

Integrating Deeper Learning and HQIR Curriculum Analysis and Adjustment Tool: Surface Learning

Purpose: This tool is designed to support district curriculum teams in analyzing a local curriculum with its high-quality instructional resource (HQIR) to determine alignment with learning science principles. This analysis also will help show where deeper learning is happening within the resource and inform how deeper learning practices may be used to make smart adjustments in order to provide more vibrant student learning experiences in Tier 1 instruction.

When to Use: This tool may be used to support districts during the HQIR adoption process as the curriculum team analyzes potential resources for alignment to the indicators below. Once an HQIR has been adopted, it is recommended that this tool is used after early implementation as districts transition into ongoing implementation (**potentially starting in year two and beyond**). This allows educators to develop a better understanding of the resource and its instructional design to ensure any adjustments made in ongoing implementation maintain the integrity of the resource.

Instructions for Curriculum Analysis:

- Analyze the local curriculum and HQIR for evidence of each indicator below.
- Make note of indicators or aspects of an indicator that may not be fully present.

Learning Stage	Indicators	Notes from Analysis
Surface Learning	<ul style="list-style-type: none"> ● Students actively use background knowledge to support their learning. Routines are present to: <ul style="list-style-type: none"> ○ Help students activate relevant prior knowledge to prepare the brain in advance to “catch” new inputs. ○ Provide students opportunities to continue connecting learning to prior knowledge to support consolidation. 	
	<ul style="list-style-type: none"> ● Vocabulary instruction builds declarative knowledge by helping students understand, recall and apply subject-specific words and academic terms. <ul style="list-style-type: none"> ○ Students are tasked with using new words they acquire in a variety of ways and have multiple opportunities to practice and apply new vocabulary. ○ Students receive direct instruction in word analysis and vocabulary learning strategies specific to the content area. 	
	<ul style="list-style-type: none"> ● Strategy instruction and modeling develop procedural knowledge through direct instruction and demonstration of key skills, learning processes and cognitive (thinking) strategies. <ul style="list-style-type: none"> ○ Teachers are supported in providing direct instruction and in demonstrating new skills and strategies (cognitive, metacognitive) as they model relevant thought processes. 	

Learning Stage	Indicators	Notes from Analysis
	<ul style="list-style-type: none"> ● Illustrations, animations, manipulatives, organizers, concrete and worked examples support conceptual understanding. <ul style="list-style-type: none"> ○ Visual representations and examples support visual and verbal (dual-coding) comprehension of new ideas. ○ Schematics (diagrams, flow charts, etc.) help guide and support procedural knowledge. 	
	<ul style="list-style-type: none"> ● Regular opportunities are provided for retrieval practice with declarative knowledge. Retrieval practice (self- or peer-quizzing, ungraded practice tests, etc.) is deliberate, spaced over time and formative. 	
	<ul style="list-style-type: none"> ● Regular opportunities are provided for practice of new skills with formative feedback. <ul style="list-style-type: none"> ○ Skills practice is deliberate and spaced over time. ○ Skills practice is mixed/interleaved to allow students to engage with the content in a variety of formats, problem types and contexts in order to help them think more deeply as they identify what is different and access appropriate strategies. 	

- Based on analysis of the indicators above, it is important for districts to ensure aspects of the HQIR that align to surface learning are consistently implemented into classroom instruction. In some HQIRs, these aspects may be presented as optional and may need to be designated as “non-negotiable” elements in the local curriculum document. It may not be necessary, however, to do them all.
- While a curriculum team may choose to make discrete adjustments to address issues identified above, the deeper learning practices below also address what may not be present in a HQIR or may be used to strengthen what is only partially present.

Instructions for Curriculum Adjustment: The practices below are often associated with project-based learning, a common vehicle for deeper learning. The considerations for each deeper learning practice can help support priming for surface learning’s core components. Which considerations are taken up depends on findings from the curriculum team’s analysis as well as current capacities regarding deeper learning. A few additional recommendations are:

- Use the [Adjusting High-Quality Instructional Resources Tool](#) from the Kentucky Department of Education (KDE) to help make sure adjustments made do not compromise the integrity of the HQIR’s design.
- Strategically space curriculum adjustments over time to ensure they are effectively embedded and there is opportunity for leaders and teachers to develop a shared understanding of them.

- Engage with external deeper learning partners when needed so those adjusting the curriculum have sufficient support; many deeper learning partners also have established tools and/or approaches a district might use.
- Assess the needs educators may have for high-quality professional learning to develop their capacity to incorporate adjustments to their curriculum successfully.
- Consider cognitive load as complexity is added to the learning design. Additional focuses, like portrait of a learner competencies, for example, also require direct instruction (modeling, etc.), practice and feedback to support growth. Others, like aspects of authenticity, require focus as well. Make sure, therefore, adequate space is provided to move between these so students have the available “bandwidth” needed to attend to each when it is focused upon. This helps ensure academic outcomes can be met as other valuable learning and vibrant experiences happen.

Learning Stage	Deeper Learning Practices and Considerations	Notes for Curriculum Adjustment
Surface Learning	<p>Authenticity</p> <ul style="list-style-type: none"> ● Explore how new knowledge, skills and initial sensemaking can be connected to the relevant context established during priming. <ul style="list-style-type: none"> ○ Make clear how demands for knowledge, understandings and skills from authentic topic, tools, product and audience necessitate the new learning to establish its value. ○ Connect new knowledge to interests generated during priming. ● Make sure as knowledge is rehearsed and skills are practiced to strengthen surface learning, it is seen in the service of what students need to know, understand and be able to do when they are asked to transfer learning into a public product for a real-world audience. <ul style="list-style-type: none"> ○ Connect the rounds of rehearsal and practice students experience to how experts in the field build their bases of knowledge and refine their skills. 	
	<p>Inquiry</p> <ul style="list-style-type: none"> ● Connect back to the essential question so it is seen as driving new learning and practice with knowledge and skills. ● Add supporting questions that follow from the essential question and are relevant to new learning provided. ● Find ways to connect new learning to questions students asked during priming. ● As new topics, texts and tasks are experienced during surface learning, look for opportunities for students to refine and add to questions they generated during priming. 	
	<p>Structured Collaboration</p> <ul style="list-style-type: none"> ● As students actively acquire and practice new knowledge (including vocabulary), 	

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	<p>skills and strategies, embed collaborative structures that support doing so together to capitalize upon the benefits of making learning more dynamic and social.</p> <ul style="list-style-type: none"> ○ Match appropriate structures to intended learning outcomes for surface learning and follow key principles for effective collaboration. 	
	<p>Voice & Choice</p> <ul style="list-style-type: none"> ● When students activate relevant prior (background) knowledge, see how their individual funds of knowledge can be shared across the classroom community. ● Notice where needs for new learning (knowledge, understandings and skills) might be differentiated according to individual learner’s readiness levels. ● As students acquire subject-specific and academic vocabulary, notice where they might have choice in how this is done and how practice with new vocabulary could be integrated into their own voices (e.g., embedding vocabulary into their own spoken or written explanations or examples). ● Provide guided opportunities for students to create their own nonlinguistic representations (organizers, concept maps, models, etc.) of the learning. ● As students monitor and reflect on progress toward their individual goals (academic goals, portrait of a learner competency goals, interest goals, etc.) help them see how new learning supports reaching of those goals. 	