

Appendix C Placement of Exploring Life activities on the WBI instrument

	Learner Directed		Materials Directed	
Essential Feature of Inquiry	L2	L1	M1	M2
Learners are engaged by scientifically oriented questions.	<p>Prompts learner to formulate own question or hypothesis to be tested.</p> <p>Laboratory 7.2 Guided Research: Cellular Respiration in FastPlants®</p>	<p>Suggests topic areas or provides samples to help learner formulate own question or hypothesis.</p> <p>Laboratory 7.2 Guided Research: Cellular Respiration in FastPlants® Laboratory 8.1 Photo Finish</p>	<p>Offers learner lists of questions or hypotheses from which to select.</p> <p>Laboratory 7.2 Guided Research: Cellular Respiration in FastPlants®</p>	<p>Provides learner with specific stated (or implied) question/hypothesis to be investigated.</p> <p>Webquest – CalorieQuest Webquest – ChocolateQuest Webquest - ThermalventQuest</p> <p>Laboratory 7.1 Investigating Chemical Energy Stored in Food Laboratory 7.2 Guided Research: Cellular Respiration in FastPlants® Laboratory 8.1 Photo Finish Investigative Lab 36 - You Are a Pond Organism Explore!: Aerobic Exercise and Dietary Supplements</p>
Learners give priority to evidence, which allows them to draw conclusions and/or develop and evaluate explanations that address scientifically oriented questions.	<p>Learner determines what constitutes evidence and develops procedures and protocols for gathering relevant data (as appropriate).</p> <p>Laboratory 7.1 Investigating Chemical Energy Stored in Food Laboratory 7.2 Guided Research: Cellular Respiration in FastPlants® Laboratory 8.1 Photo Finish</p>	<p>Directs learner to collect certain data, or only provides portion of needed data. Often provides protocols for data collection.</p> <p>Laboratory 7.1 Investigating Chemical Energy Stored in Food Laboratory 7.2 Guided Research: Cellular Respiration in FastPlants® Laboratory 8.1 Photo Finish Investigative Lab 36 - You Are a Pond Organism</p>	<p>Provides data and asks learner to analyze.</p> <p>Explore!: Aerobic Exercise and Dietary Supplements Ch. 8 Webquest – ChocolateQuest</p>	<p>Provides data and gives specific direction on how data to be analyzed.</p> <p>Ch. 7 Webquest – CalorieQuest Ch. 8 Webquest – ChocolateQuest Ch. 36 Webquest - ThermalventQuest</p>
Learners formulate conclusions / explanations from evidence to address scientifically oriented questions.	<p>Prompts learner to analyze evidence (often in the form of data) and formulate own conclusions/explanations.</p> <p>Laboratory 7.2 Guided Research: Cellular Respiration in FastPlants®</p>	<p>Prompts learner to think about how evidence leads to conclusions/explanations, but does not cite specific evidence.</p> <p>Explore!: Aerobic Exercise and Dietary Supplements</p>	<p>Directs learner attention (often through questions) to specific pieces of evidence (often in the form of data) to draw conclusions and/or formulate explanations.</p> <p>Webquest – CalorieQuest Webquest - ThermalventQuest Laboratory 7.2 Guided</p>	<p>Directs learner attention (often through questions) to specific pieces of evidence (often in the form of data) to lead learner to predetermined correct conclusion/explanation (verification).</p> <p>Webquest – ChocolateQuest Webquest – ThermalventQuest Laboratory 7.1 Investigating</p>

	Explore!: Aerobic Exercise and Dietary Supplements			Research: Cellular Respiration in FastPlants® Laboratory 8.1 Photo Finish Investigative Lab36 - You Are a Pond Organism Ch.7 Explore!: Aerobic Exercise and Dietary Supplements	Chemical Energy Stored in Food Ch.7 Explore!: Aerobic Exercise and Dietary Supplements		
Learners evaluate their conclusions / explanations in light of alternative conclusions/ explanations, particularly those reflecting scientific understanding.		Prompts learner to examine other resources and make connections to conclusions and/or explanations independently ("Catalyst"). Webquest - ThermalventQuest Laboratory 8.1 Photo Finish	Provides hypertext links but does not refer to them. Learner independently examines other resources and make connections to conclusions and/or explanations.	Directs learner to hypertext links related to areas and sources of scientific knowledge. Explore!: Aerobic Exercise and Dietary Supplements	Identifies areas and sources of scientific knowledge that could be useful, but does not provide hypertext links.	Suggests or implies possible connections, but does not provide hypertext links.	Explicitly states specific connections, but does not provide hypertext links.
Learners communicate and justify their proposed conclusions / explanations.	Reminds learner of general purpose of communication and/or need for communication, but gives no specific guidance.		Talks about how to improve communication, but does not suggest content or layout.		Suggests possible content to include and/or layout that might be used. Laboratory 7.2 Guided Research: Cellular Respiration in FastPlants®	Specifies content to be included and/or layout to be used. Explore!: Aerobic Exercise and Dietary Supplements	
	Learner-driven with much initiative and independence.		Learner makes decisions, but with support and scaffolding, particularly with the process.		Learner does much selecting from provided materials. Limited choices.		Materials-driven. Learner makes few choices and is given much direction.