											Rev	Description	Approval	Date
	Have P	<sup>&gt;</sup> reK-	K-5 tead	chers e	engag	jed in	the p	roces	s of ma	aking the		Description	, pp. or al	Date
Goal	connecti	ions	(using	g the er	nginee	ering	desig	n proc	cess) t	between				
	literature	e witł	th matl	hematio	cs & s	scienc	e whi	ile rea	iding s	tories.	03	١	VDW	8/16/07
Obal.	I his wil	ll em	nphas	size the	e proc		natur	e of le	earnin	ig. Show	1			
	the simi	ilarit	ties of	t Skilltu	ul thin	nking,	the	scien	ce pro	cess, the	Э			
	enginee	əring	g desi	ign pro	cess	and	the m	nathe	matica	al probler	n			
	solving	proc	cess.											
A 10 10 10 0	e e h	To	o enha	ance the	e lear	rning p	proce	ss by	using	the engine	eering	g design meth	odology	as
Appro	acn	аc	conne	ctor bet	tweer	n litera	ature,	scien	ice & n	nathemati	cs, ba	ased on thinkir	ng skills,	, as
		de	efined	in the B	Bloom	n taxor	nomy	. The	conce	pt uses th	e exis	sting comfort le	evel of tl	he
Design P	rocess	ele	ementa	ary tead	chers	and t	the st	udent	's natu	iral engine	ering	abilities.		
Establish	Need		ne proc	cess be ding to r	gins	sophi	eticat	and sto	uch as	t older and	s, star 28 – 8	ting in the low	er grade	25
Resear	rch	stu	udents	s The i	under	rlinina	skills	of the	e endi	neering de	esian	process are re	elated to	
Developr	ment	the	e scier	nce pro	cess.	, math	emat	ical p	roblem	solving (	proce	ss) and thinkir	ng skills.	
Select so	lution	Th	nus the	e studei	nt is t	aught	how	to thir	nk skill	fully and s	see th	e relevance o	f what th	ney
Construct P	rototype	are	e learr	ning.										
Test & Ev	aluate	f"Er	ingine	ering de	esign	challe	enges	are	create	d by actio	nable	items in the s	tory and	k k
Commun	icate	lea	ad to in	nquiry t	based	d team	n proje	ects th	hat hav	/e a desig	n the	me. As an ex	ample,	in
Redesi	gn	the	e story	y Islan		ine Bil	ue Do	olphins	s", the bo bor	village lea	aves (	canoes on the	SIDE OF	а
		de,	ettina c	one of th	japo hem (	down	the hi	ill and	l into th	ne water	A "de	sign challenge	e" for the	<u>e</u>
"o porizo		l sti	udents	s could	he to	desin	in a s	vstem	to ma	ie Water: ke it easi	≏r for	her to lower th		
engine	ers		uuema	scould		ucsig	n a s	ystem						<u>.</u>
design u	seiui te or	6	Mee	ets all th	he lea	arnina	nrinc	inles	of the	Massachi	ISAtts	Science Fran	nework	
product	s or		Pro	motes h	hiahei	r-orde	er thin	kina s	skills	massaone	100110		iewoin	
society	isina	•	Invit	ites the	incori	porati	on of	instru	ictiona	l technolo	av int	o the curriculu	ım.	
science	and	•	Eng	aineerin	ia is d	lifferei	ntiate	d: offe	ers an	"in" for lea	arners	of all types.		
mathema	mathematics "													
		•	Inte	gration	with	scien	ce an	d mat	h is im	portant w	ay to	show students	s how ar	nd
		i	why	/ they a	re rel	levant	and	useful	l in the	world.				
Ben	efits:	•	Dire	ectly col	nnect	ted wit	th imp	orover	ment o	f living co	nditio	ns/safety/heal	th and	
			welt	fare of p	peopl	le.						_		
		Ŀ	Eng	gages b	oth S	studen	its an	d Tea	chers	in an exci	tıng le	earning proces	s.	
		(						h a 199 a	thede	اممير ممرا:				
			I NIS P	proposa	ai is to I Dovid	o aeve	elop ti	ne me	for int	logy and I	mpier	nentation proc	cess (	ProK_
		_		riculum	and	make	it sus	stainal	ble wit	h the follo	wina	additions.	existing	
Deliv	erables	.	•Usin	ng a we	b rep	ositor	v for I	past p	rojects	s and colla	aborat	tion tools.		
Donv	or abree		•Cont	itinuing	on-lin	ne upo	date c	lasse	, S.					
			●Bring	g the co	oncep	ot into	teach	ner co	llege o	curriculum				
			•Expo	osing e	ngine	ering	colle	ge stu	idents	to this cor	ncept	for support of	the	
		l	class	room e	nviror	nment	t							
Literacy	' can be	exp	pand	led by	creati	ing re	ports,	, journ	nals, pr	resentatio	ns <sub>L</sub>	ītlo:		
and modif	ication to t	the s	storv b	ov the s	tuder	nt. Bo	oth st	udent	s and	teachers	I '	ilie.		

and modification to the story by the student. Both students and teachers see the connection between all subjects when doing an engineering design project. The projects are done as an **inquiry based process**, with the team experience being an additional learning benefit.

Title:		
Doc. #		Rev.
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