

## Theoretical Grounding for Design

The theoretical grounding for this design combines features of both the constructivist and objectivist paradigms. The design team for this technology device has envisioned its use with authentic and meaningful learning activities. However, because this device will be incorporated into a public elementary school, which is organized within a primarily objectivist paradigm, and because the users are students who require individualized instructional and behavioral programs, there are concessions to objectivist learning environments.

# Constructivism

Meaning is created by individuals. Learning is an active, creative, and contextual response to experiences and interactions. There are multiple perspectives of the world and events. The focus in a constructivist classroom is on the learner. The teacher acts primarily as a facilitator. Learning is shaped by prior knowledge and is based on inquiry, exploration, and reflection.

# Objectivism

Instruction is based upon selective reinforcement of behavior. Learning is defined as evincing particular responses to environmental cues and stimuli. It is both observable and measurable. The focus in an objectivist classroom is the acquisition of predetermined knowledge and skills. The teacher is the transmitter of knowledge and skills, and the student is the receiver.

<p><b>Anchored Instruction Model</b> This is a form of technology-based learning. Learning occurs within a narrative: the anchor, which presents a case study or problem. All necessary data for solving the problem are embedded in the problem-solving modules. Learning is generally collaborative. Interactive, branching multimedia are used to promote understanding and realism.</p>	<p><b>Authentic Learning Model</b> Learners are involved in applying practical, everyday knowledge and skills in realistic situations. There is a focus on collaborative activities, contact with expert sources, and generalization of learning.</p>	<p><b>ARCS Model</b> This model focuses on learner motivation by gaining and maintaining the learner's attention, making learning relevant to the user, ensuring that the learner can achieve the objectives in the time allowed, and promoting a sense of satisfaction with the results.</p>	<p><b>Behaviorist Model</b> In behaviorism, knowledge is transmitted from the teacher to the student. Behaviorist instruction is based upon lesson plans which focus on critical information that all students must master. Learning is evaluated in terms of "passing" or "failing" predetermined goals and objectives.</p>	<p><b>Individualized Instruction</b> Both instruction and learning are based upon assessment of needs and strengths. Each student receives instruction in areas of particular weakness.</p>	<p><b>Systems Approach</b> This model programs instruction, using computers and multimedia, to meet predetermined goals and objectives. Instruction is modified to fit the learner's dynamic needs.</p>
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## References

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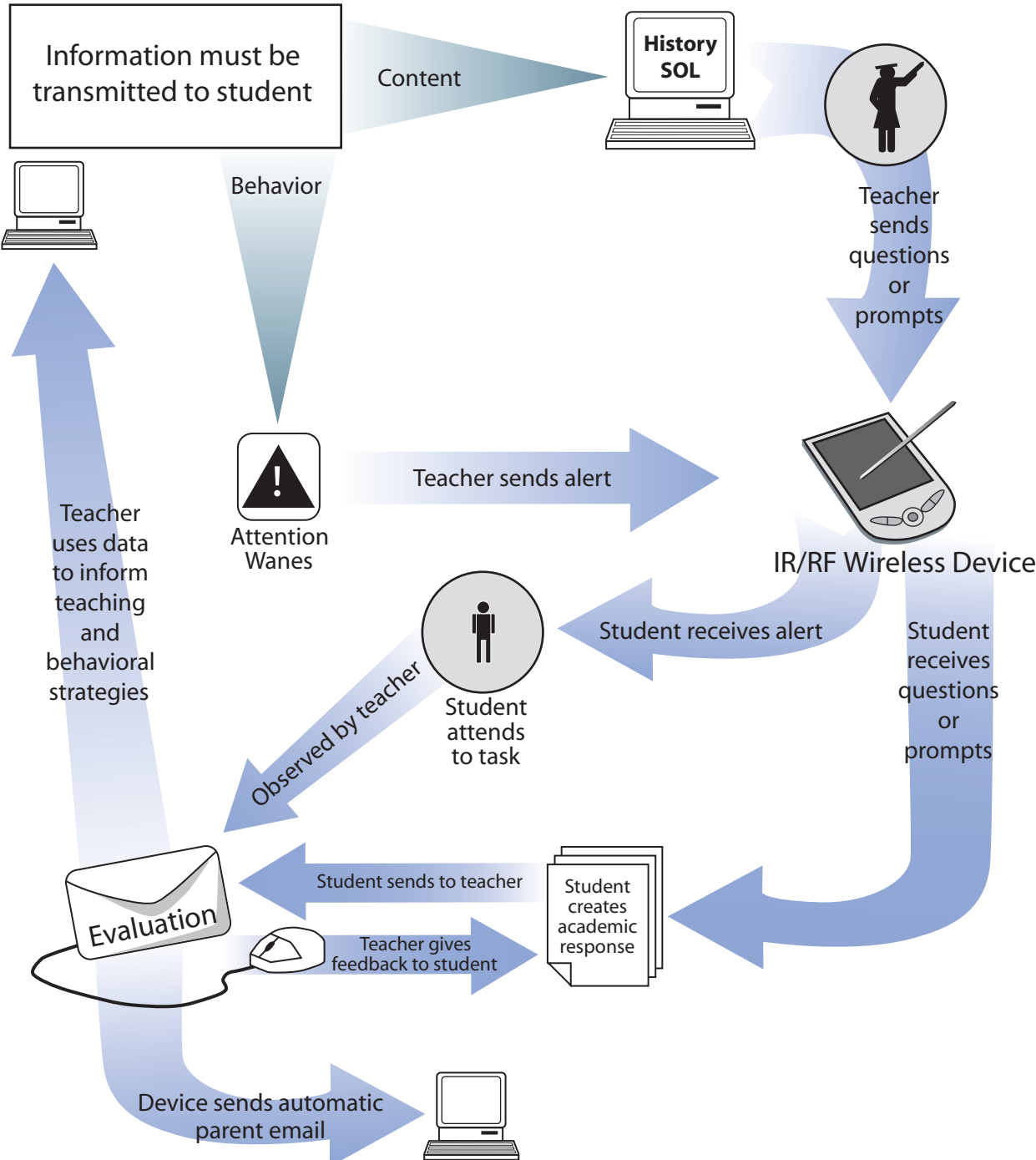
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# Concept Model



ADHD/Gifted  
**Content Inventory**

\*Targeted Information is Highlighted in Green

Topic	Subtopic	More Details	URL for more information	User with Main Access to Cached site-when
<b>Reminders</b>		visual- vibration- soft sound-		Student- Intermittent access
	Specific positive reinforcement messages from the teacher	This should be included as often as possible. Too often these students, and the adults around them, dwell on the negatives. Emphasis on strengths will increase positive outcomes.	<a href="http://sparksofgenius.wordpress.com/2007/04/23/great-parenting-advice-especially-for-adhd/">http://sparksofgenius.wordpress.com/2007/04/23/great-parenting-advice-especially-for-adhd/</a>	Student- Intermittent access
	Attention	Intermittent- visual- vibration- soft sound		
		student checks & tallies		
		On task		
		Off task		
		The data automatically creates a graph of on task behavior		
		Teacher sends text message from a pool of messages		
		Specific praise- text- wow you have been working hard!		
		Quiet reminder to return to task-		
		visual		
		vibration		
		soft sound		
		Text		
	Locator	When student loses device		Student- as needed
		If at home, parent goes to computer and activates GPS		Parent/ Student- as needed
		A map of the house and surrounding area indicates the location of the device with a flashing light		
		Student chosen ring is also activated		
		If at School, teacher goes to computer and activates GPS		Teacher/ Student- as needed

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		A map of the School and surrounding area indicates the location of the device with a flashing light		
		Student chosen ring is also activated		
	Low Battery Alert	When battery has full charge		Student- full access
		Battery icon has four solid green squares		
		When battery has an hour left of charge		
		Battery icon has 3 empty squares and one yellow square		
		Battery icon blinks every 10 minutes		
		When battery has 15 minutes left of charge		
		Battery icon has four empty red squares		
		Battery icon blinks every 5 minutes		
		Text message reminds student to turn off device and recharge		
		When battery has 5 minutes left of charge		
		Battery icon has four empty red squares		
		Battery icon blinks continuously		
		recharge it		
<b>Virginia History VS 4 c. Explain how geography influenced the relocation of Virginia's capital</b>				Student-always
		<b>Hardships experienced by colonists at Jamestown</b>		
		drinking water was contaminated		
		marshy		
		contained diseases		
		had some salt water seeping in it		
		dirty living condition		
		fire twice destroyed wooden buildings		
		<b>Williamsburg</b>		
		higher elevation		
		population of the town was growing		
		located farther from the James River		
		drier		
		safer place		
		<b>Richmond</b>		
		better location for trade		
		central location		
		safer from attack by the English		

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		<b>Maps</b>	<a href="#">..\Colonial Maps.doc</a>	
		<b>Jamestown</b>		
		<b>Williamsburg</b>		
		<b>Richmond</b>		
<b>Other VA History Learning Opportunities</b>	Early History of Virginia		<a href="http://www.scott.k12.va.us/martha2/History%20Page.htm">http://www.scott.k12.va.us/martha2/History%20Page.htm</a>	Student-always
	Instructions for the Virginia Colony 1606		<a href="http://odur.let.rug.nl/~usa/D/1601-1650/virginia/instru.htm">http://odur.let.rug.nl/~usa/D/1601-1650/virginia/instru.htm</a>	Student-always
	a. explaining the importance of agriculture and its influence on the institution of slavery;	Tobacco became a cash crop- not available in England- colonists could get money for it & buy things they needed- they had lots of land - the more tobacco they grew- the more money they could earn- but they needed lots of people to plant and harvest - but didn't want to pay them- Indentured servants- worked for 7 years- slaves- worked for free for their whole lives- People from Africa were captured & forced to become slaves- <b>Vocabulary</b> - tobacco, cash crop, profitable, product, trade, labor, indentured servants, slaves, harvest, and agriculture		Student-always
	d. describing how money, barter, and credit were used.	barter. Review how the colonists traded with the American Indians (First Americans) to survive during early colonization-Today- money, checks, debit cards, credit cards.- tobacco was a cash crop- green gold-used as money-for goods and services-very few had paper money and coins to pay for goods and services- credit, promised to pay after the crop was harvested & sold- no banks until 1791- <b>Vocabulary</b> - barter, trade, cash crop, credit debt, savings, products, harvest		Student-always
	Library of Virginia-	Look up terms- Teacher resource	<a href="http://www.lva.lib.va.us/">http://www.lva.lib.va.us/</a>	Teacher- always
	Facts about Virginia- (Paid site)		<a href="http://www.enchantedlearning.com/usa/states/virginia/">http://www.enchantedlearning.com/usa/states/virginia/</a>	Student- teacher determines
Skills to be Used in teacher created		Determine cause-and-effect relationships.		

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		Compare and contrast historical events.		
		Draw conclusions and make generalizations.		
		Make connections between past and present.		
		Sequence events in Virginia history.		
		perspectives.		
		Evaluate and discuss issues orally and in writing.		
		Analyze and interpret maps to explain relationships among landforms, water features, climatic characteristics, and historical events.		
<b>Activities</b>		Teacher will create and send prepared a selection of activities on topic- student may choose	<a href="http://www.mce.k12tn.net/colonial_america/colonial_america.htm">http://www.mce.k12tn.net/colonial_america/colonial_america.htm</a>	Student- teacher determines
			<a href="http://www.smarter.com/---se--qq-costume+colonial--pt-0--tt-.html">http://www.smarter.com/---se--qq-costume+colonial--pt-0--tt-.html</a>	
			<a href="http://www.theteacherscorner.net/thematicunits/colonial.htm">http://www.theteacherscorner.net/thematicunits/colonial.htm</a>	
			<a href="http://www.visitwilliamsburg.com/index.aspx">http://www.visitwilliamsburg.com/index.aspx</a>	
			<a href="http://www.beavton.k12.or.us/jacob_wisner/fourth/colonies/virginia.htm">http://www.beavton.k12.or.us/jacob_wisner/fourth/colonies/virginia.htm</a>	
<b>File of videos/ icons/ Pictures/ maps/ graphics on pertinent topics</b>			<a href="http://streaming.discoveryeducation.com/search/assetDetail.cfm?guidAssetID=31385E98-FACC-4A1A-AFE0-EF51FAF62B81">http://streaming.discoveryeducation.com/search/assetDetail.cfm?guidAssetID=31385E98-FACC-4A1A-AFE0-EF51FAF62B81</a>	Student- teacher determines- limited access
<b>Organization Aids</b>	Daily/weekly Schedule	Classes, lunch, special subjects, etc.		Student/Teacher- Full access Parent- home access
	Homework	Daily and long term projects and assignments with periodic reminders for the long term assignments		Student-Full access Parent- home access

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	Quiz/Test schedule	With study reminders		Student-Full access Parent-home access
	Current Grades with progress graph			Student-Full access Parent-home access
<b>ADHD Information</b>	Kid's Health for Kids		<a href="http://www.kidshealth.org/kid/health_problems/learning_problem/adhdkid.html">http://www.kidshealth.org/kid/health_problems/learning_problem/adhdkid.html</a>	Student- teacher determines-limited access
	Neuroscience for Kids		<a href="http://faculty.washington.edu/chudler/adhd.html">http://faculty.washington.edu/chudler/adhd.html</a>	Student- teacher determines-limited access
	Biographical sketches of successful adults who have (had) ADHD	Some of these links are not active so a site with biographies may need to be fixed/created	<a href="http://www.adhdrelief.com/famous.html">http://www.adhdrelief.com/famous.html</a>	Student- teacher determines-limited access Parent- home access
			<a href="http://add-adhd.lifetips.com/cat/57754/famous-people-with-adhd-add/">http://add-adhd.lifetips.com/cat/57754/famous-people-with-adhd-add/</a>	Parent/Teacher-access
		These sites have lists of names.	<a href="http://www.adhdtexas.com/famouspeople.htm">http://www.adhdtexas.com/famouspeople.htm</a>	Parent/Teacher-access
		These sites have lists of names.	<a href="http://www.adult-child-add-adhd.com/categories/general/famous_people.php">http://www.adult-child-add-adhd.com/categories/general/famous_people.php</a>	Teacher- access
		These sites have lists of names.	<a href="http://www.unboundpotentials.com/id111.html">http://www.unboundpotentials.com/id111.html</a>	Teacher- access

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<b>Strategies</b>	ADHD Benefits-	Energy to do much! Incredible creativity, Hyper focus in areas of interest, Ability to think "Outside the Box" often a well developed sense of humor	<a href="http://www.drhallowell.com/press/detailedbio.html">http://www.drhallowell.com/press/detailedbio.html</a>	Teacher/Parent - Home access
	Know your strengths & use them			
	Good sleep habits		<a href="http://web4health.info/en/answers/adhd-sleep-enough.htm">http://web4health.info/en/answers/adhd-sleep-enough.htm</a>	Teacher/Parent - Home access
			<a href="http://www.lifespan.org/services/childhealth/research/studies/sleep-adhd.htm">http://www.lifespan.org/services/childhealth/research/studies/sleep-adhd.htm</a>	Teacher/Parent - Home access
			<a href="http://www.4-adhd.com/article1.html">http://www.4-adhd.com/article1.html</a>	Teacher/Parent - Home access
	Good nutrition		<a href="http://www.nlm.nih.gov/nlci.com/nutrition/">http://www.nlm.nih.gov/nlci.com/nutrition/</a>	
	Organization	Students need to find a way to help themselves organize.	<a href="http://www.advance.com/advance_friendly/org_strategies.html">http://www.advance.com/advance_friendly/org_strategies.html</a>	Student/Parent/Teacher full access
			<a href="http://www.squidoo.com/organizeADHD/">http://www.squidoo.com/organizeADHD/</a>	Teacher full access
			<a href="http://ezinearticles.com/?Teacher-Tips:-Organizing-Your-ADHD-Students&amp;id=4035">http://ezinearticles.com/?Teacher-Tips:-Organizing-Your-ADHD-Students&amp;id=4035</a>	Teacher full access
	Positive Self Talk		<a href="http://www.mayoclinic.com/health/positive-thinking/SR00009">http://www.mayoclinic.com/health/positive-thinking/SR00009</a>	Teacher/parent-full access
			<a href="http://www.healthyhabits.com/SelfTalk.asp">http://www.healthyhabits.com/SelfTalk.asp</a>	Teacher/parent-full access
			<a href="http://www.2imaginethis.com/positive_self_talk.shtml">http://www.2imaginethis.com/positive_self_talk.shtml</a>	Teacher/parent-full access
	Self advocacy	This is for older students but parents & teachers can begin planting the seeds to self advocacy much earlier.	<a href="http://www.healthcentral.com/adhd/teen-adhd-40351-5.html">http://www.healthcentral.com/adhd/teen-adhd-40351-5.html</a>	Teacher/parent-full access

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	Stress relief		<a href="http://school.familyeducation.com/learning-disabilities/treatments/37812.html?detoured=1">http://school.familyeducation.com/learning-disabilities/treatments/37812.html?detoured=1</a>	Student- Intermittent access
	Brain Gym		<a href="http://www.braingym.org/">http://www.braingym.org/</a>	Teacher/parent- full access
	Brain Gym- PACE Exercises		<a href="http://esl.about.com/od/englishlessonplans/a/braingym.htm">http://esl.about.com/od/englishlessonplans/a/braingym.htm</a>	Student- Intermittent access
	Brain Gym Resources		<a href="http://www.braingym.com/">http://www.braingym.com/</a>	Parent/teacher full access
<b>Other Reminders- visual- vibration- soft sound-</b>	Water Break	1 per hour		Student- Intermittent access
<b>Visual/vibration Prompts</b>		Teacher will send prompts from a prepared list (or impromptu) as needed		Student- teacher determines
	2 minute exercise break	These would be - small motor movements that can be quietly executed without disturbing others- Large movement breaks would be initiated by the teacher- the student could have a limited number of cues per several hours to let the teacher know when a large movement break is needed.		Student- Intermittent access
<b>Productivity Tools</b>	MS Office for Pocket PCs or Palm OS	For Productivity - word processing & Spread sheets & Presentation - Student would use these to create projects and assignments		Student-always
	Classical Instrumental Music	There would be pre determined set of instrumental classical music choices.	<a href="http://www.i-waveonline.com/index.htm">http://www.i-waveonline.com/index.htm</a>	Student-always
		Research has found that instrumental musical arrangements at 60 beats per minute has therapeutic effects.	<a href="http://www.cqcapd.state.ny.us/Danweb/pastissues/oldissues/2003/Power%20of%20music.htm">http://www.cqcapd.state.ny.us/Danweb/pastissues/oldissues/2003/Power%20of%20music.htm</a>	Teacher/parent- full access

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	Paint/ doodle program	this could help the student as they are listening, thinking about the topic, and/or working on an assignment		Student- teacher determines- limited access
	Camera	Take pictures to illustrate projects or help cue student		Student- teacher determines- limited access
	voice/sound Recorder	Could record classes for notes or music/ spoken words for a project.		Student- teacher determines- limited access
	Visual timer	this software provides a visual way to know just how much time is allotted for an activity and how much time has passed at any moment.	<a href="http://www.timetimer.com/products.php">http://www.timetimer.com/products.php</a>	Student-Full access
<b>Parent/Teacher Resources</b>	About.com- lists of many websites		<a href="http://childparenting.about.com/od/attentiondeficitdisorders/">http://childparenting.about.com/od/attentiondeficitdisorders/</a>	Teacher/Parent - Home access
			<a href="http://www.adhd.com/index.jsp">http://www.adhd.com/index.jsp</a>	Teacher/Parent - Home access
			<a href="http://www.chadd.org/AM/CustomPages/home/CHADD_Home.htm?CFID=5949003&amp;CFTOKEN=29957358&amp;jsessionid=f2301886971194852261921">http://www.chadd.org/AM/CustomPages/home/CHADD_Home.htm?CFID=5949003&amp;CFTOKEN=29957358&amp;jsessionid=f2301886971194852261921</a>	Teacher/Parent - Home access
			<a href="http://school.familyeducation.com/learning-disabilities/treatments/37809.html">http://school.familyeducation.com/learning-disabilities/treatments/37809.html</a>	Teacher/Parent - Home access
			<a href="http://www.celebrate-adhd.com/index.html">http://www.celebrate-adhd.com/index.html</a>	Teacher/Parent - Home access
			<a href="http://www.ricklavoie.com/aboutrick.html">http://www.ricklavoie.com/aboutrick.html</a>	Teacher/Parent - Home access

