progress				
Comme	ents:			5	(4)
Creativit	y in linking the game to appropriately related science content				
8-10	Very creative in linking this year's game theme to other science/technology	<i>1</i> .			
4-7	Attempted to link this year's game theme to other science/technology.				
1-3	Mentioned other science/technology.	0	No discussion of other sci	ence/tech	nology.
Comme	ents:			10	
Proper f	ormal writing - Proper use of grammar & composition throughout;source cit	ations u	sed to gather information; w	ithin 2-5 p	age limit
8-10	Very few grammar mistakes/misspellings, included citations, 2-5 pages.				
4-7	Noticeable grammar mistakes/misspellings or did not include citations, 2-5	pages.			
1-3	Many grammar mistakes/misspellings, no citations, or not within 2-5 pages		0 Incompreh	ensible or	missing.
Comme				10	
	Design Process (17 pt	š.) 🖔			
Impleme	entation of the Engineering Design Process (Evidence that the engineering des	ign pro	cess was effectively used)		
21-25	Process is explicitly identified; steps are obvious and explanation is thorough	gh.			
16-20	Process is identified; steps are discernible and there is some explanation.				
11-15	Process is not identified; there is some discussion of a design process.	6-10	Discussion of process is m	inimal.	
1-5	You can tell there was a design process of some sort.	0	No discernible design pro	cess.	
Comme	ents:			25	(24)
Brainsto	rming Approaches - How well organized and productive was the brainstorming				
21-25	Approach is explicitly identified, organization &productivity are obvious, ex	planation	on is thorough, discussion o	f how dec	isions made.
16-20	Approach is identified, organization and productivity are discernible, there	is some	explanation.		
11-15	Approach is not identified, there is some discussion of brainstorming.	6-10	Discussion of approach is	minimal.	
1-5	You can tell there were ideas generated.	0	No discernible brainstorm	ing.	
Comme	ents:			25	(21)
Analytic	al evaluation of design alternatives - Use of analytical and mathematical skills in) decidii	ng upon and implementing de	sign alter	natives
21-25	Evaluation is explicitly identified, analytic/mathematical approach is obviou				
16-20	Evaluation is identified, analytic/mathematical approach is discernible, alte				
11-15	Evaluation is not identifiable, alternative designs are identified.	6-10	Discussion of alternative of	lesione ie	minimal
1-5	You can tell there were alternatives.	0	No discernible evaluation		mminal.
Comme		<u> </u>	1 140 discerninie evaluation	<u> </u>	
Commit				25	1(15)

AV

Offensiv	e and defensive evaluation - Analysis of gaming strategies and design	elements	used t	o achi	eve team goals		, , ,
21-25	Evaluation of offensive/defensive strategies is explicitly identified, g knowledge of the game.	oals of th	is tear	m are	clearly identified, o	discussion show	ws a deep
16-20	Evaluation is identified, goals are discernible, discussion shows a known	owledge	of the	game.			
11-15	Evaluation is not identified, there is some notion of goals and game	knowled	ge.				
6-10	Discussion of goals and game knowledge are minimal.						
1-5	There is some slight mention of strategy.	0	No c	liscern	ible evaluation.		
Comme	ents:					25	25
	e Development Process (Evidence that a software development p						
(21-25)	Process is explicitly identified; steps are obvious and explanation is t						xplained.
16-20	Process is identified; steps are discernible and there is some explana						
11-15	There is some discussion of a development process or design method		6-10		ess is mentioned b		
1-5	You can tell there were some software design methods used.		0	NO C	liscernible softwar	e development	process.
Comme	ents:					25	23
Safety -	Evidence that safety training occurred and safe practices were followed	to prever	nt stud	ents' n	nisuse of tools and	other devices/e	
	result in personal injury or damage to property						
(17-20)	Clear evidence that safety training occurred, clear evidence that the		rified s	afety	procedures were f	ollowed.	
13-16	Clear evidence of safety training, some evidence procedures were v		Τ				
9-12	Some evidence of safety training, some procedures were verified.	5-8			ence safety trainin	g, no verifying	procedur
1-4	Safety was mentioned; unsafe methods might be visible in photos.	0	Non	nentio	n of safety.		
Comme						20	20
	Documentation - Team organization, meeting minutes, CAD/other drawi	ngs, phot	os, tes	t resul	ts, etc. that suppor	t the main docu	ment (max
16-20	le -sided pages); +5pts bonus for BEST National Registry proof,	from nri	maru	locum	ont	-	
11-15	Clearly identifies ALL categories mentioned above; references made Identifies items from the list above; but missing one or two categori		mary c	iocum	ent.		
1-5	Includes items from at least 2 categories; but not identified.	6-10	Item	s from	n at least 3 categor	ies ahove are i	ncluded
0	No items from listed categories are included.	+5			lational Registry p		
Comme		1	1		tational fiebisti y pr	25	15
50# 733555	And the second of the second o	· · · · · · · · · · · · · · · · · · ·			and a combined state to		
Organiz	Overall Quality and completene tation and appearance - Table of contents, summary, page number					age to append	
(21-30)	Well organized, looks good, includes Table of Contents, summary, p						
11-20	score sheet), linkage to appendices.	rt about					
1-10	Reasonably organized, looks good, missing one or two items from list Poorly organized, no attention to looks, missing multiple items from			0	Disorganized, mi	ssing most iter	mc
Comme		i iist abov	<u>c. </u>		1 Disorganized, iiii	30	
						30	25
	ce to specifications heet and/or title page that identifies the school team name, teacher contact in	formation	and te	am nu	mher		
	ins, Business font no smaller than 12 pt., double-spaced (single spaced of						
	option, Softcopy Format = PDF or Hardcopy in Standard Binder, 35 one-side					d page max for	appendices
(21-30)	Adheres to the specifications listed above.						
11-20	Violates one of the specifications listed above.						
1-10	Violates two or three of the specifications listed above.	0	Viola	ates fo	r or more specs.		
Comme	ents:					30	30
	of content - Well written, clear photo labels, lack of extraneous material such				tional efforts, spirit de	evelopment, tear	n building
(21-30)	Everything is well written/clear/logical, everything is clearly labeled				_		
11-20	You can follow everything with some effort, one or two things that a						
1-10	Hard to understand in places, labels missing in places, unnecessary in	material.		0 Ve	ery difficult to follo	w, unnecessar	
Comme	ents:					30	28
SCORE	CALCULATION and Additional Comments:	Total				300	278
						÷10	÷10
		Final S					
		rinai S	cure			30 max	27.8
Judge n	name/number (print):						
Team N	lumber: 0804 School: DECOTO	rH	eri	tac	de Chris	shoun	
. 223					J	Acad	emy

	Research Paper (4 pts.)				22.00	Possible Points	Points Awarded
Correlat	ion between the game and how the science/technology is being used at a compa	any/ind	ustry/researc	:h la	b in the tear	n's state or	region
(8-10)	In-depth discussion of how this year's game theme relates to industry in thi						
4-7							
1-3	General discussion of this year's game theme, but no ties to the region			0	No discuss	ion of game	theme.
Comm	ents:					10	10
Apy rela	ited information of the game theme such as history, famous inventor(s), major m	ileston	es, etc.				
(4-5)	In-depth discussion of history and people related to this year's game theme	:					
2-3	General discussion of history and people related to this year's game theme.						
1	Some mention of history or people.			0	No discuss	on of relate	ed info
Comm	ents:					5	5
Analysis	s of the game theme/problem & related technology's impact on the human exper	ience, o	ur needs, ad	lapt	ations, and p	rogress wit	h solutions.
4-5)	In-depth historical account of the effects to human experience, needs, adap						
2-3	Some discussion about the effects of the theme/problem/technology on hu	ıman ex	periences, r	nee	ds, adaptation	ons or progr	ress.
1	Mentioned the effects to human experience, needs, adaptation or progress				f history/eff		
Comme	ents:		-			5	4
Creativit	ty in linking the game to appropriately related science content					L	
8-19	Very creative in linking this year's game theme to other science/technology	·•			· · · · · · · · · · · · · · · · · · ·		
4-7	Attempted to link this year's game theme to other science/technology.						
1-3	Mentioned other science/technology.	0	No discuss	sion	of other sci	ence/techn	ology
Comm		ļ				10	8
Proper f	ormal writing - Proper use of grammar & composition throughout; source cita	ations u	sed to gathe	r in	formation: w	uithin 2-5 na	
(8-10)	Very few grammar mistakes/misspellings, included citations, 2-5 pages.	ations u	oca to gatile		ioiliation, v	nami 2-5 pa	ge mark
4-7	Noticeable grammar mistakes/misspellings or did not include citations, 2-5	nages					
1-3	Many grammar mistakes/misspellings, no citations, or not within 2-5 pages.		<u>-</u>	0	Incompreh	oncible or n	ologin =
Comme				0	Incompreh	ensible of fi	lissing.
COMM		2 1. le 1 14 10	W			10	10
400000	Design Process (17 pt	s.) 🗀					
Impleme	entation of the Engineering Design Process (Evidence that the engineering des	ign pro	cess was eff	ecti	vely used)		
(21-25)	Process is explicitly identified; steps are obvious and explanation is thoroug	h.		-			
16-20)	Process is identified; steps are discernible and there is some explanation.						
11-15	Process is not identified; there is some discussion of a design process.	6-10	Discussion	n of	process is m	inimal.	
1-5	You can tell there was a design process of some sort.	0	No discerr	nibl	e design pro	cess.	
Comme	ents:					25	25
Brainsto	rming Approaches - How well organized and productive was the brainstorming	approac	h? How we	ell v	as it docum	ented?	<u></u>
(21-25)	Approach is explicitly identified, organization &productivity are obvious, ex						ions made.
16-20	Approach is identified, organization and productivity are discernible, there				·		
11-15	Approach is not identified, there is some discussion of brainstorming.	6-10	Discussion	of	approach is	minimal.	
1-5	You can tell there were ideas generated.	0			e brainstorm		
Comme	<u> </u>	-				25	25
Analytic	al evaluation of design alternatives - Use of analytical and mathematical skills in	dacidir	na unon and	imr	lomonting d	ooian altarn	
(21-25)	Evaluation is explicitly identified, analytic/mathematical approach is obviou						auves
16-20	Evaluation is explicitly identified, analytic/mathematical approach is discernible, alter					A	
11-15	Evaluation is identified, analytic/mathematical approach is discernible, after Evaluation is not identifiable, alternative designs are identified.	6-10		_		dociena !-	inima al
1-15	You can tell there were alternatives.	0 e-10			alternative o		mimal.
		U	I NO discerr	וטוו	e evaluation	·	
Comme	mus:					25	25

	Judges' 2019 Engineering Not	ebook	Score	Sheet		AV
Offensiv	ve and defensive evaluation - Analysis of gaming strategies and design	element	s used t	to achieve team goals		
21-25	Evaluation of offensive/defensive strategies is explicitly identified, g	oals of	this tea	m are clearly identified, dis	cussion sho	ws a deep
	knowledge of the game.	_				·
(16-20)	Evaluation is identified, goals are discernible, discussion shows a known	owledge	of the	game.		
11-15	Evaluation is not identified, there is some notion of goals and game	knowle	dge.			
6-10	Discussion of goals and game knowledge are minimal.					
1-5	There is some slight mention of strategy.	0	No	discernible evaluation.		
Commo	ents:				25	20
					25	20
Softwa	re Development Process (Evidence that a software development p					
21-25	Process is explicitly identified; steps are obvious and explanation is t					explained.
16-20	Process is identified; steps are discernible and there is some explana		me de			
(11-15)	There is some discussion of a development process or design metho	ds.	6-10	Process is mentioned but	t minimal de	etail.
1-5	You can tell there were some software design methods used.		0	No discernible software	developmen	t process.
Comme	ents:				25	K
						<u> </u>
	Evidence that safety training occurred and safe practices were followed	to preve	ent stud	ents' misuse of tools and of	her devices/	equipment
	result in personal injury or damage to property					
	Clear evidence that safety training occurred, clear evidence that the		erified :	safety procedures were fol	lowed.	
13-16	Clear evidence of safety training, some evidence procedures were v	T				
9-12	Some evidence of safety training, some procedures were verified.	5-8		e evidence safety training,	no verifying	g procedur
1-4	Safety was mentioned; unsafe methods might be visible in photos.	0	No r	mention of safety.		
Comme	ents:	3			20	20
Support	Documentation - Team organization, meeting minutes, CAD/other drawi	ngs, pho	tos, tes	st results, etc. that support t	he main doc	ument (max
	le -sided pages); +5pts bonus for BEST National Registry proof,		•			
16-20	Clearly identifies ALL categories mentioned above; references made	from p	rimary o	document.		
11-15	Identifies items from the list above; but missing one or two categori	eses				- · -
1-5	Includes items from at least 2 categories; but not identified.	6-10	Jien	ns from at least 3 categorie	s above are	included.
0	No items from listed categories are included.	+5		vided National Registry pro		
Comme	ents:		•		25	15
3 1 (50.55)	Overall Quality and completene	1971	Nicto	LANGE CONTRACTOR		3500 5000
					与它们到	
	zation and appearance - Table of contents, summary, page number					
21-30	Well organized, looks good, includes Table of Contents, summary, p	áge nun	nbers, d	liscussion of evaluation poi	nts (e.g. Iter	ns on the
	score sheet), linkage to appendices.					
11-20	Reasonably organized, looks good, missing one or two items from lis					
1-10	Poorly organized, no attention to looks, missing multiple items from	list abo	ve.	O Disorganized, miss	ing most ite	ms.
Comme	ents:				30	24
Adheren	ice to specifications					
	heet and/or title page that identifies the school team name, teacher contact in					
	ins, Business font no smaller than 12 pt., double-spaced (single spaced of					
	option, Softcopy Format = PDF or Hardcopy in Standard Binder, 35 one-side	d page n	nax for n	nain section, 20 double-sided	page max for	appendices
21-30	Adheres to the specifications listed above.					
11-20	Violates one of the specifications listed above.					
1-10	Violates two or three of the specifications listed above.	0	Viol	ates for or more specs.		
Comme	ents:				30	30
Quality	of content - Well written, clear photo labels, lack of extraneous material such	as comm	unity or	promotional efforts, spirit deve	elopment, tea	m building
21-30	Everything is well written/clear/logical, everything is clearly labeled,	no exce	ess mat	erial.		
11-20	You can follow everything with some effort, one or two things that a			/		
1-10	Hard to understand in places, labels missing in places, unnecessary r	naterial		0 Very difficult to follow,	unnecessar	y ma teri al.
Comme	ents:				30	7
SCORE	CALCULATION and Additional Comments:	T-A-1				200
JCORE	CALCOLATION and Additional Comments:	Total			300	249
					÷10	÷10′
		Final	Score		30 max	240
					33 11/ax	10,10
Judge r	name/number (print):					√
Team N	Team Number: 0804 School: ERIS					

	Research Paper (4 pts.)				12 11 11 12	Possible Points	Points - Awarded
Correla	Correlation between the game and how the science/technology is being used at a company/industry/research lab in the team's state or region						
/8-10 In-depth discussion of how this year's game theme relates to industry in this region.							
47							
1-3	General discussion of this year's game theme, but no ties to the region			0	No discus	sion of game	theme.
Comm	ents:					10	10
Any rela	ted information of the game theme such as history, famous inventor(s), major n		es, etc.				
4-5	In-depth discussion of history and people related to this year's game theme	e					
2.3	General discussion of history and people related to this year's game theme						
1	Some mention of history or people.			0	No discus	sion of relate	ed info
Comme	ents:					5	5
Analysis	of the game theme/problem & related technology's impact on the human exper	rience, o	ur needs, a	dapt	ations, and	progress wit	h solutions.
4-5	In-depth historical account of the effects to human experience, needs, ada						
2-3	Some discussion about the effects of the theme/problem/technology on his						ress.
1	Mentioned the effects to human experience, needs, adaptation or progress					ffects to hun	
Comme			1 100 11101111	•	······································	T T	lunity.
						5	5
Creativit	y in linking the game to appropriately related science content						<u> </u>
8-10	Very creative in linking this year's game theme to other science/technology	<i>/</i> ·					
4-7	Attempted to link this year's game theme to other science/technology.					****	
1-3	Mentioned other science/technology.	0	No discus	sion	of other so	cience/techn	ology.
Comme	ents:						1/2
SM	ART SEDSOR WW WEB					10	10
Proper f	ormal writing - Proper use of grammar & composition throughout;source cit	ations u	sed to gath	er in	formation;	within 2-5 page	ge limit
8-10	Very few grammar mistakes/misspellings, included citations, 2-5 pages.						
4-7	Noticeable grammar mistakes/misspellings or did not include citations, 2-5	pages.	_				
1-3	Many grammar mistakes/misspellings, no citations, or not within 2-5 pages	i		0	Incompre	hensible or n	nissing.
Comme	ents:					10	10
and the same	Design Process (17 pt	\$.) %	Political Property of the Prop		the second	A THE STATE OF	1 1 1 (S)
Impleme	ntation of the Engineering Design Process (Evidence that the engineering des		rose was of	focti	volv ugod \	September 1 and September 1	1,120,443,042,64
21-25	Process is explicitly identified; steps are obvious and explanation is thorough		cess was en	ICCLI	very useu j		
16-20	Process is identified; steps are discernible and there is some explanation.	311.					
		6 10	Discussio	5			
1-15	Process is not identified; there is some discussion of a design process.	6-10			process is I		
	You can tell there was a design process of some sort.	0	No discer	nibi	e design pr	ocess.	
Comme	nts:					25	120
Brainsto	rming Approaches - How well organized and productive was the brainstorming	approac	:h? How w	rell v	vas it docun	nented?	
21-25	Approach is explicitly identified, organization &productivity are obvious, ex						ions made.
16-20	Approach is identified, organization and productivity are discernible, there						iono maac.
11-15	Approach is not identified, there is some discussion of brainstorming.	6-10			approach is	s minimal	
1-5	You can tell there were ideas generated.	0 ~			e brainstori		
Comme							1
						25	20
	al evaluation of design alternatives - Use of analytical and mathematical skills in						atives
21-25 16-20	Evaluation is explicitly identified, analytic/mathematical approach is obvious Evaluation is identified, analytic/mathematical approach is discernible, alternatives are suppressed in the control of th					ed.	
			T			daa! !-	· · · · · · · ·
1-15	Evaluation is not identifiable, alternative designs are identified.	6-10				designs is m	inimal.
	You can tell there were alternatives.	0	I NO discer	nibl	e evaluation	n. T	
Comme	ms:					25	15

